Lean efforts of the past have proven to be inadequate

The growing complexity of most factories in terms of product mix, routings, etc., makes it hard/impossible for the traditional tools of Lean.

It's time to consider new tools and areas for process improvements and waste reduction. Don't settle for thinking a facility is as Lean as it can be.

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Tools to take Lean to the next Level

With **5-S Principals** and the **7 Deadly Wastes** in mind, it is time to consider new areas for process improvements, lean initiatives and waste reduction. Material handling-and, more specifically, inventory storage-in a variety of areas throughout a facility often presents an opportunity to support the implementation of lean methodologies.

Areas for consideration might include:

- **Central Manufacturing Supply Areas**
- **Kanban/Just-in-Time Inventories**
- **Kitting Operations**
- **Tooling Stores**
- **Quality Assurance Retain Materials**
- **Service Parts Distribution**
- **Finished Goods Distribution**
- **Maintenance Parts Storage**
- **Work-in-Process (WIP) Applications**
- **Customer Sample Parts**
- **Buffer Storage of Materials Used in Manufacturing**

Further eliminate waste in these areas in a variety of ways, while simultaneously redefining processes for greatly enhanced productivity and accuracy.

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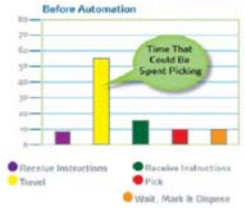
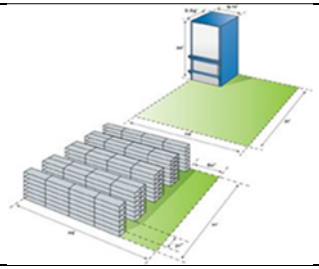
Opportunities for Waste Reduction and Process Improvements

We have the solutions for the five key contributors to the seven potential wastes within a facility.

- **Floor space**
- **Poor productivity**
- **Less than 100% picking accuracy**
- **Lax inventory control and security**
- **Improper ergonomics**

Opportunity	Solution to Consider	Solution Illustration
1. Excessive Replenishment If reserve of Fast and Medium moving inventory is stored in static shelving,, time could be wasted waiting for replenishment of picked materials	Consider Automated Storage and Retrieval System that offer fast, easy accessibility to stored inventory, quickly presenting or automatically storing items at the point of operator access for picking and replenishment	Vertical Carousel   Vertical Lift
2. Excessive Pick Travel Use a pedometer to estimate picker travel times. Often workers are traveling for miles during a shift. In a manual operation where works travel to their item they may spend as much as 65% of their shift walking	Consider automated storage and retrieval technologies that deliver a required item directly to the operator via the "goods to person" concept, dramatically reducing pick travel time.	
3. Wasted Search Time Upon arrival at a picking destination, a worker must visually search the shelves, looking for the correct item and matching up part numbers, a process that can take several minutes or more	Consider a light-directed item locating system, such as a light pointer device) used with VLMs, to identify the precise location of the item to be picked or replenished and eliminate search time	

Opportunity	Solution to Consider	Solution Illustration
4. Pick Errors Picking involves more than grabbing an item off a shelf. Operators follow a paper pick list, travel to a location, find the item, check the list to determine the number of items required, pick the item, confirm the pick by marking the paper, then deliver the items for packing. Each step is an opportunity for human error	Consider a combination of light-directed picking technologies and integrated message centers that communicate pick information to the operator. These visual picking aids reduce processing errors and increase accuracy up to 99.9%	 VLM with TIC lights
5. Damaged Items Goods stored on shelves, whether in or out of containers, are exposed to dirt and dust common to warehousing and manufacturing operations. This shortens their shelf life and renders them unsuitable for sale or for internal use	Consider a fully enclosed solution to keep items clean and protected from exposure to dirt, dust and other environmental contaminants. Not only does this extend their life, but also reduces the amount of products or components that must be scrapped due to damage	
6. Missing inventory In open shelving spread across hundreds or thousands of Sq. Ft., items can simply get lost thus leading to inaccurate inventory and Min/Max quantities.	Consider inventory management software to manage the items within the storage unit. This allows managers to closely monitor stock levels in real time	
7. Wasted Storage Space Traditional shelving not only requires a tremendous amount of floor space, it also does not make use of empty overhead space	Consider high density storage solutions that significantly reduce the amount of Sq. Ft. required to store inventory. For example 120 bays of shelving can be condensed into one Vertical lift (85% space savings)	

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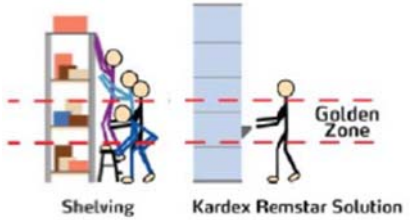
Opportunity	Solution to Consider	Solution Illustration
8. Improper Ergonomics Shelf based storage forces workers to bend or stretch to reach inventory, or even use ladders to access the highest items. All of these activities increase the chances of injury and workman's comp claims	Consider storage solutions that deliver stored items to the "Golden Zone" between the workers shoulder and knees. These solutions minimize unnecessary or excessive motions.	

Some of our customers include: