



# Supply Chain Visibility in Business Networks

Current State of Supply Chain Visibility

3/11/2014

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## Research

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## Disclosure

Your trust is important to us. As such, we are open and transparent about our financial relationships and our research processes.

## Research Methodology and Overview

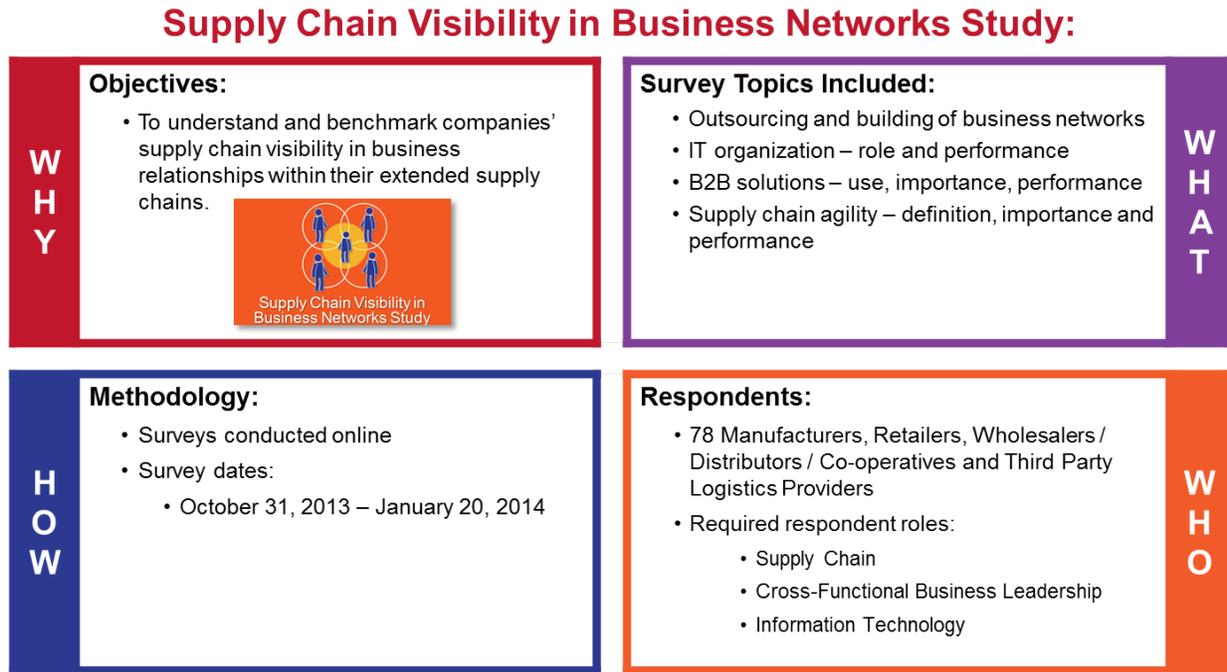
Companies want to build end-to-end value networks. The supply chain processes are more dependent on trading partners and interactions of the extended supply chain; but, the IT capabilities are largely based on electronic data interchange (EDI) and spreadsheets. It is inadequate. IT spending is focused on Enterprise Resource Planning (ERP) which automates the enterprise, not the network. This is a conundrum for the supply chain leader.

The goal of this report is to understand current capabilities and tap into the future aspirations of supply chain leaders. The report is designed to raise the issue to drive alignment between IT and line-of-business executives on how to deliver on the requirements of supply chain visibility in extended business networks.

This report is based on the results of a quantitative study. The findings are augmented with supply chain interaction through inquiry and strategy days. The respondents of this study were 78 supply chain leaders across a range of industries. Fifty-nine percent of the respondents are heads of supply chain teams.

To help the reader, an overview of the report is shared in Figure 1. (Each study that we do starts with a clear statement of purpose of objectives and goals.) A detailed summary of the respondent demographic data and supporting research findings is shared in the Appendix in Figures A-K.

Figure 1. Survey Overview



Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)

When reading this report, remember that respondents answered this study of their own free will. It was not fielded to a third-party panel where the results are more suspect.

The primary incentive to take the study was the agreement that all respondents would get a copy of the final report with the opportunity to talk through the results at study completion in an hour conference call. In addition, some respondents were offered the chance to get a \$10 Starbucks gift card in exchange for taking the survey.

Each figure in this report is embedded as an image. At the bottom of each image is the question asked, information about the respondents answering the survey question, and some background on the charting. This level of detail is shared to ensure completeness of thought. In addition, [the report summary of all results is available to review](#) and share with others.

As part of our standard processes, individual respondent answers and company names are kept confidential.

## Executive Overview

Teams claim that they are building end-to-end supply chain processes, but we do not find that this is true. Despite the growing need to automate the extended supply chain, the focus of most companies is on enterprise automation. The process flows of the extended supply chain are dependent on spreadsheets and Electronic Data Interchange (EDI). It is not sufficient.

Companies want better supply chain visibility. The gaps in current supply chain capabilities are large. While EDI is effective in moving transactional data, it is point-to-point lacking community interaction.

Companies are seeking new and deeper forms of supply chain visibility through business networks. It takes many forms. It is foundational to deliver on the promise of agility. They want to be more agile and the current IT architectures are not meeting this need.

High level survey findings are:

- **Outsourcing Is a Reality. It Is Here to Stay.** For the average company, outsourcing of manufacturing and transportation is a reality. In the study, approximately 90% of respondents report having some level of outsourcing. Additionally, 30% outsource 40% or more of their manufacturing, and 55% outsource at least 40% of their logistics on a volume basis.
- **Supply Chain Visibility Has Many Forms. Few Are Being Delivered Well.** The term supply chain visibility is a nebulous term with many meanings. There is no standard definition. In this report, we share insights on the forms of visibility and the issues with each. Visibility within the company is being addressed by current IT architectures, but B2B architectures to support emerging supply chain visibility requirements are evolving.
- **The Gaps in Supply Chain Visibility Are Large. The Satisfaction with EDI Is High. The Confidence in ERP to Close the Gap Is Low.** The average company with ERP has seven different ERP instances and 49% of respondents report ERP spending plays a major role in their IT budget. However, as shown in this report, the gaps for supply chain visibility are high and the confidence that ERP implementations can close the gaps is low. As a result, the extended supply chain runs on EDI and spreadsheets. In the words of one supply chain leader that we interviewed, *“Today, it is much like chewing gum, bailing wire and a shoestring.”*

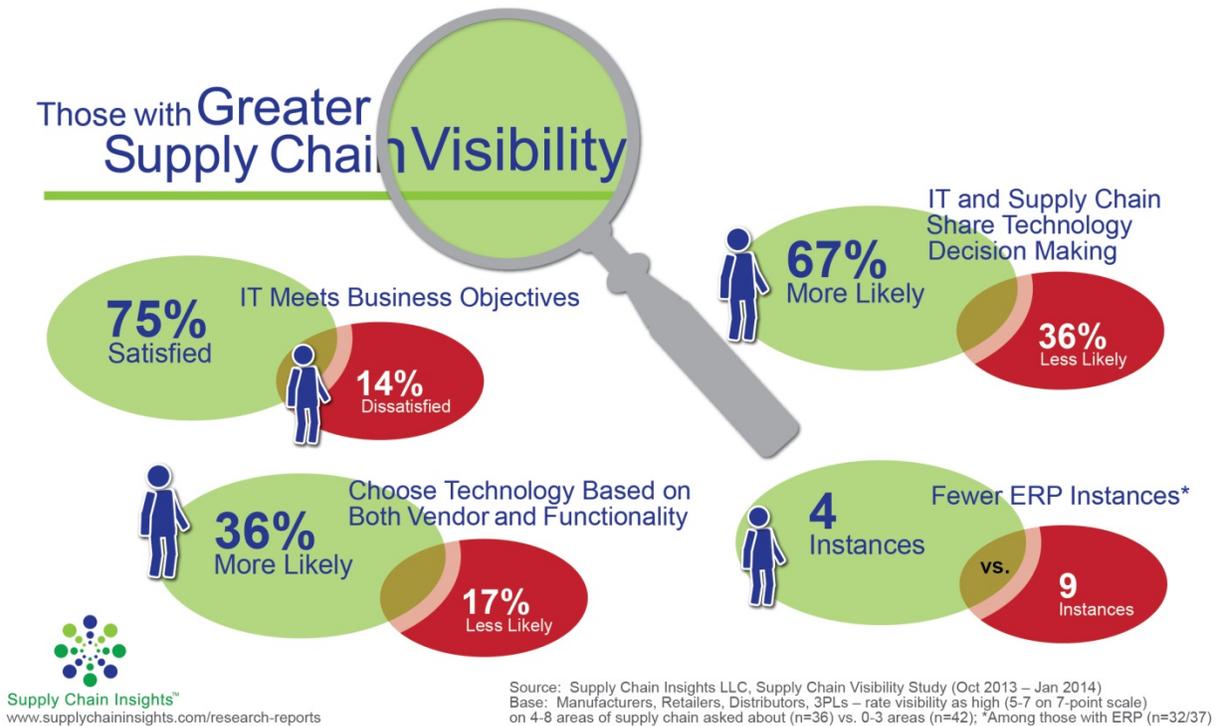
In this report, we give an overview of the current state of supply chain visibility—the different forms and the state of each—and share insights on current levels of importance and

performance. We then look critically at current efforts of IT investment/focus and give recommendations on how business users can work with IT teams to close these gaps.

