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Intelligence for Wholesale Distribution Professionals

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# Profits in a Year of Strong Growth

*Analysis: Industry enjoying growth, but not adjusting to challenges*

*The following analysis by long-time industry expert Al Bates examines key profit drivers in wholesale distribution across 30 lines of trade monitored by the Profit Planning Group. This article looks at historical data from the past five years and particularly trends in 2012, the last year for which full data is available. In 2012, distributors experienced strong growth, but that growth did not necessarily translate into strong profits.*

*This article provides insight into this trend and provides recommendations to improve profitability, including the single most important issue distributors should address in 2014.*

**By Al Bates**

During 2012 – the last year for which complete information is available – distributors, as a group, enjoyed strong sales growth. However, that sales growth did not translate directly into higher profit. While profit was up slightly, the results were disappointing given the sales activity.

The following article reviews the key findings from an analysis of key profit drivers across 30 lines of trade covered by Profit Planning Group. It must be kept in mind that on some factors comparisons across industries can be made easily. Sales growth, for example, can be compared directly. If one industry grows and another does not, it is a directly measurable factor.

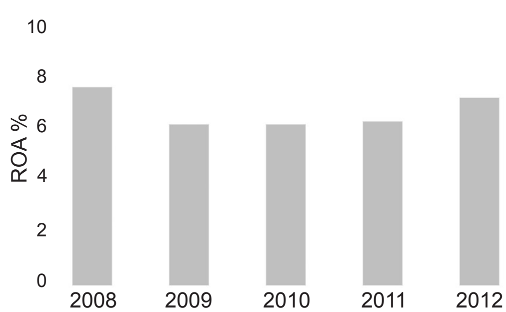
On most of the factors that influence profitability, though, direct comparisons are not possible. Some distribution industries, for example, have high gross margin percentages while others have low percentages. For factors such as gross margin the key is the degree of change. If the gross margin percentage is declining for a specific industry while the rest of distribution industry is increasing, it is a clear indicator that attention is needed.

This analysis looks at how five components trended in 2012 across three broad distribution industry segments:

- **Industrial** includes firms selling largely to the factory floor
- **Construction** represents firms selling a wide range of building materials and supplies
- **Consumer** firms are those selling consumer products or products utilized by retailers of all types

Return on Assets (ROA) is the best overall measure of distributor profitability. It is profit before taxes expressed as a percent of the total asset investment in the business.

**Return on Assets by Year**




ROA followed a slow downward path from 2008 through 2010 then recovered in 2011 and 2012 as the economy slowly moved ahead. Some industries deviated from this pattern due to conditions unique to their lines of trade. However, in general, distribution followed a pattern of slow decline and modest recovery.

What is important to note is that the term "modest" with regard to the recovery in ROA really does mean modest. ROA advanced from 6.1 percent to 7 percent.

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## INSIDE



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**PERSPECTIVE** ■ Commentary by Thomas P. Gale

## New Year's Resolutions and 'Truthiness'

About seven years ago, "truthiness" was one of those words of the year that quickly got overused. It describes using intuition or gut feeling to define "truth" without regard to hard evidence in the form of facts, data or even logic.

Now it's 2014 and there is a lot of truthiness surrounding (ironically) big data, market planning and customer relevance.

There are too many assumptions built on outdated facts, behaviors and data. Ask your technology support department how they are feeling right now – if you dare distract them. They are getting bombarded with requests from every corner of the company for implementation of:

- CRM
- third-party business intelligence tools
- API builds to niche applications for routing, warehouse, financial KPIs and more
- all of the above

IT managers are slammed. And they are getting mixed signals. In many cases, executives are not asking the right questions or don't know the right questions to ask when it comes to leveraging technology.

That's not a criticism, but rather an indication of how quickly technology and distribution markets are changing, and how challenging it is to keep up with both, much less synchronize them for competitive advantage.

Why is this important now? With an anticipated strengthening economy in 2014, markets will continue to tighten competitively. Think about Amazon, Google and other more traditional competitors playing in your backyard.

Some of these competitors will be lobbing cannonballs without much accuracy, but others will be laser-like in attacking specific customer segments and markets they have researched.

Make your 2014 resolution to get better clarity on your current and most important analytics priorities – specifically the insights and required data that will most impact your profitability and potential for growth. That internal conversation will go a long way to taking truthiness out of the decision process for which projects have to get done first.

And it will in turn position your company to best take advantage of the opportunities for growth this year in spite of tougher competition.

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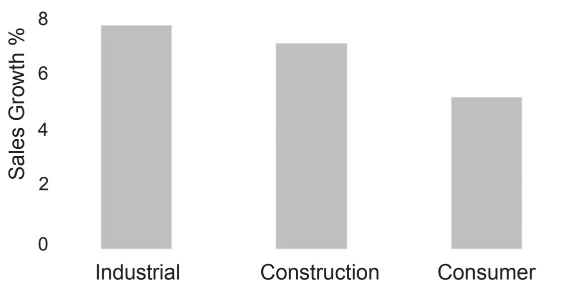
**Profitability**
Continued from page 1

While an increase is an increase, the size of the improvement was disappointing given the level of sales growth that will be discussed in the next exhibit. All distributors were able to do was return back to about where they were five years earlier.

The most important factor taking place in 2012 was strong sales growth.

