AdeptGroup ENGINEERING EXCELLENCE

The Value of a Packaging Audit

What is a Packaging Audit?

A Packaging Audit is a review of the company's packaging to determine if a package or range of packaging meets certain new criteria as set forth by the company. The process includes an evaluation of many aspects of the company's packaging process, including primary, secondary and tertiary packaging to determine if it can be improved to better protect a product, save on costs, enhance sustainability or a combination of several potential improvements.

Why is a Packaging Audit Important?

A Packaging audit is typically conducted when a company suspects that the current packaging for one or multiple products may need to be revisited due to one or more of the following criteria:

New mandatory government regulations

- New regulations may include mandatory guidelines for companies to follow regarding packaging for specific products.
- The company must adhere to these regulations or face penalties, which may include significant fines or prohibition from selling their product(s) where the regulations are imposed.

New sustainability packaging guidelines required or desired

- Whether companies are voluntarily looking to improve the sustainability of their packaging or a new regulation forces them to expedite their sustainability plans, conducting a packaging audit to evaluate the progress made toward those goals can be an extremely beneficial activity.
- The company must adhere to these regulations or face penalties, which may include significant fines or prohibition from selling their product(s) where the regulations are imposed.

Desired cost savings

- A company can leverage a packaging audit to evaluate the current materials, components and design of packaging in relation to its cost and then apply that knowledge to reengineer the package and identify lower-cost replacements, which can result in significant savings for the company.

Quality Remediation of a Packaged Product

- When damage occurs, conducting a packaging audit can help identify flaws in packaging design.
- If desired, companies can leverage this kind of audit to identify areas within the supply chain where the damage is occurring.
- This will provide critical information for a packaging redesign to improve end results.

Why is a Packaging Audit Important? Cont.

A Packaging audit is typically conducted when a company suspects that the current packaging for one or multiple products may need to be revisited due to one or more of the following criteria:

Improved market share for a current packaged product

- When the demand for a product increases, sometimes the packaging needs to be reviewed.
- Whether it's to enhance its features, account for different shipping optimization requirements or to refresh the look, a packaging audit can provide options for new packaging to meet the desired criteria.
- In addition, staying competitive in a shifting market requires companies to be aware of the way similar products are packaged, which is generally a good starting point to gather insight on what to do and what not to do for a packaging refresh.
- These insights can be gleaned through a channel audit.

Reduced availability of current Packaging materials

- When current packaging materials become less readily available, a packaging audit allows for evaluation of additional materials, designs and suppliers to reduce the likelihood of production delays due to a lack of packaging resources.

The Steps of a Packaging Audit

The steps included in a packaging audit process will depend on the purpose or purposes of the audit. Generally, the packaging audit process includes:

- **Identify** why the audit is being conducted
- **Definine** the objective(s) of the packaging audit
- **Distinguish** which product or group of products to evaluate
- **Determine** which current areas of concern need to be investigated and addressed
- **Establish** who will provide input into the audit so that the output of the audit is accurate
- **Specify** the expected timeline for the audit and the subsequent actions
- **Identify** the key stakeholders and sponsor of the audit
- **Gather** the products or the process flow and equipment to review and identifying the areas to focus on to address the audit's objective(s)
- **Follow** the initial review by reviewing the data obtained with your key stakeholders and ensuring the information obtained is accurate
- **Present** a preliminary discovery of information to the sponsor of the audit to confirm the direction and content match the audit's objective(s)
- **Conduct** the audit of the specified product or product groups
- **Prepare** an audit report that provides outputs to all the input questions
    - This audit report should provide actionable recommendations with a timetable for presentation to the team

Useful Findings

While PVC is a low-cost material, its status as a non-recyclable MOC and the new regulations that banned it in some regions make it a good candidate for replacement across the company's products.

A handful of alternatives to PVC blister packaging emerged during the audit. Injection-molded paper was identified as a potential replacement for PVC in the blister packaging. It is 100% recyclable and compostable but is not transparent.