## Evolution of Supply Chain Visibility

The term “*supply chain visibility*” is bandied about, but it lacks a consistent definition. In the study, companies that rate their supply chain visibility better than others have the characteristics outlined in Figure 2.

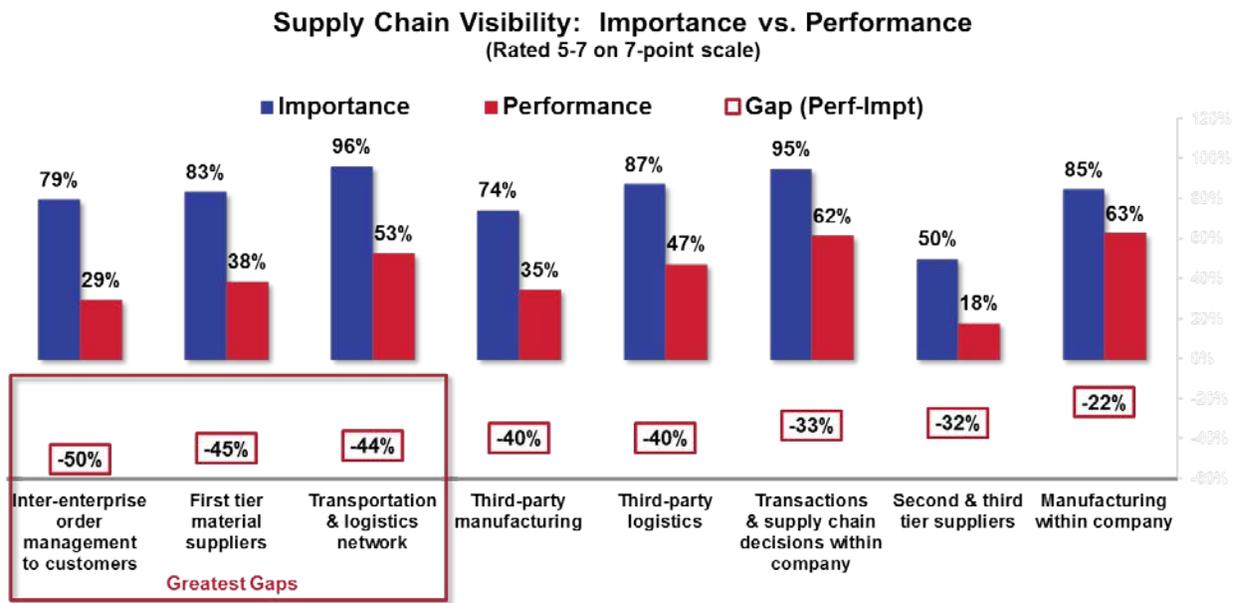
Figure 2.



There are many forms of visibility. Today, the most important are transportation and logistics network interactions and enterprise transactions. The greatest gaps are in the network for the coordination of orders, first-tier suppliers, and transportation and logistics.

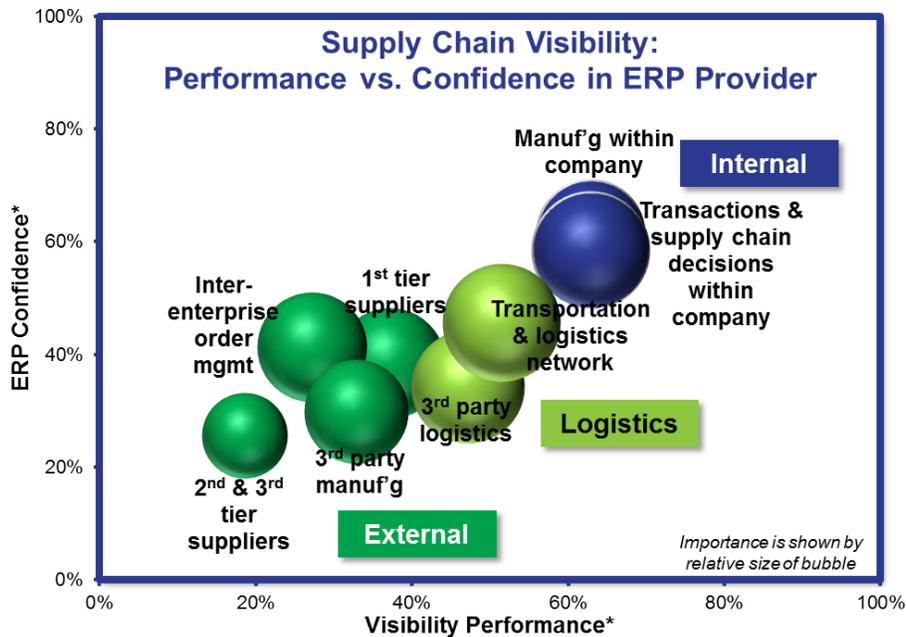
As shown in Figure 3, the current focus of most companies is enterprise automation. Supply chain visibility in the extended supply chain is still in its infancy.

Figure 3. Current State of Supply Chain Visibility



Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78)  
 Q15. Please think about supply chain visibility. How important is it for your company to have visibility of the supply chain in each of the following areas? SCALE: 1=Not at all important, 7=Extremely important  
 Q16. How well do you think your company performs on having supply chain visibility in each of these same areas? SCALE: 1=Poor, 7=Excellent

Figure 4. Confidence in the Enterprise Resource Planning to Close the Gap in Supply Chain Visibility



Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Have ERP System (n=70)  
 \*All measures based on those rating 5-7 on a 7-point scale  
 Q15. Please think about supply chain visibility. How important is it for your company to have visibility of the supply chain in each of the following areas? SCALE: 1=Not at all important, 7=Extremely important  
 Q16. How well do you think your company performs on having supply chain visibility in each of these same areas? SCALE: 1=Poor, 7=Excellent  
 Q17. How confident are you that your ERP provider can give your company the supply chain visibility it needs in these same areas we asked about before? SCALE: 1=Not at all confident, 7=Very confident

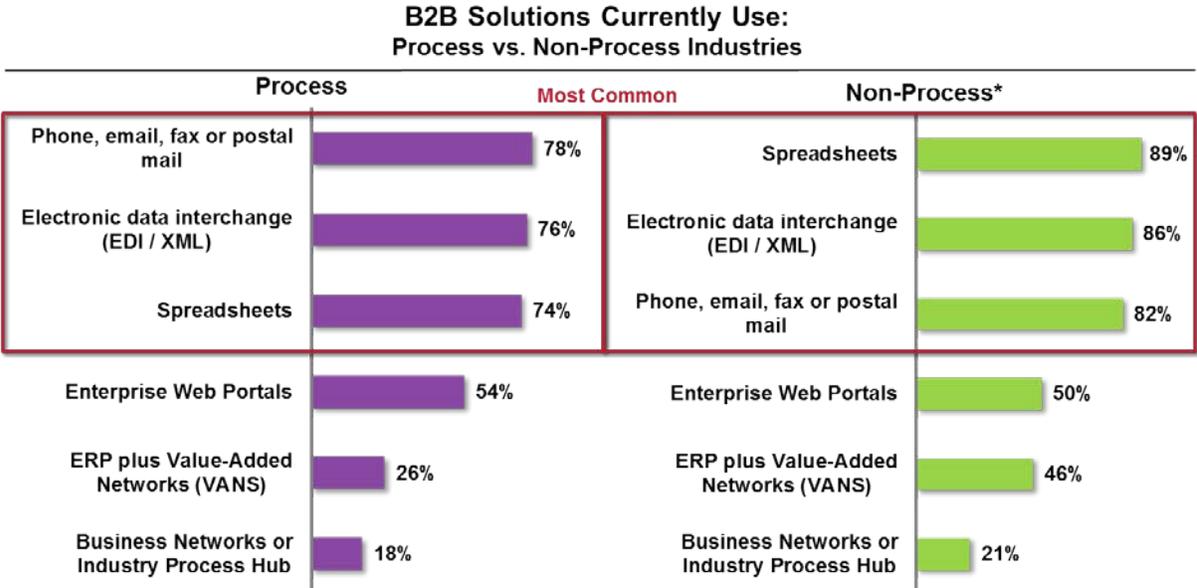
As shown in figure 4, the confidence of supply chain leaders to close these gaps through ERP efforts is low. The largest gaps for ERP initiatives by supply chain leaders are in the areas of transportation in the extended supply chain. Manufacturing strategies for supply chain visibility within the enterprise can be solved through ERP initiatives. The rest cannot be.