**Sales Growth by Industry Segment: 2012 vs. 2011**

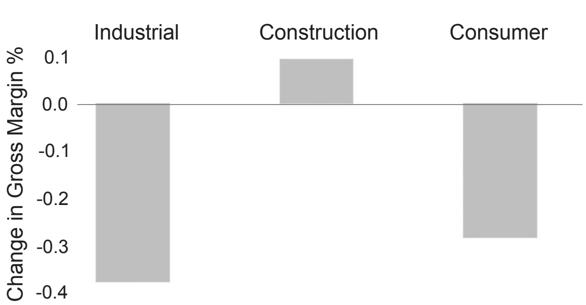



This was true across all three sectors analyzed – distributors selling largely in the industrial market, distributors selling into the construction market and distributors selling directly to consumers or to retailers ultimately selling to consumers.

Ideally, sales growth in excess of 5 percent should lead to increased profitability. Because all three segments were above the 5 percent level, the modest change the industry saw in ROA does not reflect the full potential that firms could have achieved. Clearly, other factors were at work.

The primary profit culprit in 2012 was a decline in the gross margin percentage. Both the industrial and consumer segments experienced measurable declines. Construction was up, but only by an insignificant 0.1 percent.

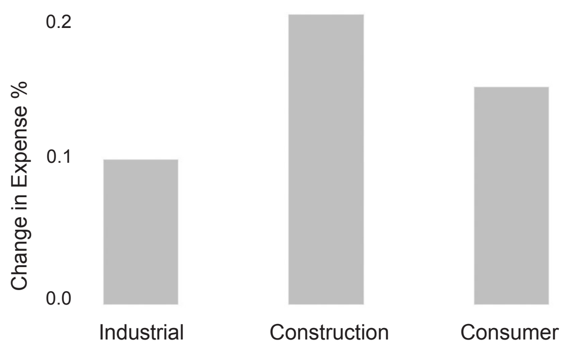
**Change in Gross Margin Percentage by Segment: 2012 vs. 2011**




Gross margin is the single most important driver of profitability. Often, strong sales growth causes firms to take their eye off the pricing ball. The decline in the gross margin percentage is an issue that needs to be addressed by all distributors.

The one thing that sales growth should do is help drive down operating expense percentages. In reality, the operating expense percentage rose slightly in all three segments.

**Change in Expense Percentage by Industry Segment: 2012 vs. 2011**



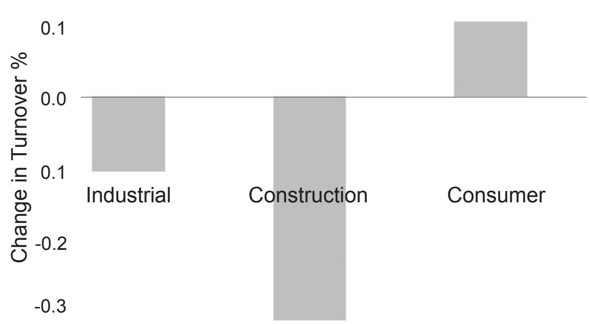

While the changes were modest, they should be an area of concern going forward.

This negative change may reflect a period of reinvestment in infrastructure in anticipation of continued future sales growth. If the increase in operating expense percentages continues in the future, it will cause the sales growth to be little more than wasted effort.

A great question emerges: "If the gross margin percentage is down and the expense percentage is up, how did ROA go up?" Virtually all of the improvement came from non-operating expense control. In essence distribution is generating all of its improvement off "other income." It is a pattern that can't continue.

Inventory turnover rates fell in two out of three industries.

**Change in Inventory Turnover Rate by Industry Segment : 2012 vs. 2011**

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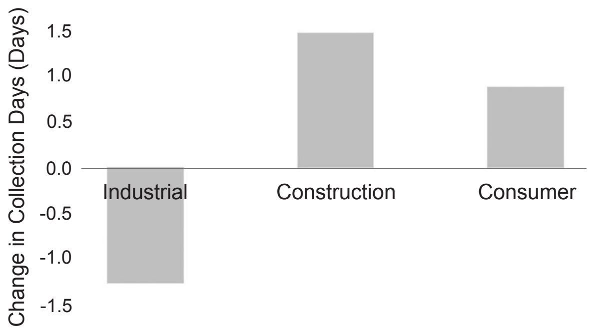
This is not at all surprising in a period of strong growth. Firms rush to maintain in-stock positions which almost always leads to a short-term decline in turnover. Ultimately, this issue is self-correcting.

The average collection period or days sales outstanding also increased slightly.

**Change in Collection Days by Industry Segment: 2012 vs. 2011**




Again, this is a somewhat normal pattern when sales growth is strong.

In aggregate the figures reflect a distribution base that is enjoying a pattern of sales growth, but not yet adjusting to the challenges that such growth brings. In the future, attention must be devoted to bringing the gross margin percentage and the operating expense percentage back into line.

*Al Bates is the author of Triple Your Profit!, available from MDM at www.mdm.com/tripleyourprofit.*

*Bates is also the president and founder of Profit Planning Group, a research and executive education firm focused on corporate financial planning. Learn more at www.profitplanninggroup.com.*

# Tech, Talent & Efficiency: 2014's Top Concerns

*Survey: Economy takes a backseat to other business concerns*

*This article provides an overview of distributors' top business and industry concerns as we move into 2014. The results in this report are based on the 2014 MDM Industry Outlook Survey, sponsored by NetSuite.*

**By Lindsay Konzak**

The economy has moved out of the top spot when it comes to top concerns noted by distributors in MDM's annual reader survey. While many readers still say the economy is a concern, in general, readers were mixed in their responses – a shift from recent years.