Recyclable polyethylene terephthalate glycol (PETG) also showed promise as a replacement material because it is transparent and can be molded using the same thermoforming equipment used for the PVC packaging. While PETG is more expensive than PVC, the cost increase can be offset by redesigning the blister packaging to reduce gage. Using RPETG, which is made with up to 50% recycled PETG, retains the transparent properties and strength of virgin PETG, but allows more flexibility with cost via down-gaging – meaning it can be incorporated into the packaging at a lower cost than PVC.

To address consumer concerns about needing to cut the package open, the audit included examination of the clamshell design and found that both the injection-molded paper and RPETG materials could be redesigned to incorporate die-cut features that allow easy opening without a knife or scissors, making the product more accessible to all consumers and especially benefitting seniors. These new design options also eliminate the problems with sharp edges left after cutting open PVC packaging.

Each of these material and design options also accounted for the problem with unsellable product resulting from crushed cartons during shipping. The paper material could be designed as a complete package that incorporated cushioning as part of the structure, eliminating the crushing damage in shipping. The RPETG blister packaging could be designed with more plastic being used in the support structure and less plastic in the non-support areas, which would also eliminate the crushing damage.

Both options also accounted for complaints about excessive corrugate by eliminating the corrugate dividers within the cartons. By eliminating the dividers, the new designs also eliminate the issue of dirt and dust that came from the excessive corrugate.

Additional Improvements

The audit was also able to identify several improvements for issues not included in the company's list.

Plastic tape was impacting the recyclability of the corrugate cartons and had to be removed so that the corrugate material could enter the recycling stream. By swapping out the existing tape machine for one that works with paper-reinforced tape, the cartons would be recyclable without removing the tape and the tape would provide more structure, eliminating the need for staples.

Wood pallets were driving unnecessary costs due to the rising price of lumber. They also added to the cost of shipping because of their weight and the space they take up. Replacing wood pallets with tri-layer fiberboard slip sheets would save money on all three of those fronts because they're less expensive and their light weight and low profile allows for greater density of product during shipping, which drives down shipping costs and fuel consumption. Additionally, the slip sheets would eliminate occasional damage to cartons from protruding nails and loose boards on wood pallets.

Summary of New Packaging Resulting from the Audit

By making changes based on the recommendations produced during the audit, this company would replace PVC and plastic bags for each of its products with either a thermoformed RPETG or injection molded clamshell paper form.

The new clam shell package designs allow the packaged product to remain separated when placed in the shippers, eliminating the need for the corrugate partitions and eliminating the plastic bag and the tie. The case carton's board was replaced with 32ECT C flute brown board and sealed with reinforced paper tape, eliminating the staples and the plastic tape and reducing the shipper cost from Mullen to ECT.

Without changing the carton size, each shipper could accommodate more product and the shippers could be column stacked on fiberboard slip sheets in place of the wood pallet, with the top two layers interlocked to hold the column together, the column stacking eliminating crushed case cartons. The use of slip sheets also eliminates the need for new pallets and allows for greater product density and improved truck utilization, reducing transportation costs.

Every piece of the packaging, from the slip sheets down to the primary clamshell packaging, is now recyclable and represents cost savings when compared to the original packaging. As an added bonus, the slip sheets also allow for the shipping pattern to be customized for overseas customers to fit the European Union size of 800 x 1200, eliminating the need for repackaging upon arrival for the storage.

OUTPUTS FROM A THOROUGH AUDIT

A successful packaging audit provides data on the specifications of current packaging to allow companies to make decisions about how to proceed with a packaging redesign or new package development.

In many cases, a packaging audit can provide opportunities to evaluate several aspects of packaging outside of the initial objective of the audit. For example, remediating packaging to reduce damage can also offer opportunity to reduce cost and increase sustainability.

The results of the packaging audit can provide a roadmap for future packaging decisions.

Get the Project Resources You Need

Leveraging an external resource to complete your packaging audit comes with several benefits. In addition to providing objective results, many consultancies have an agnostic relationship with suppliers and materials, which allows for a wider array of packaging options and recommendations that you can trust are in your brand's best interest.

If you think a packaging audit may be right for your brand and you're interested in discussing how it would help with your unique packaging challenges, get in touch.