To close the gap and improve supply chain visibility, there is not a clear path forward. The friction between line-of-business leaders and IT is an issue. In the study, 49% of respondents report that ERP was a major focus in their 2013 IT budgets. The spending is so substantial that line-of-business leaders are struggling to find funds for non-ERP supply chain visibility initiatives; and in general, the IT team is not in general agreement that the visibility gap cannot be closed through ERP.

## Current State of B2B Connectivity

B2B efforts are now three decades old; yet, as shown in Figure 5, the primary mechanisms are based on manual efforts. The dependency on spreadsheets is limiting the evolution of supply chain visibility.

Figure 5. Current State of B2B Connectivity



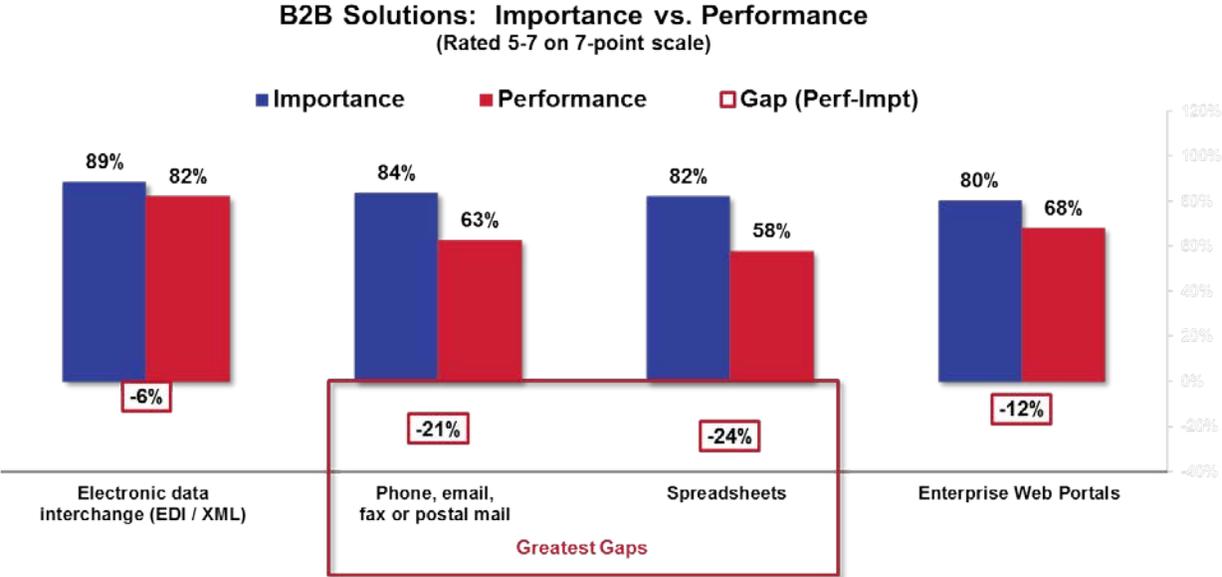
Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Process Industry (n=50) Non-Process Industry (n=28)  
 \*Non-Process Industry = Discrete, Retail and Other – CAUTION: SMALL BASE SIZE  
 Q37. Which of the following B2B solutions, if any, does your company currently use? Please select all that apply.

The evolution requires the automation of both planning and transactional data. It also requires the synchronization and harmonization of data between multiple parties for differences in the context of products, locations, and calendars. To close this gap, successful companies are

building private networks and investing in public network capabilities. The most successful private network is Walmart’s Retail Link.

As shown in Figure 6, while the current state of EDI is both important and working well, the other forms of connectivity currently used in supply chain networks are not. Portals do not provide a system of record for the network and phone, email, fax, and spreadsheet information is manual and unreliable.

**Figure 6. Gaps in B2B Connectivity**

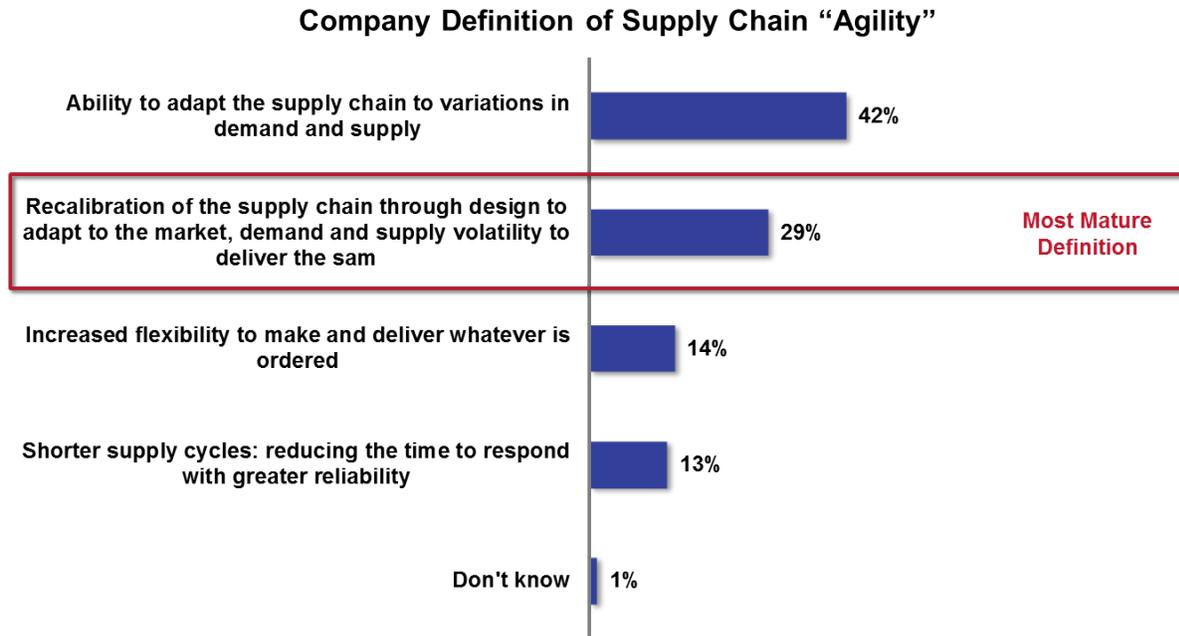


Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total Have Solutions (varies by solutions currently use n=41-62)  
 Q38. For each of the B2B solutions that your company uses below, please indicate how important it is to your company. SCALE: 1=Not at all important, 7=Extremely important  
 Q39. And for these same B2B solutions, please rate its performance for your company. SCALE: 1=Poor, 7=Excellent