Many had concerns about talent; others were focused not generally on the economy, but more specifically on the impact of government inaction on the market. Competition rose in the list this year, as did concerns over the successful implementation of technology.

This article looks at what distributors have done over the past year to reposition in 2013 and outlines their top concerns moving into 2014. It is based on the 2014 MDM Industry Outlook Survey, conducted in late 2013 by MDM and sponsored by NetSuite.

Thank you to all readers who responded to this annual survey.

### Changes Distributors Made in 2013

In response to a question about the changes they've had to make in their firms to be successful in 2013, many readers said they invested in new talent and training for employees. Some new hires complemented new technology initiatives. One respondent reported creating a new position for customer relations along with implementing a new CRM tool.

That said, others reported eliminating positions, freezing salaries and reducing costs in other areas with a focus on streamlining operations. Some of that was due to tightening margins. One respondent reported the business paid closer attention to inventory, postponed hiring and examined more closely the size of the organization to determine if more cuts were needed.

But far fewer noted actual cuts than in the past. More were focused on ongoing process improvement internally, with many citing technology as a growing focus for their businesses.

Some invested in software that would allow the logistics part of their operations to be more efficient. Many also noted more reliance on business intelligence tools over the past year to uncover new opportunities. One noted "continued flexibility to find solutions to customer, supplier and employee challenges while at the same time implementing better control and reporting functions so that the flexibility doesn't become anarchy."

The survey also indicated a growing focus on sales force realignment, as well as on marketing – which some have said is the next frontier for distributors. Part of this is due to the rise of interest in analytics in distribution. As a result, some distributors reported a more focused field sales effort and better inside sales support.

Online marketing and e-commerce improvements were also among the list of changes many readers made in 2013. Expect that to be an even bigger focus in 2014.

### Talent Concerns

One of the top concerns noted by distributors this year was finding and keeping top talent. This has been a perennial concern for distributors, but there seems to be an uptick in the number of companies noting a challenge in finding both potential employees that are interested in the industry and employees that are qualified. Some readers said that competitors' poaching the top talent they already have is also a concern.

This provides companies that recruit and train well with an edge in the market. Greg Bloom, chief sales and marketing officer for Allied Building Products, told MDM earlier this year that bringing fresh blood into the organization is a challenge. "We certainly have a hiring challenge, and we certainly have a retention challenge, I think, in distribution. And the companies that do that the best are obviously going to be stronger for it," he said.

Those sentiments are echoed by many in the latest MDM reader survey, with distributors saying that the makeup of their workforce is a top concern going into 2014.

Many have introduced more training into

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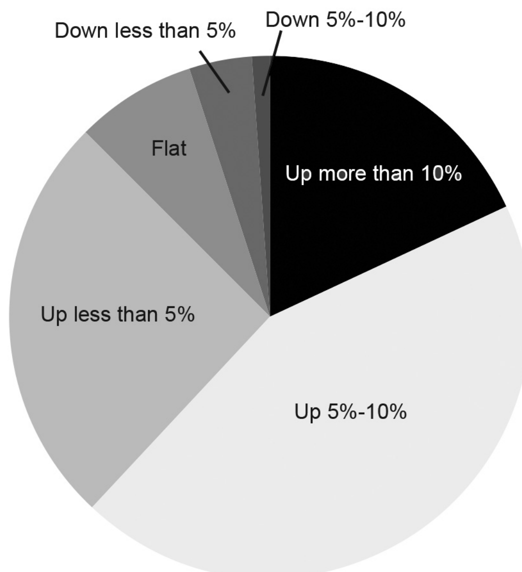
### 2014 Revenue Outlook




*Source: 2014 MDM Industry Outlook Survey*

### Sector Revenue Growth Expectations in 2014

Individual sector trends followed the overall growth trend; some sectors, such as building materials, are expecting stronger growth, and others are expecting more moderate growth, including industrial. But very few in any sector expect a decline in sales in 2014. Respondents could indicate all sectors they participated in, so responses below may include some overlap between sectors.

| | Up more than 10% | Up 5%-10% | Up less than 5% | Flat | Down less than 5% | Down 5%-10% |
|---|---|---|---|---|---|---|
| Building Materials | 23.1% | 34.6% | 28.8% | 11.5% | 1.9% | 0% |
| Chemicals & Plastics | 33.3 | 42.4 | 15.2 | 6.1 | 3.0 | 0 |
| Consumer Products | 20.0 | 40.0 | 20.0 | 16.0 | 4.0 | 0 |
| Electrical/Electronics | 22.4 | 38.8 | 26.5 | 6.1 | 6.1 | 0 |
| Grocery/Foodservice* | 66.7 | 11.1 | 11.1 | 0.0 | 11.1 | 0 |
| HVACR/Plumbing | 20.5 | 51.3 | 15.4 | 10.3 | 2.6 | 0 |
| Industrial | 19.4 | 42.7 | 25.8 | 9.7 | 2.4 | 0 |
| Janitorial Supplies | 23.1 | 38.5 | 23.1 | 11.5 | 3.8 | 0 |
| Oil & Gas Products | 27.8 | 38.9 | 22.2 | 8.3 | 2.8 | 0 |
| Pharmaceutical* | 36.4 | 63.6 | 0.0 | 0.0 | 0.0 | 0 |
| Pulp & Paper | 30.4 | 43.5 | 17.4 | 4.3 | 4.3 | 0 |
| Safety Products | 24.5 | 36.7 | 24.5 | 10.2 | 4.1 | 0 |

* Small sample: fewer than 20 respondents

*Source: 2014 MDM Industry Outlook Survey* their curriculums to both provide growth opportunities for employees and build skills to help them serve customers better.

