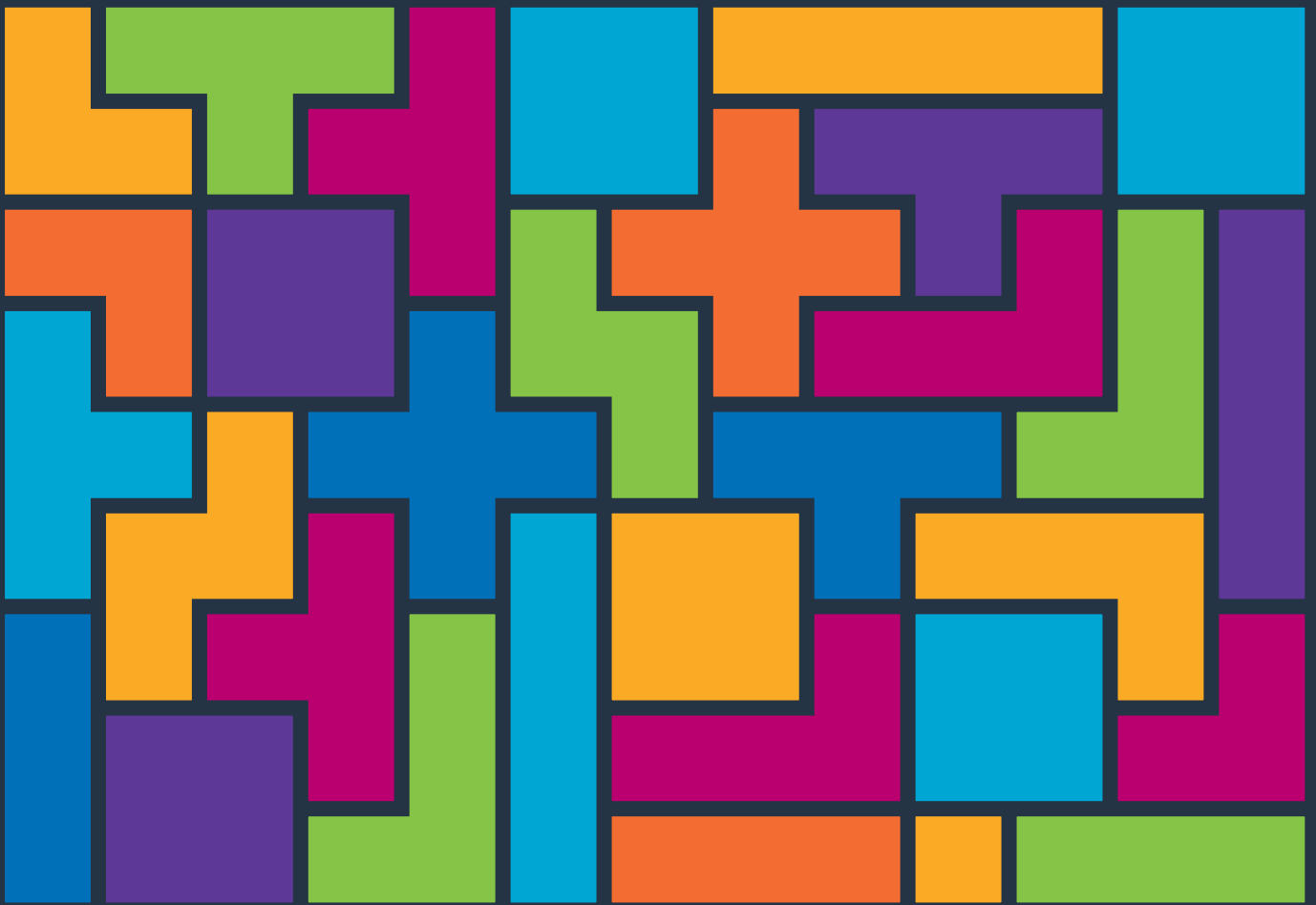


The State of Logistics Outsourcing ✦ Results and Findings of the 15th Annual Study

2010 THIRD-PARTY LOGISTICS



About the Images: Puzzling Logistics Challenges

A puzzle is a question, problem or contrivance designed for testing ingenuity. A brain-teaser is something (as a puzzle) that demands mental effort and acuity for its solution. Supply chain executives are challenged to put their puzzle-solving skills to the test to surmount the many issues impacting logistics and supply chain management in 2010 and into the future.