## The Role of Supply Chain Visibility in Improving Agility

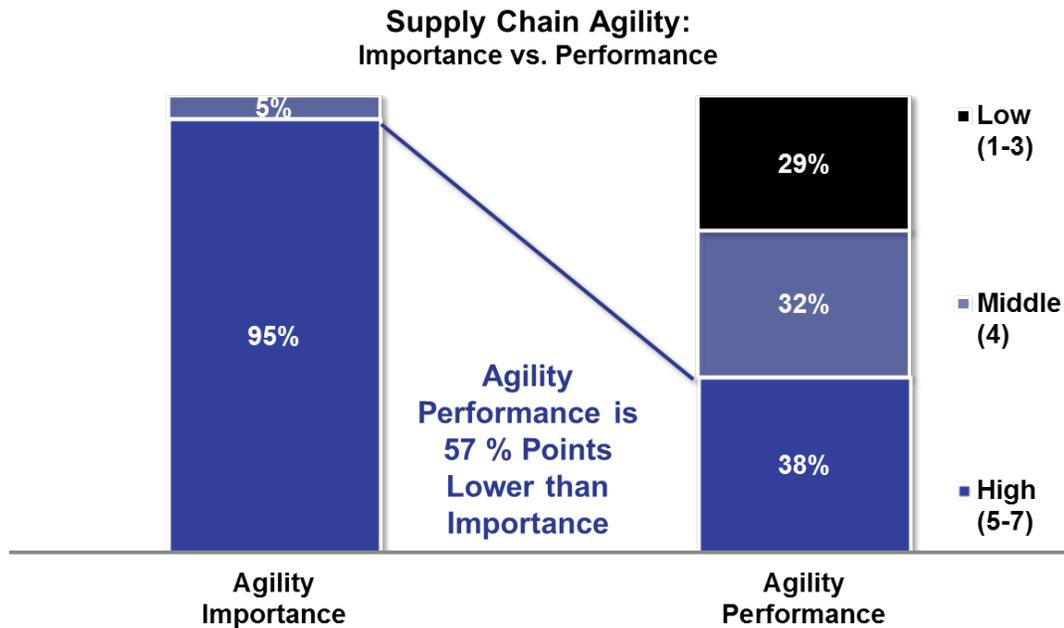
While companies define agility in many different ways, the promise of supply chain visibility is to make the company more “agile.” As demand and supply volatility increases, and companies become larger, supply chain visibility grows in importance. In Figure 7, we capture the definition of agility from the respondents. The most mature companies want to recalibrate the supply chain as the buy- and sell-side markets shift to deliver the same cost, quality and customer service. They are clear that agility is a capability that is much deeper than shorter cycles. In the survey, companies that rate themselves as more agile also rate themselves higher on visibility capabilities.

Figure 7. Definitions of Agility



Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78)  
 Q24. How does your company define what it means for the supply chain to be "agile"? Please select the one that fits best.

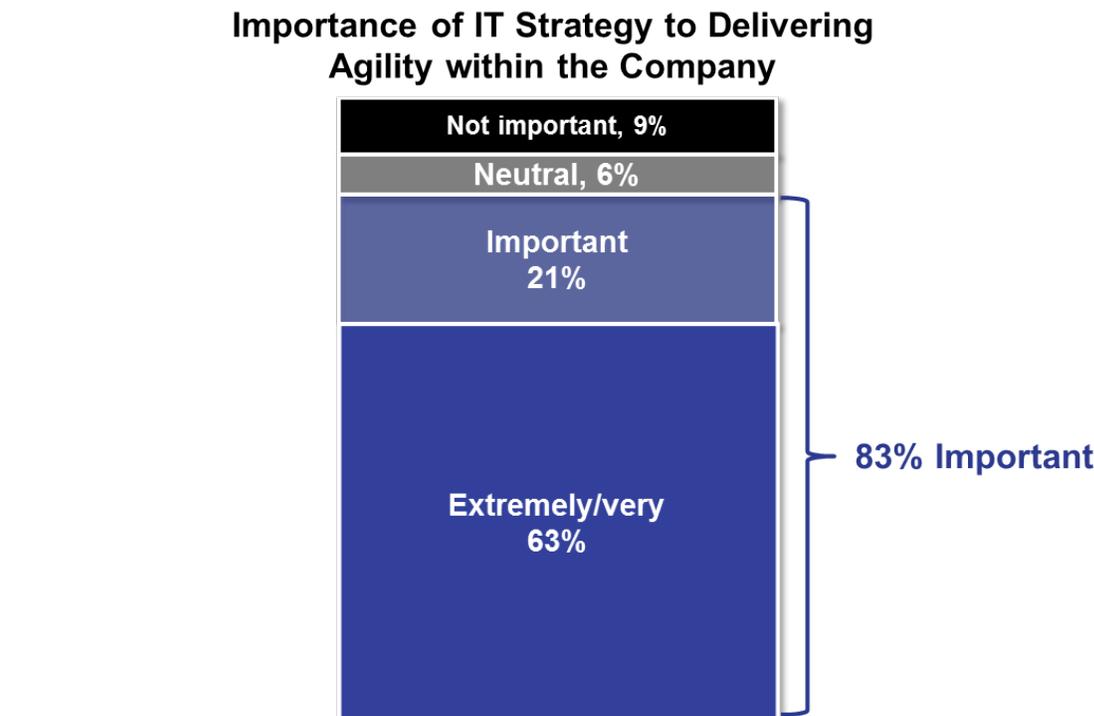
Figure 8. Gaps in Performance Ratings and Importance of Agility



Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78)  
 Q25. How important is it for your company's supply chain to be "agile" in 2014? Please base your answer on however your company defines agility. SCALE: 1=Not at all important, 7=Extremely important  
 Q26. How would you currently rate your company's supply chain in terms of being "agile"? SCALE: 1=Not at all agile, 7=Extremely agile

The gap between the desired level and current state of agility is large, as shown in Figure 8. Over 83% of companies would like to have their IT strategies deliver on the agility promise. A key component of delivering on the agility promise for line-of-business leaders, as shown in Figure 9, is closing the gaps on supply chain visibility.

**Figure 9. The role of IT in Delivering on the Agility Promise**



**Source:** Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78)  
 NOTE: 1% answered "don't know" (not shown on chart)  
 Q28. How important is your information technology strategy to the delivery of agility within your company? SCALE: 1=Not at all important, 7=Extremely important

## Alignment of IT and Business Decisions

To close the gaps and deliver both supply chain visibility and improved agility, business leaders need to align with IT. Today, there is a gap. IT budgets are tight and resources are scarce. It is tough for supply chain leaders to drive innovation through IT. For nearly half of respondents, ERP spending plays a major role in their 2013 IT budgets, and as shown in this report, this is not the answer to close the gap in delivering B2B supply chain visibility.

Instead, as shown in Figure 10, the primary focus for the IT department is IT maintenance of keeping enterprise systems safe and secure. Process industries are more interested in adopting new forms of innovation.

Figure 10. The IT Focus within Process and Non-Process Companies

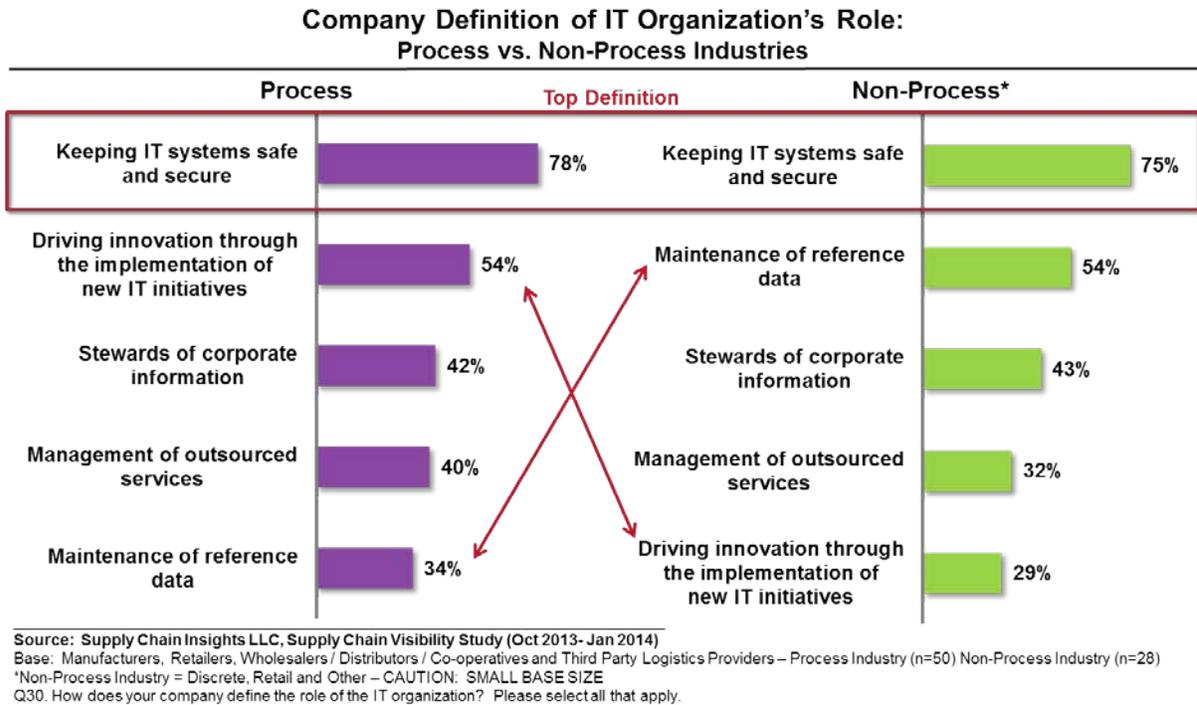
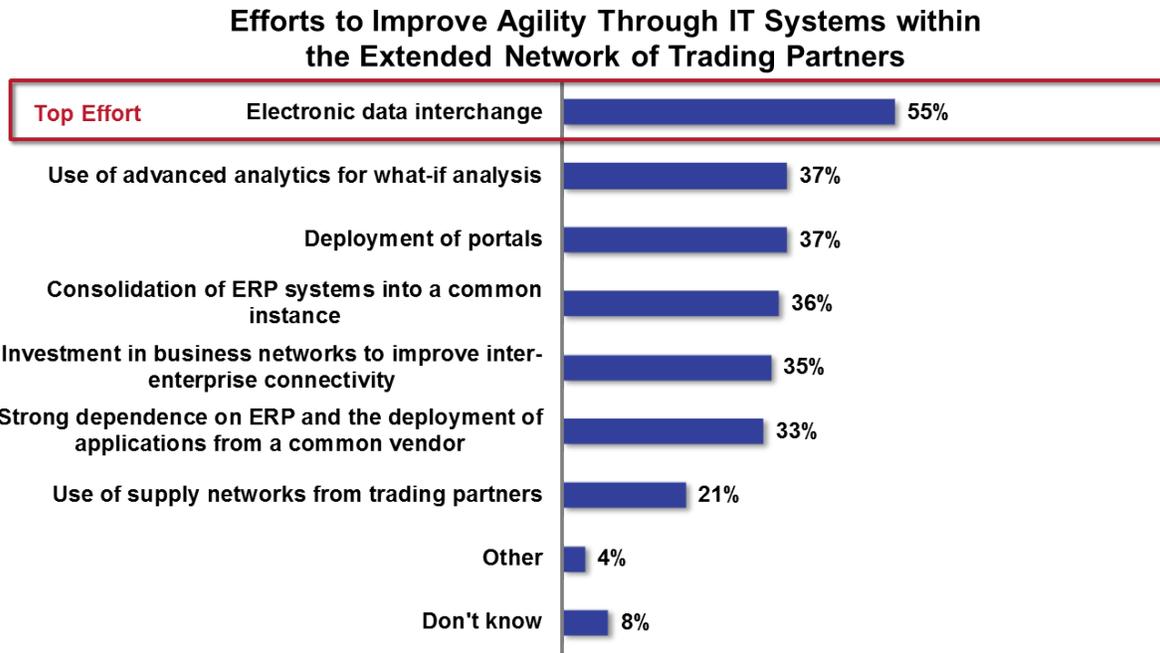