An aging workforce is also top of mind for many.

### Competitive Concerns

The shifting competitive landscape was an ongoing concern for distributors in the survey. One respondent said a top concern was "new competition from market interrupters." Another noted the "encroachment in the channel by office supply big-boxes," and others feared the "disappearance of independent distributors."

Amazon's potential effect on the industry continues to be a concern for many, even if it has not yet had a big impact on the bottom line.

The Internet has changed how customers want to do business, which in turn has shifted how distributors of all sizes approach their markets.

Distributors that are still catching up on providing a true multichannel experience will continue to struggle against larger regional and national distributors that have more resources. The impact of the Web is a top concern for many respondents in the survey.

Some distributors also worry about the impact of multichannel opportunities on supply chain relationships: How does that affect manufacturer loyalty?

### External Concerns

While the economy has faded as a top concern for 2014, other related topics continue to weigh on distributors' minds. Survey respondents are concerned government action – or inaction – may lead to another economic downturn.

Regulatory actions are a concern for many respondents, who said that specific items like the loss of energy rebates or conflict minerals reporting requirements would be a challenge for their businesses in 2014.

The Affordable Care Act, also known as Obamacare, is certainly top of mind for many respondents, with one saying they are concerned about the "unintended consequences of the ACA."

The ongoing impact of the sequester and a "lack of investment in energy and infrastructure markets" were also noted as areas of concern. The federal budget, debt ceiling and tax policies also continue to be front of mind for many distributors. Slow growth overseas is also a concern, especially in Europe.

*More details from the 2014 MDM Industry Outlook will be provided in the upcoming Jan. 16, 2014, webcast, the 2014 Distribution Industry Outlook.*

*Download a whitepaper, sponsored by NetSuite, with the full results of the survey at www.mdm.com/2014Outlook.*

# Distributors' Technology Plans in 2014

*Survey: Interest in tech grows, but challenges remain*

*Many distributors have struggled with where to invest limited dollars to meet the demands resulting from the rapidly growing role of technology in the industry. This article looks at distributors' current technology challenges and plans, identified by respondents to the 2014 MDM Industry Outlook Survey.*

*Download the complete results of the 2014 MDM Industrial Outlook Survey, sponsored by NetSuite, at www.mdm.com/2014Outlook*

**By Jenel Stelton-Holtmeier**

The Great Recession did little to slow technology advancements and customer expectations. But distributors' investment opportunities were limited thanks to skinnier wallets.

While conditions have since improved, cost of implementation remains one of the top technology challenges identified by respondents to the 2014 MDM Industry Outlook survey, sponsored by NetSuite. But many respondents also recognize the importance of making these investments to improve operations and customer interactions.

The challenge is "identify(ing) the most cost-effective and necessary investments," one respondent wrote. The goal is to "improve efficiencies and ultimately earnings," another said.

### Technology Plans

Many respondents are planning to explore customer relationship management (CRM), e-commerce and pricing software in the coming year.

E-commerce, for many, is no longer considered optional. "E-commerce is becoming more of the norm," one respondent wrote. "Heck, I rarely go to a store anymore around the holidays." But it also provides opportunity to expand sales reach. "E-commerce will open an entirely new market," one respondent said.

Respondents are exploring other technologies, including CRM and pricing, to improve internal efficiencies and communication. "We need to improve and expand our ability to communicate with our customer base in as many ways as possible," one distributor noted. Another respondent wrote: "I want our sales staff inside and out to be one linked driving force."

In line with the results from last year's survey, many respondents also continue to explore software as a service, citing the benefits of reduced cost, ease of implementation and convenient access. "We have invested heavily in technology to date; we need to put everything in the cloud," a respondent wrote.

## Technology Challenges

While the cost of upgrading or implementing new systems is a perennial challenge, many of the other challenges readers identified relate to new technologies that have emerged in recent years that have changed how customers expect business to be done, such as e-commerce. Other challenges result from a focus on getting more out of the systems companies already have in place.

Here are some of the top concerns identified by respondents to the survey:

**Obtaining actionable analytics:** More data than ever is available to distributors and manufacturers, and much of that already exists in the systems they have in place. The first problem is getting that information out of those systems and into a usable format. The second problem is figuring out what to do with that information once it is in hand.

The key is figuring out the questions that need to be answered, Real Results Marketing's Jonathan Bein told MDM earlier this year, such as how much it costs to serve each customer or how to ensure the accuracy and uniformity of information being provided. Once those basic questions are answered, managers and executives will be able to better identify where else the data can take them.

