



*A follow up to*  
**OPERATIONAL  
PERFORMANCE *and*  
INVESTMENT PLANS**

In Warehousing, Distribution and Manufacturing

*October 2012*

*Sponsored by:*



*Conducted by:*



*A follow up to*  
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**In Warehousing, Distribution and Manufacturing**



Two years ago, Material Handling Industry of America (MHIA) launched a series of research studies focused on the community of users of automation in warehousing, distribution and manufacturing. The studies were designed to explore attitudes towards automation, the extent to which automation has already been adopted by the user community and future spending plans on automation.

With this study, MHIA revisits two of the topics explored in the original studies: operational performance and investment plans in warehousing, distribution and manufacturing.

More than a comparison between then and now, this follow-up study is a snapshot of the current state of automation in manufacturing and distribution today and plans for investments in the immediate future.

This study of manufacturing and warehousing/distribution professionals was conducted in August 2012 with four goals:

- To gain an understanding of operational performance and investment plans in warehousing/distribution and manufacturing facilities...
- To evaluate where automation fits in the minds of manufacturing and warehousing professionals...
- To build a cumulative body of knowledge that will help educate and raise awareness about the value of automation...
- And finally, to measure trends and changes of operational performance and investment plans in warehousing/distribution and manufacturing facilities.

## Key Findings

- The most important key performance indicators are order accuracy, on-time delivery, throughput and order fill rates
- Cost savings, improved efficiencies and accuracy/speed are the most important operational factors driving automation investments
- Technologies that manufacturing and warehousing professionals believe will make a difference in their facilities include RFID, voice picking, automated storage, robotics and software.
- Thirty percent (30%) indicate that order accuracy is the most important performance indicator in evaluating their facility's performance, followed by on-time delivery (27%) and order fill rate (18%).
- Seventy-four percent (74%) of respondents indicate they are planning or considering an automation project

The most important factors impacting their operations over the next 12 months are customer demand levels (79%), customer requirements and mandates (70%), operational excellence goals (66%), internal cost constraints (63%) and new product requirements (46%). Those are followed closely by sustainability (44%) and government regulations (39%).

When it comes to planned capital equipment investments, traditional material handling products such as rack, shelving and lift trucks top the list of planned expenditures during the next 12 months. Still, both manufacturers and warehouse/distribution professionals are planning to invest in automatic identification technologies, such as bar codes and RFID, dock equipment, conveyors and totes/containers.

Highly automated technologies are also in the mix. Some 22% of respondents plan to invest in automated storage technologies, 17% in AGVs, 16% in robots and approximately 12% in vertical lift modules and carousels. Similarly, more than 40% of respondents plan investments in supply chain software, including warehouse management systems (42%), labor/workforce management (33%), transportation management (31%), ERP (27%) and supply chain visibility solutions (25%).

## MATERIAL handling equipment plan to buy

	Prior Survey	Current Survey	
Lift trucks	39%	47%	↑
Racks and shelves	42%	43%	↑
Auto ID technologies	45%	37%	
Dock equipment	30%	33%	↑
Conveyors	38%	29%	
Totes and containers	34%	28%	
Ergonomic assist equip	32%	28%	
Automated storage/retrieval	24%	22%	
Sortation equipment	24%	21%	
Overhead handling equip	20%	18%	
Controls	27%	18%	
Automatic guided vehicles	23%	17%	
Light-directed picking	22%	16%	
Robots	19%	16%	
Vertical lift modules	23%	13%	
Carousels	18%	12%	
Other	2%	1%	

