

# 2012 Technology Roundtable

# Harnessing the new waves of data

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**Five leading technology analysts explore the roles ERP, business analytics (BI), RFID, TMS, and social media are playing to help logistics professionals capture and utilize data to improve supply chain visibility—and their careers.**

As supply chain organizations evolve technologically and do a better job of collaborating with both their internal and external partners, the next challenge is integrating and interpreting the new waves of data that are now washing up on logistics and transportation managers' computer screens as a result.

With this in mind, we've gathered four leading supply chain software and technology analysts to examine the latest trends, tools, strategies, and best practices available for better capturing and utilizing the new onslaught of data on the way to realizing an improved level of visibility across your logistics operations.

Ben Pivar, senior vice president and supply chain technologies lead for Capgemini Consulting, will bring us up to speed on the role enterprise resource planning (ERP) vendors are playing in integrating disparate processes; Jerry O'Dwyer, U.S. sourcing and procurement leader for Deloitte Consulting, will help shippers better understand the concept of business analytics (BI); Michael Liard, director of RFID for VDC Research Group, brings us to speed on a new RFID-inspired wave of data; Steve Banker, director, supply chain management at ARC Advisory Group, gives us his take on transportation management systems (TMS) evolving position in visibility; and Adrian Gonzalez, director of Logistics Viewpoints, puts social media in a logistics management and career development context.

**ERP: Integrating processes and systems**

**Logistics Management:** How would YOU define the current state of the ERP market?

**Ben Pivar:** The strength of the ERP market depends on how you define ERP. Looking at core transaction components of ERP, we still see a steady amount of activity; however the nature of the work has changed. There's still some greenfield implementation, but not as many as in years past. Much of the work is focused around upgrades, instance consolidation, or global expansion off an existing template.

In addition to core transaction systems, we're seeing very strong demand for optimization and business information management applications. Many of the supply chain related applications fall into this categorization, and customers are investing significantly due to the strong business benefits and short payback of these projects.

**LM:** What trends do you see pushing ERP's growth in supply chain over the next two years?

**Pivar:** One of the big trends that we're seeing in the market focuses on the idea of integrating business processes and systems that were previously operating in silos. As an example, we see strong demand for taking a time-phase consensus demand plan and doing a better job of sharing this information with upstream and downstream constituent groups like product development, logistics, and customers.

This plan better allows these groups to see trends in the marketplace and plan things like labor and other logistics activities more optimally. In addition, we believe that this integration will drive a new wave of collaboration between trading partners. We call this the "shelf connected supply chain," and it allows consumer goods companies to better plan and share information with retailers.

**LM:** How far are we from cloud ERP? Are we there on some level at this point?

**Pivar:** We are seeing increasing demand for cloud-based services and managed services in general. Some of the applications that we work with are very batch process intensive, yet these batches may only run nightly or over a weekend. In supply chain, due to the data intensive nature of the problems we're solving, these applications require significant hardware investment from our clients. Cloud can provide a strong and potentially lower cost option in these situations. But while we still hear client concerns about data security, we're also seeing new private cloud options and enhanced cloud security that are making adoption more likely.

**LM:** What are the benefits to plugging in your ERP's logistics and transportation offerings?

**Pivar:** There are strong benefits to using the ERP pack-

age from an integration perspective, but there may also be drawbacks in terms of rich functionality that currently exists with best of breed. We recommend a comprehensive review of the total cost of ownership of both options that considers the increased benefits of best of breed versus the potentially higher IT costs associated with the development and maintenance of interfaces to keep best of breed solutions running. The biggest benefit is reduced technical integration costs associated with the ERP solutions.

**Business Analytics: Visibility enabler**

**Logistics Management:** The concept of "business analytics" (BI) is certainly making its way around logistics management circles. For those new to the concept, how would you define BI as it pertains to logistics and transportation management?

**Jerry O'Dwyer:** We define "business analytics" as the practice of using data to drive business strategy and performance. This includes a range of capabilities—from looking backward to evaluate what happened in the past, to forward-looking approaches like scenario planning and predictive modeling.

Transportation and logistics management is one of the most data-driven components of the supply chain and is also one of the largest cost components of the supply chain for most companies. Transportation managers often lack critical visibility into today's operations due to unreliable and inaccurate data, an inability to perform root cause analysis due to aggregated data, and too much time spent performing reactive, ad-hoc analyses. The right business analytics solution can help these organizations more proactively manage their business, make fact-based decisions, and successfully plan for the future.

**LM:** Can you give us a brief scenario of what a savvy logistics team might be able to do once they put analytics work?