**Synchronization of systems and data.** Because more data is available, getting existing or new systems – and the data found within them – to play nicely together can be a challenge. Once again, making sure the data is clean and consistent can help combat this problem. Another way to address it is to make sure people are in place with the knowledge to connect the diverse systems.

**The right talent in the right place at the right time.** Several survey respondents noted they were exploring the addition of internal IT personnel. "What you would think should be basic IT support functions have been difficult

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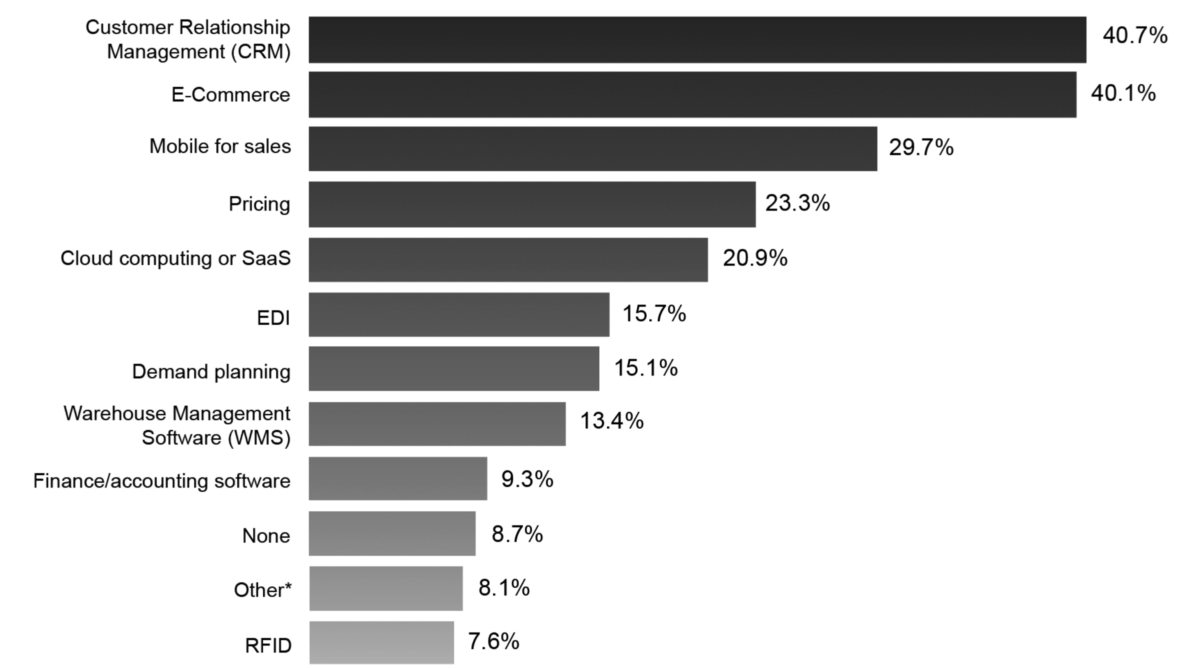
**Which new technologies, if any, do you anticipate exploring in the next 12 months?**




Respondents could choose all that applied.
*Other: Business analytics, new ERP system, transportation management, social media, hand-held tools for outside salespeople, VMI software

*Source: 2014 MDM Industry Outlook Survey* to obtain," one respondent said. Often software providers offer help lines and training to address many of the questions, but not having them onsite and immediately reachable can lead to delays in meeting customer needs.

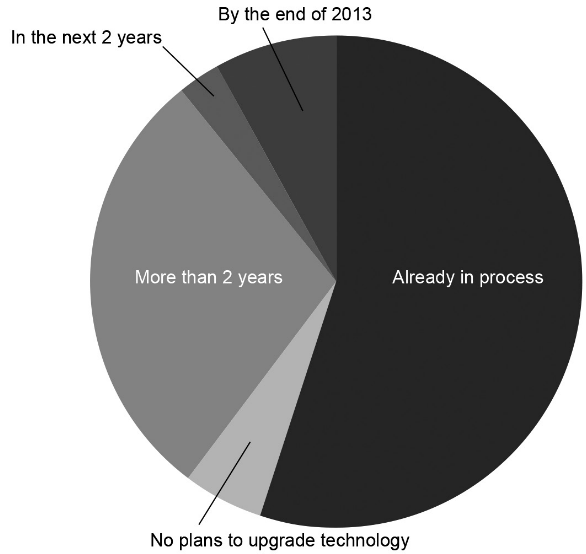
**Keeping up with changing customer and business needs.** Today it's e-commerce; tomorrow, who knows? New technology developments are always being announced. When the "news" about Amazon exploring drone delivery broke, the Internet lit up with reactions – some good, some bad and a lot of in-between. Could unmanned deliveries really work?

While many of the announcements make big headlines, they aren't always practical to consider for everyday business. That said, even the extreme announcements can highlight technology trends that may need review. For example, Amazon's announcement could highlight a demand – internally and externally – for more efficient delivery options. Keep an eye on the big announcements to see if there's something related that could be explored.

Another challenge for distributors is to implement processes to ensure entire systems don't have to be thrown out every couple years to adapt to the changes taking place. Make sure that the systems currently in place can be scaled to meet changing demand or are compatible with add-on software. Talk to existing service providers to make sure they have plans to meet changing industry needs.