## SOFTWARE applications plan to buy

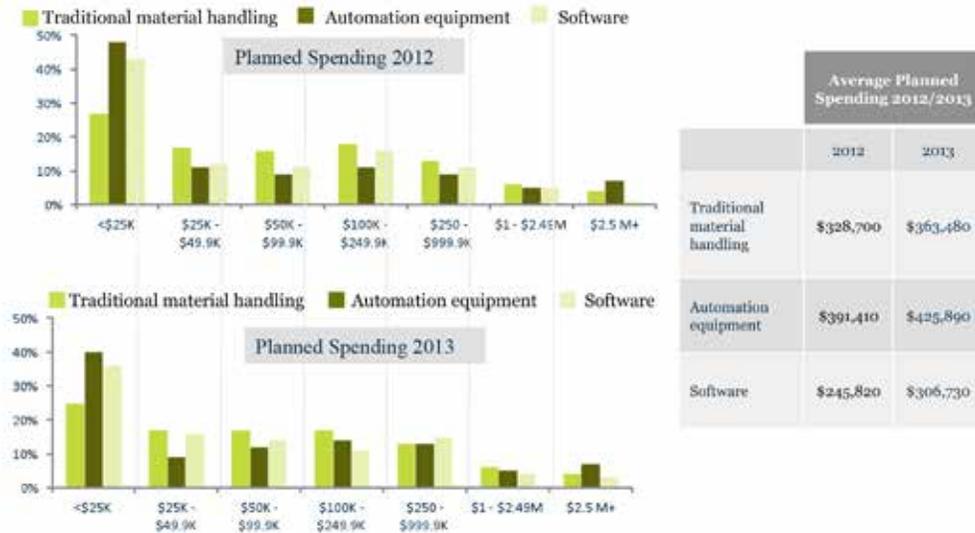
	Prior Survey	Current Survey	
Warehouse management	38%	42%	↑
Labor/workforce management	38%	33%	
Transportation management	32%	31%	↑
Enterprise Resource Planning (ERP)	20%	27%	↑
Supply chain visibility	33%	25%	
Inventory optimization & management systems	33%	24%	
Yard management /appointment scheduling	20%	24%	↑
Warehouse control systems	31%	21%	
Slotting	29%	21%	
Business intelligence /analytics	25%	20%	
Parcel shipping	19%	19%	
Network optimization & design tools	16%	19%	↑
Supplier/carrier/customer collaboration	20%	14%	

## Spending Plans

When spending plans are translated into capital budgets for 2012 and 2013, they reflect actual increases for traditional material handling, automation equipment and software over prior year spending.

At least 85% of respondents report that their plans for both years are more than or the same than their actual spending in 2011 in all three categories.

## PLANNED SPENDING for 2012 and 2013



## Methodology, respondents and their facilities

A survey was e-mailed twice in August 2012 to lists compiled by Modern Materials Handling ([www.mmh.com](http://www.mmh.com)), DC Velocity ([www.dcvelocity.com](http://www.dcvelocity.com)), Material Handling & Logistics (<http://mhlnews.com/>) and MHIA databases ([www.mhia.org](http://www.mhia.org)).

A total of 383 qualified responses were received, including 254 (66%) respondents from warehousing/distribution and 129 (34%) from manufacturing. All qualified respondents work at a manufacturing or a warehousing/distribution facility and are involved in purchasing decisions for material handling equipment and related systems, technologies and services.

Respondents represent industries as varied as food, beverage and tobacco, pharmaceutical, apparel, consumer electronics and machinery. The distribution of industries is similar to the distribution of industries in the previous surveys.

The average company represented in the survey employs a total 759 employees, including an average of 300 employees working at the facilities where the respondents work.

ISC is an Industry Group of MHIA. ISC members are the Industry's leading suppliers of integrated material handling and controls systems and is comprised of members of the Automated Storage/Retrieval Systems (AS/RS), Automatic Guided Vehicle Systems (AGVS), Conveyor & Sortation Systems (CSS) and Order Fulfillment Solutions (OFS) Industry Groups of MHIA. They supply systems worldwide and in virtually every major manufacturing and distribution sector. To learn more about ISC, visit [www.mhia.org/isc](http://www.mhia.org/isc).