Figure 11. Current IT Focus



Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78)  
 Q29. What are you currently doing to achieve greater agility through your IT systems in the extended network of your trading partners?  
 Please select all that apply.

Today, in support of the end-to-end supply chain, the IT focus is on EDI and the automation of transactional data. The larger issues of the automation of planning data for “what-if” analysis, and the delivery of supply chain visibility in the extended network, are a major gap. This gap is clearly outlined in Figure 11.

## Recommendations

To move forward, it is important for supply chain leaders to get clear on the definitions of supply chain visibility. The next step is to align IT and line-of-business leaders on a road map to close the gap. The combination of private and public networks along with EDI is promising, but requires a clear definition of the IT architecture. Here are three steps to take:

- 1. Define Priorities and Align Solutions.** While EDI is effective in the management of transactional data, it is important for companies to document requirements for supply chain visibility for transportation, sourcing and manufacturing. This includes planning and unstructured data. These are very different by visibility type and by tier of relationship.
- 2. Get Clear on What You Are Doing Today. Document the “As Is” and the “To Be” States.** Most manufacturers are not clear on what they are doing today. The documentation of the “as is” condition is usually eye-opening. Most companies overstate their current performance. The goal is to have transactions flow hands-free and to have the right data for the right person in the supply chain when they need it. Most companies are just at the starting line and the evolution of these programs requires the implementation of a multi-year roadmap of initiatives.
- 3. Align IT Strategies with the Future Goals.** Line of business leaders need to work with IT to align IT spending and future plans for supply chain visibility. This needs to include the rationalization of ERP spending, the maximization of private networks (where available) and the qualification of new forms of public supply chain visibility solutions. This includes the work being done by **Elemica** for Process Industries, **Exostar** for Aerospace and Defense, **E2open** for high-tech and electronics, **GXS** for Healthcare, and **GT Nexus** for transportation/logistics.

## Summary

The implementation of supply chain visibility grows more important with outsourcing and the building of supply chain relationships in the extended network. IT programs are not aligned to close the gap. Making this happen quickly is essential for business continuity, corporate social responsibility, and the prevention of major supply chain outages. The extended supply chain is too important to be connected primarily with spreadsheets, faxes and phone calls.

# Appendix

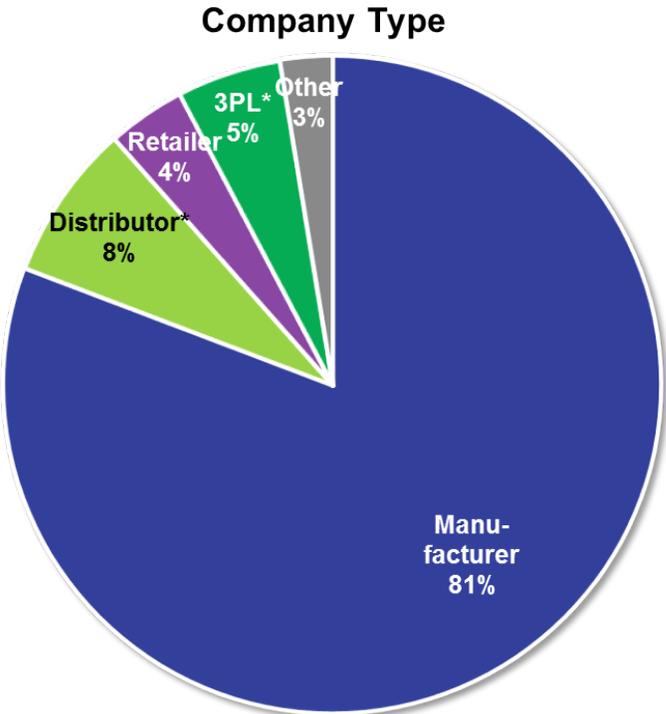
## Demographic Overview of the Quantitative Study

In this section, we share the demographic information of survey respondents as well as additional charts referenced in the report to substantiate the findings.

The participants in this research answered the surveys of their own free will. There was no exchange of currency to drive an improved response rate. The primary incentive made to stimulate the response was an offer to share and discuss the survey results in the form of Open Content research at the end of the study. In addition, some respondents were offered the chance to get a \$10 Starbucks gift card in exchange for taking the survey.

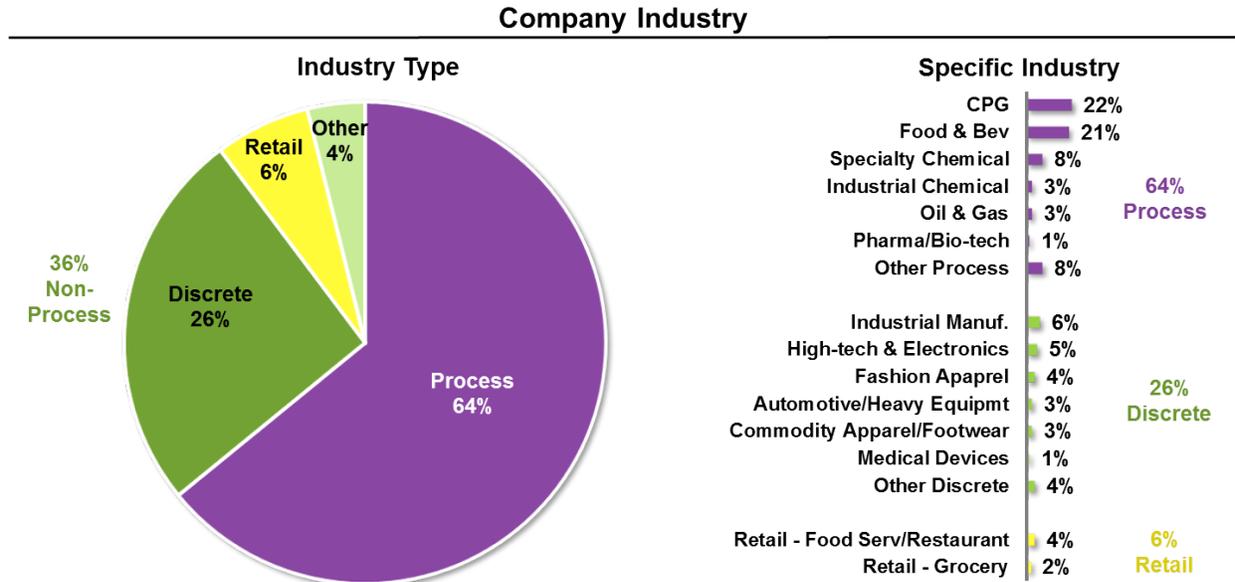
The names, both of individual respondents and companies participating, are held in confidence. The demographics are shared to help the readers of this report gain a better perspective on the results. The demographics and additional charts are found in figures A–K.