**Getting everyone on board.** One of the most common challenges identified in the survey is getting buy-in to new technology from employees. People are creatures of habit and asking them to change how they do their jobs – especially if they think the way they're doing it already is working – can be difficult.

**What is your timeframe for upgrading technology in your business?**




*Source: 2014 MDM Industry Outlook Survey*

Channelvation Inc.'s Mark Dancer spoke to MDM last year about the challenges of getting buy-in for CRM programs. His advice for overcoming the barriers is relevant for other technology implementations, as well.

First, don't go too far too fast. Begin by picking a few tools, and roll out in a way that can build credibility and familiarity.

And make sure to invest enough time in training to address the questions and concerns staff may have before expecting them to use the new technology.

## Forecast: Worldwide IT Spending to Grow 3.1% in 2014

Worldwide IT spending is projected to total $3.8 trillion in 2014, a 3.1 percent increase from 2013 spending of $3.7 trillion, according to the latest forecast by Gartner Inc. In 2013, the market grew 0.4 percent year over year.

Spending on devices (including PCs, ultramobiles, mobile phones and tablets) contracted 1.2 percent in 2013, but it will grow 4.3 percent in 2014.

Enterprise software spending growth continues to be the strongest throughout the forecast period. The 2014 annual growth rate is expected to grow 6.8 percent. Customer relationship management and supply chain management (SCM) experienced a period of strong growth, according to the report.

"Investment is coming from exploiting analytics to make B2C processes more efficient and improve customer marketing efforts. Investment will also be aligned to B2B analytics, particularly in the SCM space, where annual spending is expected to grow 10.6 percent in 2014," said Richard Gordon, managing vice president at Gartner.

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# Industrial & Construction Markets Update

VOL. 44, NO. 1 | JANUARY 10, 2014

## Latin America Manufacturing Output to Grow 3.1% in 2014

A robust motor vehicle production sector and its supplying industries will provide momentum for Latin American manufacturing in 2014, according to the Latin America Manufacturing Outlook, a semiannual analysis from the Manufacturers Alliance for Productivity and Innovation.

The report, authored by Fernando Sedano, Ph.D., MAPI economic consultant, focuses on Latin America's three largest economies – Brazil, Argentina and Mexico – as these countries are responsible for more than 80 percent of the manufacturing output in the region.

MAPI forecasts that overall manufacturing output in Latin America will grow by 2 percent in 2013 when final data is tabulated and advance by 3.1 percent in 2014.

"The manufacturing growth picture expected in Latin America is clearly a consequence of the improved backdrop among intermediate industries, which will have to expand production to satisfy the projected strong demand from auto plants," Sedano said. "Conditions are set for faster manufacturing growth in 2014, although the expansion will be moderate. Manufacturing companies in Brazil and Mexico will lead the growth tables, but Argentina's factories will likely remain flat."

In developing its forecast, MAPI uses data from national statistical agencies, assigning weighted average annual production indexes for each industry. The weights are determined by a country's value-added in U.S. dollar terms in each sector, using MAPI's proprietary econometric model.

Brazil's manufacturing activity (48.7 percent of MAPI's regional index) should get a boost in the first half of 2014 due to being the host country for soccer's World Cup. Sedano believes it will increase demand for Brazil's manufactured goods, especially in the

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### Distributor News

**Applied Industrial Technologies**, Cleveland, OH, has acquired **Texas Oilpatch Services Corp**. of Houston. TOPS is a distributor of bearings, oil seals, power transmission products and related replacement parts to the oilfield industry.

**The United Distribution Group** has acquired **Dandy Specialties Inc**., Abilene, TX. Dandy is an industrial distributor of specialized drilling rig and wellhead components comprised of three facilities in Abilene, TX; Odessa, TX; and Hobbs, NM. It will operate as a division of **McCarty Equipment Co**., a subsidiary of UDG's **GHX Industrial**.

**Industrial Distribution Group Inc**., Belmont, NC, a distributor of MROP products and integrated supply solutions, has acquired **Tommy White Supply Co**. and the industrial division of **Duncan Co**. Headquartered in Midland, TX, TWS is a provider of supplies, services and equipment to customers in energy markets. Minneapolis, MN-based Duncan Industrial distributes industrial supplies including cutting tools, abrasives and metal removal products.

**WESCO International Inc**., Pittsburgh, PA, has announced that **WESCO Distribution Inc**., through its Canadian subsidiary, has agreed to acquire **LaPrairie Inc**. LaPrairie generates about $30 million in annual revenue from a single location in Newmarket, Ontario. It is a wholesale distributor of electrical products servicing the transmission, distribution and substation needs for utilities and utility contractors.

**WinWholesale Inc**., Dayton, OH, has acquired **Wyatt Irrigation Supply Inc**., Santa Rosa, CA. Wyatt Irrigation Supply has locations in Napa, Petaluma and Ukiah that provide irrigation services and supplies to the wine industry in the Napa and Sonoma Valleys. WinWholesale also opened two Winsupply locations serving fire sprinkler contractors – one in Pittsburgh, PA, and in Long Island, NY.

**Singer Equities Inc**., Glen Burnie, MD, has acquired **Cumberland Valve**, Bridgeton, NJ. The acquisition will help Singer to expand product lines and increase fabrication and testing services. Cumberland Valve specializes in industrial and hydraulic hose fabrication, supporting customers in the greater Delaware Valley and southern New Jersey areas. It will operate under its current name as a division of **R/W Connection Inc**., Roanoke, VA, a wholly owned subsidiary of Singer.

