

# Leaning on Standard Work Can Minimize Changeover Downtime in Packaging

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## Key Takeaways:

- Standard Work is a lean manufacturing tool that ensures consistent, repeatable processes to keep production lines moving and uphold high performance standards
- Getting an accurate snapshot of the current state through data is one of the keys to implementing Standard Work to changeovers.
- Implementing Standard Work to manage changeovers ensures better flow between workstations and can ultimately help packaging manufacturers achieve efficiency gains, waste reduction and improved employee morale

**In today's manufacturing environment, packaging companies cannot afford to keep making one-off adjustments to their production lines to accommodate design changes or other variances.**

These modifications are mounting due to the rise in customization, and if companies continue down the same path, the increase in changeover downtime due to these tweaks could negatively impact both efficiency and profitability. Standard Work, a lean manufacturing element that helps companies establish consistent, repeatable production processes, can help keep the line moving and drive high performance standards at the same time.

## Dissecting Downtime

Custom specifications force companies to frequently stop the presses to adjust machine settings, swap out componentry, or perform one-off quality and compliance checks. While these interruptions are necessary to meet the spec requirements, they can often be productivity sappers. For example, just a few minutes of downtime can mean hundreds of units of lost production on a high-volume packaging line. Other, more subtle contributors to downtime include unanticipated maintenance and repairs, material shortages, and quality control issues.

## The Three Pillars of Standard Work

Standardizing work processes helps companies institutionalize the detailed procedures that allow them to make their products in the safest, easiest, most effective way possible, based on the tools and resources available.

From a lean perspective, Standard Work focuses on three core process elements:

- **Takt Time.** The rate at which parts/products must be produced to fulfill customer demand
- **Work Sequence.** The steps operators perform in the order in which they are completed
- **Standard Inventory.** The amount of in-process stock is key; keep quantity of parts/raw materials necessary to run operations minimal

## Applying Standard Work to Changeover Processes

A key first step in applying Standard Work to changeovers is getting an accurate snapshot of the current state through data. Beyond establishing Work Sequence and Takt Time, technologies like IoT and cloud computing provide data that helps manufacturers better understand the inner machinations of the operations and processes that drive their businesses.

1. **Take note of variations and issues.** There are often several ways to perform a task, but only one is the best at utilizing all the resources - materials, machines, and operators - in the most efficient way possible. The data tells all, or at least a lot. Are there workers performing the same tasks with very different outputs? Are some operators single-handedly dragging Takt Time down? Can we combine anything? It's open season for all self-assessments. Using lean tools to optimize work sequence can uncover those non-value-adding steps that could be removed.
2. **Document, document, document.** Once procedures and processes are set, it is critical to document and maintain them. There are all sorts of options for doing this, including using the digital work instructions within a manufacturing system, which can help make it easier to guide newer operators through the key steps, and keep the records updated along the way.
3. **Prioritize collaboration, seek feedback.** This is a team effort that should involve everyone from the C-suite to machine operators to maintenance staff. By tapping into a broad range of expertise, organizations can more quickly identify challenges and institute effective solutions. Early feedback is instrumental in honing the final product, so setting up a trial period during which workers can practice run-throughs without real consequences is always a good idea.
4. **Update training programs regularly.** The Standard Work improvements will only deliver the desired results if the people pulling the levers understand the new standards and are committed to adhering to them. Training programs should be treated as living, breathing cogs in the machine, with updates made to training materials and procedures to integrate new insights, improvements, and/or technological advancements.
5. **Continuously strengthen standards.** We often see companies de-emphasize their focus on Standard Work once they get the results they were looking for. This is a mistake because standardized work is never perfect or final. Rather, it represents a current best practice that should be challenged daily through Kaizen and continuous improvement.

## Challenges and Benefits

There are certainly challenges involved in shifting to Standard Work, with one of the most common being the “this is how we have always done it” mantra. Some employees may initially resist the change because it goes against what they are accustomed to, and they may feel it is overwork to document and detail processes. These attitudes can be changed or at least mitigated by having internal leaders champion the standardized changeovers and inspire confidence and engagement by clearly articulating the benefits. Performance-based incentives around reducing changeover times are also effective and can instill that cultural mindset of constant improvement.

In our experience collaborating with clients, the benefits of Standard Work far outweigh any challenges. This more strategic approach to managing changeovers ensures better flow between workstations and can ultimately help packaging manufacturers achieve:

**Efficiency gains.** Making changeover processes standard reduces the potential for human error, leads to fewer line disruptions, enhances productivity, and increased output with less lead time.

**Waste reduction.** Improved procedures and better workflows reduce wasted time in the process and lead to less material waste, scrap, and rework.

**Improved employee morale.** When employees feel valued and understand how what they do daily contributes to the organization’s goals, they will increase their engagement and take ownership of new responsibilities. Documented procedures provide a level of clarity and confidence that can boost both job satisfaction and productivity.

## Make Standardization Standard

The challenges will only get more daunting for packaging manufacturers that do not address changeover downtime and seek solutions like standardization. Standard Work can truly be a winning solution by reducing variability, helping workers, adding big value to training, and being a catalyst for instilling a continuous improvement, Kaizen mindset. When processes are consistent, it is much easier to prioritize areas for improvement.

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