**Figure A. Company Overview of Respondents**



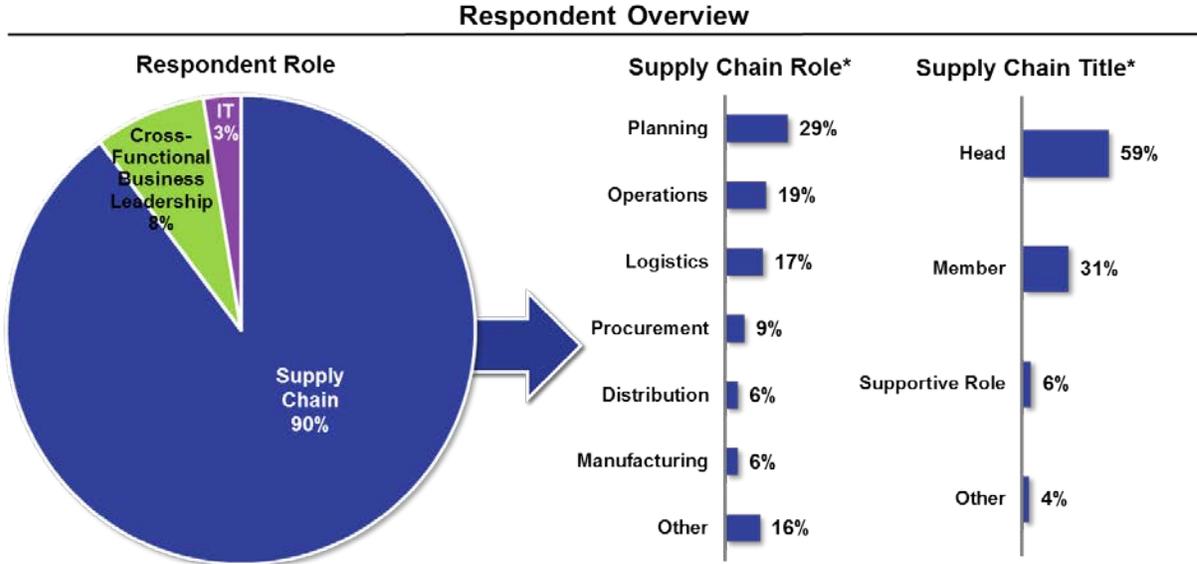
Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78)  
\*Distributor = Wholesaler, Distributor, or Co-operative; 3PL = Third Party Logistics Provider  
Q1. Which of the following best describes you or your company? Please select the one that fits best, even if the terminology isn't quite right.

Figure B. Company Respondent by Industry



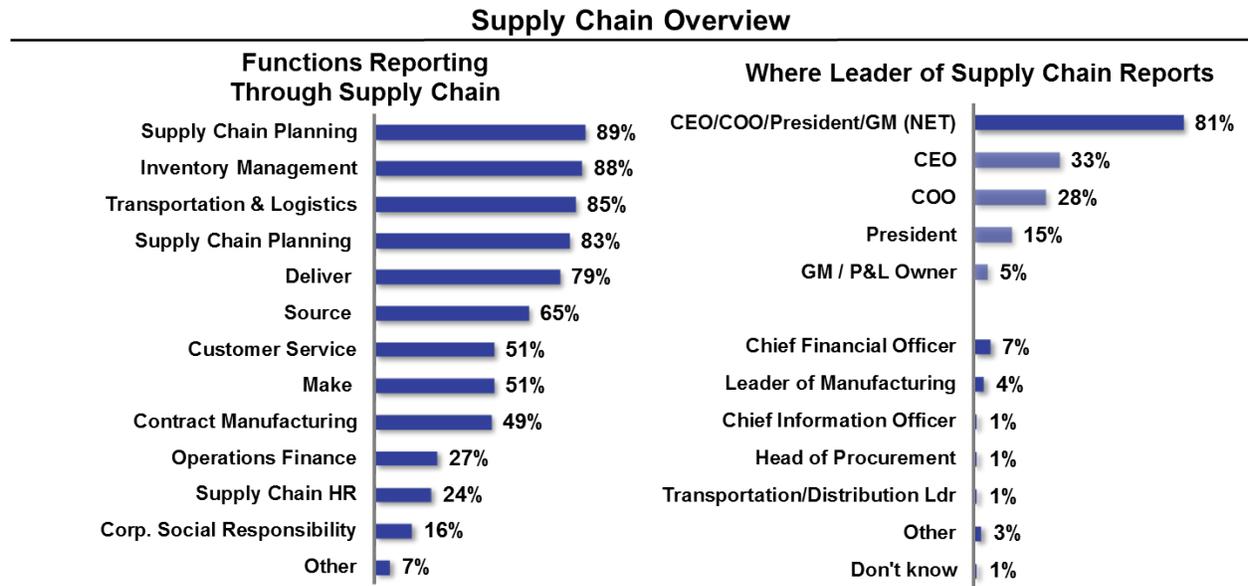
Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78)  
 Q41. Which industry grouping best defines your company? Please select the one that best applies.

Figure C. Company Respondent by Role



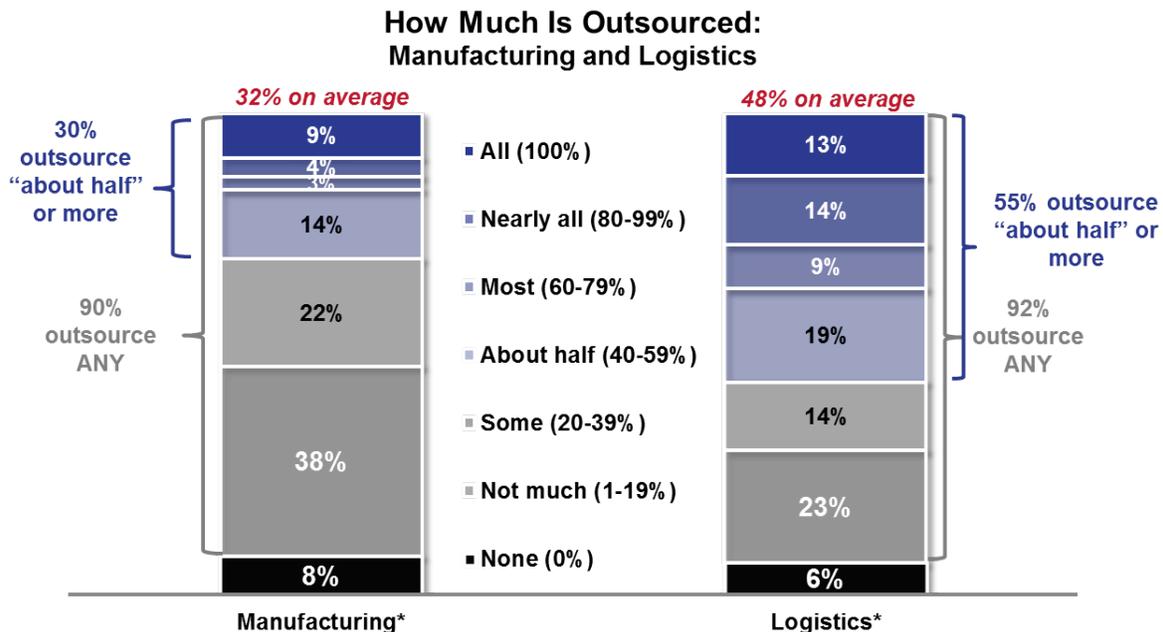
Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78); \*Base: Supply Chain Role (n=70)  
 Q3. Which of the following best describes your current role, even if the terminology isn't quite right?  
 Q5. Which of the following best describes your role within the supply chain? Again, please select the one that fits best, even if the terminology isn't quite right.  
 Q6. And which of the following best describes your title or position within the supply chain?