**Hisco**, Houston, TX, an employee-owned specialty distribution company serving the aerospace, electronic assembly, medical device and other industrial markets, has acquired online distributor **All-Spec Industries**, a distributor of products for electronic service, repair and testing. All-Spec features 30,000 items. The distributor ships benchtop electronic assembly products from its Wilmington, NC, distribution center.

**Tech Air,** a Danbury, CT-based distributor of industrial, medical and specialty gases and related welding supplies, has acquired Georgia-based

continued on p.2 of this section

**News Digest**

Continued from p. 1 of this section

**Compressed Gases of Augusta** and **A-L Welding Supply Inc.** of Gainesville.

**Avnet Inc**., Phoenix, AZ, has acquired the remaining interest in **MSC Investoren GmbH** in Europe. MSC is a distributor of electronic components and a provider of embedded computing technology and display solutions. The purchase follows Avnet's acquisition of a majority interest in MSC Group Oct. 1, 2013. Patrick Zammit, president of Avnet Electronics Marketing EMEA, said plans to create an embedded and display solutions business unit in EMEA will allow Avnet to serve the technology value chain more deeply and widely.

**Airgas Inc**., Radnor, PA, has increased prices on helium by 20 percent on average, effective immediately or as contracts permit. The pricing action is in response to rising crude helium prices being charged by the Bureau of Land Management to helium refiners, which have driven up the cost of pure helium from suppliers. Supply chain disruptions also remain a challenge to the industry.

**NetPlus Alliance**, Lockport, NY, a buying group for industrial and contractor supplies distributors, has announced Paul Byrnes as the company's new vice president of distributor development. Byrnes has worked 40 years in the distribution industry, including 30 years in industrial distribution. Prior to joining NetPlus Alliance, he was with United Stationers/ORS Nasco for 19 years.

## Economic News

**The manufacturing sector expanded** in December for the seventh consecutive month, according to the latest Manufacturing ISM Report on Business. The PMI registered 57 percent, the second-highest reading for the year, just 0.3 percentage point below November's reading of 57.3 percent.

**New orders for manufactured goods** in November, up two of the past three months, increased $8.8 billion or 1.8 percent to $497.9 billion, the U.S. Census Bureau reported. This was at the highest level since the series was first published on a NAICS basis in 1992 and followed a 0.5 percent October decrease. Excluding transportation, new orders increased 0.6 percent.

Led by gains in employment- and production-related indicators, the **Chicago Fed National Activity Index** increased to 0.6 in November from -0.07 in October. All four broad categories of indicators that make up the index increased from October, and three of the four categories made positive contributions to the index in November. The index's three-month moving average, CFNAI-MA3, increased to 0.25 in November from 0.12 in October, marking its second consecutive reading above zero and highest reading since February 2012.

**Real gross domestic product** – the output of goods and services produced by labor and property located in the U.S. – increased at an annual rate of 4.1 percent from the second quarter to the third, according to the third estimate released by the Bureau of Economic Analysis. In the second estimate, the increase in real GDP was 3.6 percent. In the second quarter, real GDP increased 2.5 percent.

November 2013 **construction spending** was estimated at $934.4 billion, 1 percent above the revised October estimate, according to the U.S. Census Bureau. The November figure is 5.9 percent above the November 2012 estimate. During the first 11 months of this year, construction spending was $828.4 billion, 5 percent above the same period in 2012.

**Construction employment** expanded in 211 metro areas, declined in 67 and was stagnant in 61 between November 2012 and November 2013, according to an analysis of federal employment data by the Associated General Contractors of America. Stephen Sandherr, the association's CEO, said it will take many more months of strong economic growth and new investments in public infrastructure to get construction employment levels close to their prior peaks.

Expansion in the manufacturing sector will be fueled by continued reshoring, according to **Manufacturing Jobs for the Future,** a new report from Sen. Amy Klobuchar (D-MN) and the Democratic Joint Economic Committee. The report cites several key factors driving the reshoring movement: improved U.S. worker productivity, the increased cost of extended supply chains and ready access to cheap natural gas.

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## Study: Greatest Supply Chain Risk Not Necessarily with Biggest Suppliers

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Bucking conventional wisdom, an MIT study on supply-chain risk shows no correlation between how much a manufacturer spends with a supplier and the profit loss it would incur if that supply were suddenly interrupted.

According to MIT, this finding defies the basic tenet that equates the greatest supply-chain risk with suppliers of highest annual expenditure.

The analysis, conducted on Ford Motor Company by Professor David Simchi-Levi of MIT's Department of Civil and Environmental Engineering and Engineering Systems Division, showed that supply firms whose disruption would inflict the greatest blow to Ford's profits are those that provide the manufacturer with relatively low-cost components.

"This helps explain why risk in a complex supply network often remains hidden," says Simchi-Levi, who is co-director of MIT's Leaders for Global Operations program. "The risk occurs in unexpected locations and components of a manufacturer's supply network."

Traditional methods for identifying the suppliers and events that pose the highest risk depend on knowing the probability that a specific type of risk event will occur at any firm and knowing the magnitude of the problems that would ensue.