**O'Dwyer:** We recently helped Welch's consolidate transportation data from three different sources and achieve a return on their investment within 30 days. With operations in 35 countries, Welch's processes approximately 50,000 customer orders each year and delivers 35,000 to 40,000 shipments annually to its customers with a transportation and distribution spend of more than \$50 million per year.

We implemented a managed analytics solution that gave Welch's a mini data warehouse to effectively report and produce key performance indicators within a dashboard. Welch's can now view data from three disparate systems; and with easier access to business insights, the company achieved that return on their investment through higher utilization, more balanced shipments and network optimization.



**LM:** What are the tools/technologies that you need to harness data, put it into context, and put it to work to help you improve your logistics operations?

**O'Dwyer:** There are actually three foundational layers at play: First, data management and smart integration from TMS and WMS as well as freight audit and pay, industry benchmark data, or other external third sources; second, a data model that is designed for logistics users and is flexible enough to handle the complexity of the transportation network; but third, and most importantly, pre-configured analytics with metrics, KPI's dashboards, and relevant dimensions that provide the deep insight and root cause analysis capability being demanded.

**RFID: Buzz is back**

**Logistics Management:** Eight years ago you couldn't pick up a business publication without seeing some news on the Walmart or DOD RFID mandates. Only recently has it boiled up into the news again. What's driving the latest RFID buzz?

**Michael Liard:** There's been a new level of activity for the RFID industry since it was announced in August 2010 that Walmart would begin tagging apparel items for men's jeans and basics. Dozens of U.S. and international retailers and brands such as American Apparel, JCPenney, Macy's, Gerry Weber, and Serge Blanco have been stepping up their RFID tagging programs and efforts over the last two years, and VDC expects more will announce deployment plans

this year and next. The end result is billions of tags on apparel items expected in supply chain and in store environments across the world over the next few years, including more than 1.5 billion by the end of 2012 alone.

**LM: What are the biggest benefits to item-level tagging for retailers?**

**Liard:** According to studies completed over the last two or three years, such as the item-level tag research projects conducted by the Information Technology Research Institute (ITRI)—part of the Sam Walton Business School at the University of Arkansas—retail business results are able to be measurably improved using RFID item-level tags to achieve and maintain higher inventory accuracy levels, which in turn provided an uplift in sales; a reduction in out of stocks, as well as improved inventory management visibility; a reduction in shrink; improvement in profit margin; and a reduction in manual labor for inventory counts.

**LM: Are manufacturers getting to this level of tagging?**

**Liard:** An increasing number of manufacturers are moving toward item-level tagging. In the retail apparel sector, there are a several brands using RFID that operate closed-loop supply chains where they manufacture, distribute, and sell apparel in their own branded stores. These RFID end users are tagging at the source and reading the tags throughout the supply chain.

Open-loop retail apparel supply chains, such as Walmart's, are also deploying RFID at the item-level, asking their trading partners (such as VF Corp. and Hanes) to adopt RFID and use tags closer to or at the source; however, these deployments are more complex as a number of players are involved. In the IT asset arena, several manufacturers are embedding or attaching RFID to IT components and hardware such as servers and blades during manufacture.

**LM: How have readers and tags evolved over the past eight years?**

**Liard:** Prices for both readers and tags have come down steadily since 2004, and performance has improved. Tag

## TMS: Global growth ahead

**Logistics Management:** How has the TMS market weathered the economic storm?

**Steve Banker:** We just completed our TMS global study and found that the TMS market came charging back in 2012—year-over-year sales surged more than 12 percent.

**LM: Did the tough times help the TMS adoption rate?**

**Banker:** We did a supplier-based study where we asked TMS suppliers for their revenues; and while this type of study does not give you adoption rates, my impression from talking to them as well as shippers is that adoption is still woefully low.

**LM: What have been the drivers pushing the TMS market along over the past three or four years?**

**Banker:** The global economic slowdown, of course, has impacted the market the most. Companies that have bought during this time period are primarily buying TMS for the same reason companies have always purchased TMS, to reduce freight spend. The volatility of fuel prices and the desire to be green have put extra attention on this solution.

**LM: What would you say are the fastest growing segments of the TMS market?**

**Banker:** We divide TMS into fleet management, a solution for companies with transportation assets, and classic TMS for shippers without and transportation assets. Surprisingly, the growth in both segments is very close. On a global basis, the biggest surprise is the surge in buying of TMS in Latin America.