Figure D. Overview of Reporting Relationships



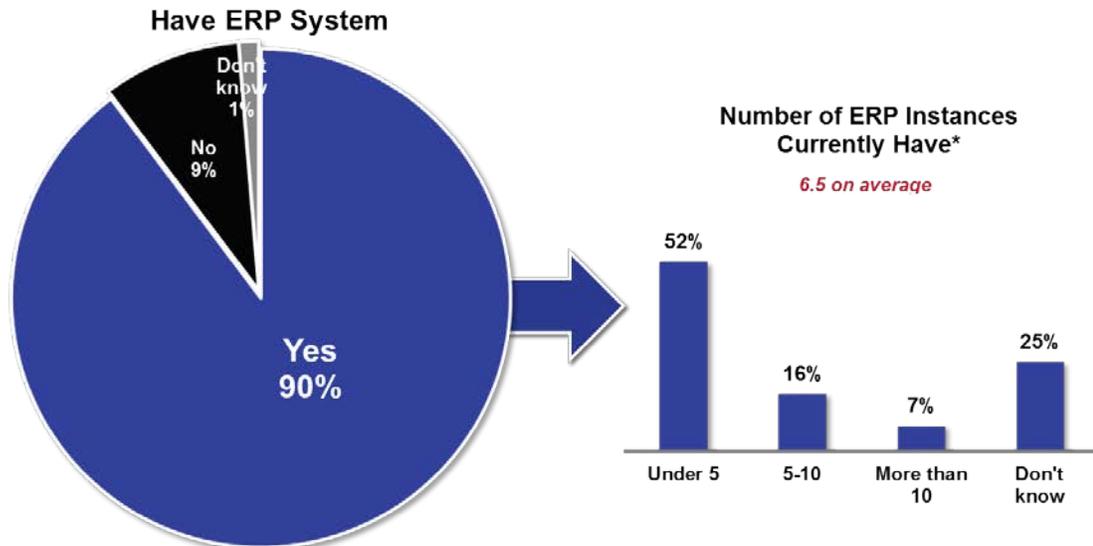
Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Have a Supply Chain Organization (n=75)  
 Q20. Companies define their supply chain organizations in different ways. Please tell us how you define your company's supply chain by selecting which function(s) report through the supply chain organization. Please select all that apply.  
 Q21. At your company, to whom does the leader of your supply chain organization report?

Figure E. State of Supply Chain Outsourcing



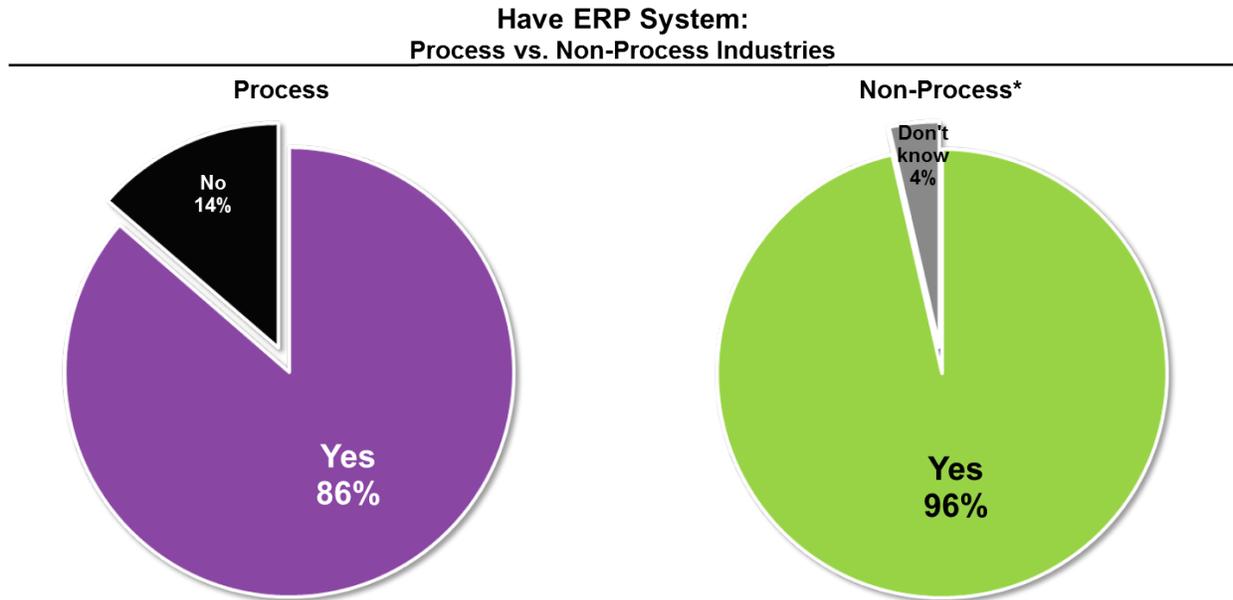
Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78)  
 \*Manufacturing: 3% answered "don't know" (not shown on chart); Logistics: 1% answered "don't know" (not shown on chart)  
 Q7. In 2013, how much of your company's manufacturing is outsourced? Your best estimate is fine.  
 Q9. In 2013, how much of your company's logistics is outsourced to a third-party logistics (3PL) provider? Your best estimate is fine.  
 For the purposes of this survey, a third-party logistics provider is a company that processes orders and ships goods on your behalf.

**Figure F. Current State of ERP Systems**



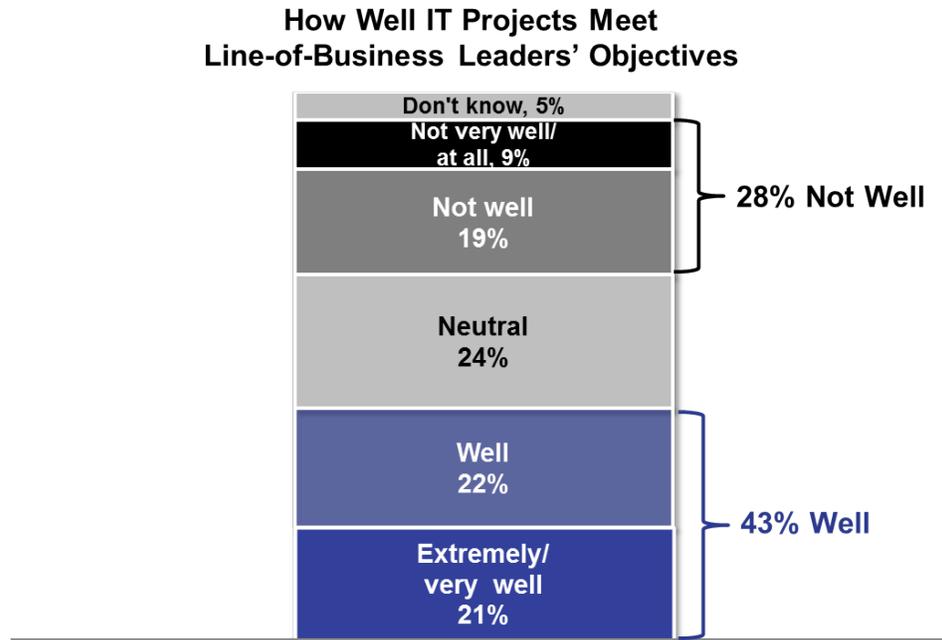
Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78) \*Base: Have ERP system (n=69)  
 Q13. Please think about Enterprise Resource Planning (ERP) systems. For the purposes of this study, ERP is a packaged software solution that may include financials, human resource management, supply chain planning, transportation planning for process automation within the enterprise. Does your company currently have an ERP system?  
 Q14. How many ERP instances does your company currently manage, if any? Your best estimate is fine. NUMERIC RESPONSE