However, risks – which can range from a brief work stoppage to a major natural disaster – exist on a continuum, and the sources of low-probability, high-impact risk are difficult to quantify.

Manufacturers generally assume their greatest supply-chain risk is tied to suppliers of highest expenditure.

But Simchi-Levi reasoned that because a company's mitigation choices – maintaining more inventory or an alternative supply source, for example – are the same regardless of the type of problem that occurs, a mathematical model of supply-chain risk should determine the impact to the company's operations if any disruption occurs, rather than estimating the probability of specific types of risks.

His model incorporates bill-of-material information (the list of ingredients required to build a company's products); maps each part or material to one or more of the firm's facilities and product lines; captures multiple tiers of supplier relationships (tier 1 are direct suppliers, tier 2 are suppliers to tier 1 firms, and so on); includes operational and financial impact measures; and incorporates supplier recovery time if a problem occurs.

As nodes are removed one at a time from the supply network, the model determines how best to reallocate inventory and obtain alternatives, and predicts financial impact. The resulting analysis divides suppliers into three segments depending on the cost of the individual components they provide and the financial impact their shortage would have: low-cost components/high financial impact; high-cost components/high financial impact; and low-cost components/low financial impact.

When researchers applied the model to Ford's multitier supply network – which has long lead times from some providers, a complex bill-of-materials structure, components that are shared across multiple product lines, and thousands of components from tier 1 suppliers – the model predicted that a short disruption at 61 percent of the tier 1 firms would not cause profit loss.

By contrast, a halt in distribution from about 2 percent of firms would have a very large impact on Ford's profits. Yet each of those firms in the 2 percent furnishes Ford with less-expensive components rather than, say, expensive car seats and instrument panels that fall into the high-financial-impact segment.

The relevance of this can be seen in light of a disruption in 2012 at a plant in Europe, which caused a shortage of a polymer used by most manufacturer-suppliers to make fuel tanks, brake components and seat fabrics. It took six months to restart production, a delay that had a large financial impact on the auto industry. Simchi-Levi's framework would have encouraged the company to build a second plant in a different region, something the affected company now is doing in Asia.

*The application of Simchi-Levi's model to Ford Motor Company's supply chain was funded by the Ford-MIT Alliance.*

**Latin America Outlook**
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food and beverages sector where it was weak in 2013, before waning in the second half of 2014. In addition, Brazil's car makers will continue to drive growth among key intermediate industries. MAPI forecasts Brazil will see 2.9 percent manufacturing growth in 2013 and 3.9 percent growth in 2014.

Mexico's manufacturers (38.7 percent of the index) gradually improved after a rough first quarter in 2013, mirroring the upturn in the U.S. manufacturing output. Stimulated by ongoing momentum in the auto industry, recent data suggest that Mexico's long-awaited recovery is starting to gain some traction. Key leading indicators suggest that manufacturing production growth will continue to accelerate going forward, with motor vehicle plants driving a broader-based expansion. MAPI anticipates 1.7 percent manufacturing growth in 2013 and a solid 3.1 percent gain in 2014.

Argentina's manufacturing prospects (12.6 percent of the index) are more subdued. In 2013 car makers benefitted from strong demand from Brazil and a solid domestic market, the latter as a result of government policies that stimulated consumer spending at the expense of savings and investment, a combination that cannot be sustained over time. MAPI anticipates 2.1 percent growth this year but only 0.6 percent growth in 2014.

All 16 industries reviewed are expected to grow in 2013 and 15 of 16 should advance in 2014, with only medical, precision and optical instruments showing a decline, by 3.2 percent. Three industries – food and beverages, motor vehicles, and machinery and equipment – account for roughly 45 percent of the region's manufacturing and are therefore most important to the forecast. Production of food and beverages – the largest industry in the region and one of the most stable – should grow by 1.1 percent in 2013 and 3.7 percent in 2014. The automotive sector is forecast to improve by 8.9 percent this year and 9.7 percent next year. Machinery and equipment is forecast to see growth of 4.9 percent in 2013 and 5.1 percent in 2014.

**News Digest**
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### Manufacturer News

**Textron Inc.**, Providence, RI, has agreed to acquire **Beech Holdings LLC**, the parent of **Beechcraft Corp**. in Wichita, KS, for about $1.4 billion. Beechcraft Corp., with estimated 2013 revenues of $1.8 billion, is a manufacturer of business, special mission, light attack and trainer aircraft.

**Actuant Corp**., Milwaukee, WI, has named Brian Kobylinski executive vice president-energy segment and China following the departure of Sheri Roberts. Kobylinski most recently served as executive vice president-industrial segment and China. Mark Sefcik has been promoted to executive vice president-industrial segment.

**Minnesota Flexible Corp**., a manufacturer of industrial hose, fittings and formed tube assemblies in St. Paul, MN, has acquired **General Rubber Co**., a distributor of hoses and accessories that are used in the hydraulic, air, water, welding, refrigeration and equipment markets. Newly acquired GRC has its headquarters, fabrication shop and warehouse in New Berlin, WI.

Maintenance and cleaning chemicals manufacturer **Zep Inc.**, Atlanta, GA, reported sales for the fiscal 2014 first quarter ended Nov. 30, 2013, of $164.9 million, an increase of 4.3 percent compared to the same period a year ago. Profit decreased 11 percent to $3.1 million.

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