**LM: How as the onset of SaaS TMS helped overall adoption? Has it made it more approachable form a cost perspective?**

**Banker:** We look at four revenues categories: software, implementation, maintenance, and SaaS/Hosting. The SaaS category is between 20 percent and 25 percent of total revenues in the industry. So has it helped adoption? Absolutely.

A platform approach does provide cost advantages, but there are other advantages as well: ease of on-boarding new carrier partners, less finger pointing around freight audit and accessorials, and the ability to use the network traffic to do some lane benchmarking. But traditional behind the firewall solutions, in aggregate, are still functionally richer.

**LM: What is your outlook for TMS market growth over the next few years?**

**Banker:** I see double-digit growth for the next year or two.

costs still depend on volume and packaging/form factor, but improvements made in the number of die per silicon wafer for ICs, less expensive antenna materials, and other developments have helped drop the cost of passive UHF EPC tags—especially for high-volume, low-cost item-level tagging deployments where an inlay is now a few cents. Passive UHF EPC reader costs, too, have come down due to reader chipset innovation that reduces the number of components, size and overall costs.

**LM: What's holding supply chain organizations back from adopting RFID?**

**Liard:** Supply chains are complex environments, and each industry and specific business processes is unique. According to our end-user research, a few considerations come to mind: cost concerns linger, including a lack of understanding around ROI and total cost of ownership; lack of awareness and education around specific applications/use cases and RFID value propositions; bar codes may be providing “good enough” visibility, therefore, an alternative AutoID system is not required; and now that we can effectively capture RFID data through improved technology/hardware, there's now a question as to how we can effectively leverage that RFID data.

**Social Media: Liking productivity**

**Logistics Management:** You've presented at a number of conferences recently on how social media should be defined in the business world.

**Most of us are using it in our personal lives, but how do you see social media evolving to help logistics professionals do a better job?**

**Adrian Gonzalez:** First, let's define “social media.” Most supply chain and logistics executives have a very limited definition of the term—for them, social media equals Facebook, Twitter, and LinkedIn. As a result, executives have a hard time seeing how social media can have an impact on supply chain and logistics processes.

But social media also includes a broad set of solutions that companies are deploying internally to facilitate collaboration and communication between employees and functional groups, as well as externally with suppliers, customers, and other partners in a private manner. At the end of the day, social media is another tool logistics professionals have in their toolbox to facilitate communication and collaboration with their peers and partners.

**LM: How has your social media vision for logistics and supply chain professionals been accepted?**

**Gonzalez:** Pretty well, but the next and more difficult step is seeing the business value. In a survey I conducted last year, supply chain and logistics executives said “unclear business value” was the biggest obstacle to achieving greater adoption of social media in supply chain processes. In essence, what many executives are saying is, “We know social media will transform supply chain processes, we just don't know how exactly, and where to start and why.”

The problem is that many executives get caught up in the terminology—blogs, wikis, tweets, discussion forums, RSS, Enterprise 2.0—and view social media as more work to do, more information they need to sift through in addition to emails and voice-mails, instead of taking a step back and thinking through the work they and their colleagues need to get done, and then determining how these tools can help them achieve their objectives in a more productive and effective manner.

**LM: If you dare to dream, where does social media take business communication five years from now?**

**Gonzalez:** In five years, we won't be talking about “social media in business,” it will just be business. This is history repeating itself. Back in the early 90s, as the Internet and web were creeping into the business world, we were having the same types of conversations, and everybody (thanks to analysts and pundits) were putting “e” in front of everything. The Internet is now ubiquitous, and we don't even think about it as we go about our work. The same will be true with social media.

That said, here are some general predictions: First, the worlds of social media and mobile computing—smartphones and tablets—will continue to merge, and that's where a lot of the innovation will come from; second, email will become less relevant, especially for young professionals who prefer texting; third, “public” social media tools like Facebook, Twitter, and LinkedIn will become better integrated with “Enterprise” social media tools, leading to faster connectivity and enhanced business intelligence.

**LM: While humans love to communicate, we don't like change. What would be a simple piece of advice for a logistics manager who may be reluctant to gravitate toward social media?**

**Gonzalez:** Don't fear it, and don't fight it because sooner or later you will have to use it. Think beyond Facebook, Twitter, and LinkedIn, and don't get caught up in all the buzz words. Instead, focus on the work you and your colleagues need to get done and see if social media tools are a better, more effective solution than email, conference calls, and other ways you're currently communicating and collaborating. Finally, encourage the young professionals on your team to take a leadership role in finding opportunities to improve existing processes using social media, and train/mentor colleagues who are less experienced using these tools.

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