**Figure G. Deployments of ERP Systems**



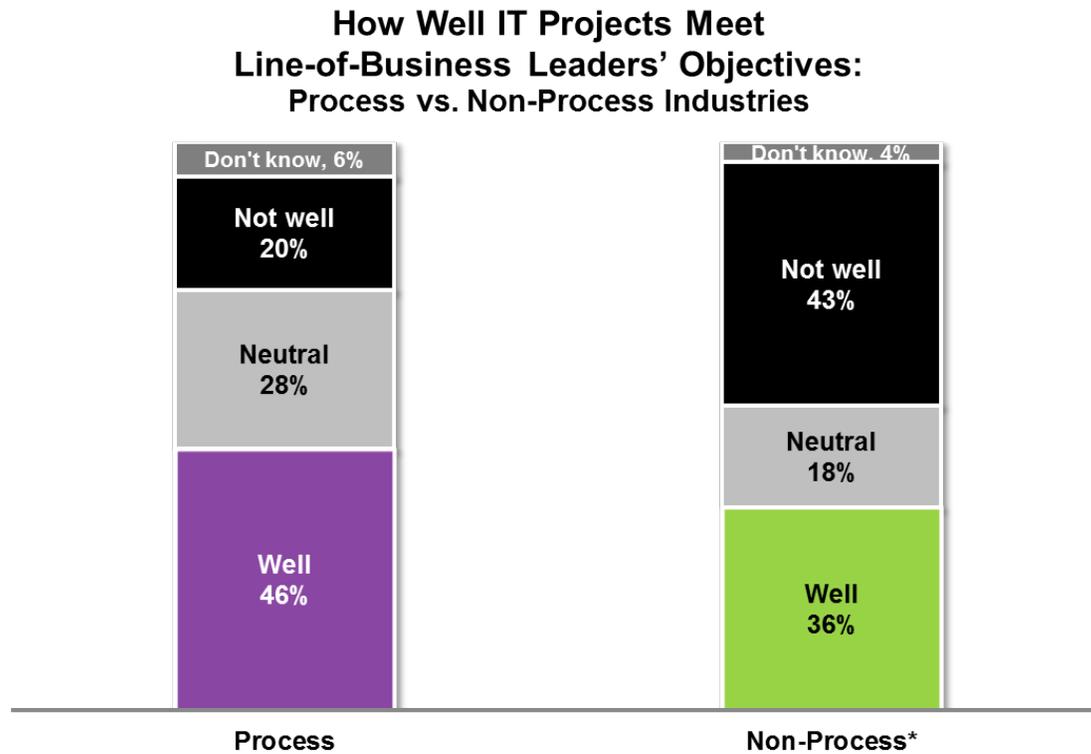
Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Process Industry (n=50) Non-Process Industry (n=28) \*Non-Process Industry = Discrete, Retail and Other – CAUTION: SMALL BASE SIZE  
 Q13. Please think about Enterprise Resource Planning (ERP) systems. For the purposes of this study, ERP is a packaged software solution that may include financials, human resource management, supply chain planning, transportation planning for process automation within the enterprise. Does your company currently have an ERP system?

Figure H. Success in Meeting IT Objectives



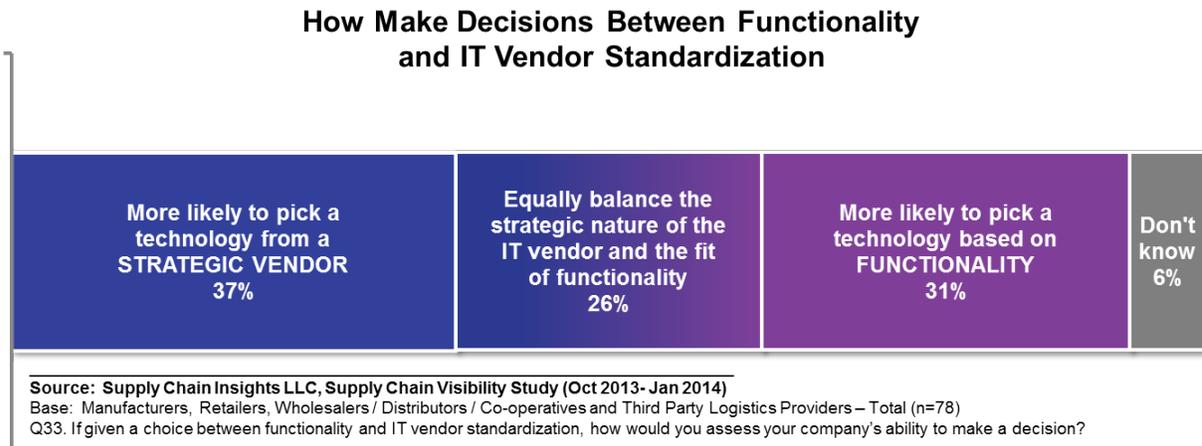
Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Total (n=78)  
 Q32. In general, how well do your IT projects meet the line-of-business leaders' objectives? SCALE: 1=Not at all, 7=Extremely well

Figure I. IT Success by Industry Type

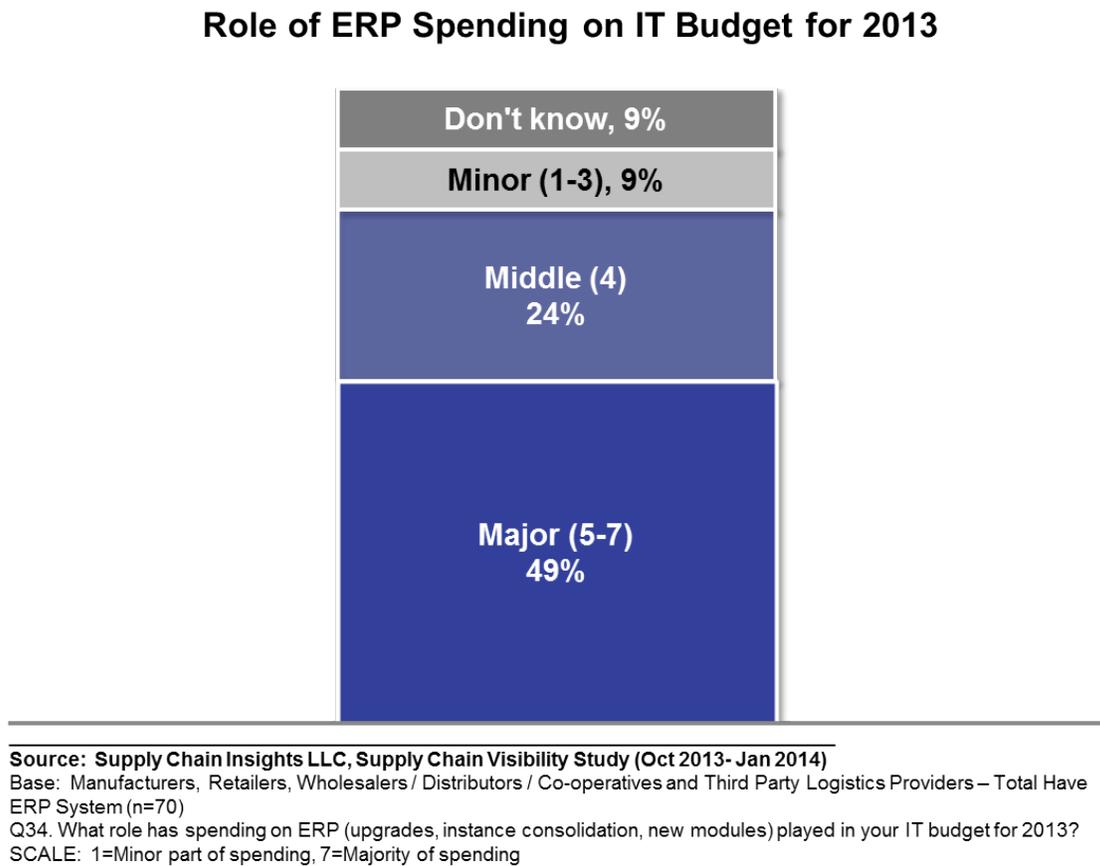


Source: Supply Chain Insights LLC, Supply Chain Visibility Study (Oct 2013- Jan 2014)  
 Base: Manufacturers, Retailers, Wholesalers / Distributors / Co-operatives and Third Party Logistics Providers – Process Industry (n=50) Non-Process Industry (n=28) \*Non-Process Industry = Discrete, Retail and Other – CAUTION: SMALL BASE SIZE  
 Q32. In general, how well do your IT projects meet the line-of-business leaders' objectives? SCALE: 1=Not at all, 7=Extremely well

**Figure J. Decision Process for IT Selection**



**Figure K. ERP Spending**



## Additional Reports of Interest

[Voice of the Supply Chain Leader – 2014](#)

[EDI: Workhorse of the Value Chain](#)

## About Supply Chain Insights LLC

Founded in February, 2012 by Lora Cecere, [Supply Chain Insights LLC](#) is focused on delivering **independent, actionable and objective advice for supply chain leaders**. If you need to know which practices and technologies make the biggest difference to corporate performance, turn to us. We are a company dedicated to this research. We help you understand supply chain trends, evolving technologies and which metrics matter.

## About the Author Lora Cecere



Lora Cecere (twitter ID [@lcecere](#)) is the Founder of [Supply Chain Insights LLC](#) and the author of popular enterprise software blog [Supply Chain Shaman](#) currently read by 5,000 supply chain professionals. Her book, ***Bricks Matter***, (co-authored with Charlie Chase) published on December 26<sup>th</sup>, 2012. She is currently working on a second book, *Metrics That Matter*, to publish in the fall of 2014.

With over nine years as a research analyst with **AMR Research, Altimeter Group, and Gartner Group** and now as a Founder of Supply Chain Insights, Lora understands supply chain. She has worked with over 600 companies on their supply chain strategy and speaks at over 50 conferences a year on the evolution of supply chain processes and technologies. Her research is designed for the early adopter seeking first mover advantage.