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SUPPORTING ORGANIZATIONS



EXECUTIVE SUMMARY

The State of Logistics Outsourcing in 2010



This *2010 15th Annual Third-Party Logistics Study*, based on research conducted in mid-2010, examines the current state of the global market for 3PL services, and explores in depth issues surrounding total landed cost calculation. The report also considers supply chain issues, including the role of 3PLs in two vertical markets, Life Sciences and Fast-Moving Consumer Goods.

The *2010 3PL Study* affirms that shippers regard logistics and supply chain management as key to their success, and many credit 3PLs with helping them to achieve critical service, cost, and customer satisfaction goals. Results are based on responses from 1,133 3PL users and non-users, as well as 3PLs, which were added for the first time to the survey group in 2009.

Significant uncertainty about the global economy continues to impact logistics spending and use of 3PLs. Respondents devote an average 11% of their companies' sales revenues to logistics, and an average of 42% of that is directed to outsourcing of logistics services. That is 10 to 15 percentage points lower than in recent years, and may mean that on average, shippers were able to scale back their expenditures for 3PL services faster than they were able to scale back their total logistics expenditures. At the same time, 65% of shipper respondents report an increase in use of outsourced logistics services; these shippers may have increased outsourcing in comparison to insourcing, but their overall spend on 3PLs may have decreased due to a number of factors. Both shippers and 3PLs report some consolidation of 3PL usage.

A healthy 89% of shipper respondents view their 3PL relationships as generally successful. Leading contributors to this success are openness, transparency and good communication, agility and flexibility, and an interest in "gainsharing" and collaboration. However, a persistent gap between the ratings that shippers and 3PLs assign to various aspects of the 3PL-shipper relationship should be an eye opener for 3PLs. In contrast, 2010 marks the third consecutive year of a narrowing of the IT Capability Gap – the difference between shippers' view of the extent to which IT is a necessary element of 3PL expertise, and their satisfaction with 3PLs' IT capabilities.

Shippers continue their tendency to outsource transactional, operational, and repetitive activities and less so those that are strategic, customer-facing, and IT-intensive, despite the large portion of 3PLs offering many or all of the 16 services covered in the survey.

TOTAL LANDED COST

In the *2009 Third-Party Logistics Study*, 64% of shipper respondents cited total landed cost (TLC) reporting and analysis as a critical capability they would like to see in their 3PLs. This strong interest in total landed cost – the sum of all costs associated with making and delivering products to the point where they produce revenue – suggested we take a deeper look.

The myriad benefits of accurate TLC calculations include more agility and confidence in decision-making, better insight into the financial performance of products and partners, and supply chain visibility. Just under half (45%) of shipper respondents report extensive use of TLC, although perceptions likely differ on what constitutes extensive use. Lack of necessary data or tools lead the list of reasons not to use TLC.

Shippers most commonly use transportation, unit price, tariffs/taxes and warehousing costs as factors in TLC calculation, and are most interested in adding carbon impact. Spreadsheets and internally developed tools are the most widely used TLC calculators, but as TLC grows in importance, some shippers and 3PLs are moving to more sophisticated commercially available TLC calculators and advanced supply chain network modeling and optimization tools.

Just 23% of 3PL respondents reported extensively providing TLC analysis/reports to their customers and many express interest in engaging in TLC efforts. However, 58% of these 3PLs say shippers are hesitant to share information with them.

Transforming from basic to more sophisticated TLC application requires C-level leadership, process change and systems transformation, and must be approached as an evolutionary, rather than revolutionary, process.

LIFE SCIENCES

The US \$1.2 trillion global life sciences industry produces medicines and devices essential to restoring or maintaining good health. Careful, expedient – and sometimes temperature-controlled – handling can be critical for product safety. Because of this, control and visibility is essential.

Life sciences supply chain challenges include product integrity and compliance requirements, an inherently complex trading partner ecosystem, and demanding customer service and cost requirements.

Shipment visibility, quality and compliance procedures, stringent inventory control, temperature control capabilities and security are important steps to ensure product integrity, prevent counterfeit and diversion and to ensure safe passage. Fully 62% of life sciences shippers cite ensuring product quality as a significant challenge and rank quality procedures highly (70%) as a service they want 3PLs to provide, although just 45% of 3PLs currently provide them. About half of shipper and 3PL respondents agree that there is a strong business case for RFID in life sciences.

Fifty-four percent of life sciences shipper respondents say the complex supply chain model represents a significant challenge, with 87% saying 3PLs can add significant value by linking all parties that interact in the life sciences supply chain.

The sometimes critical nature of life sciences products accentuates the need for flexible and responsive supply chains. Challenging shipper service requirements include recall capability, next flight out/late cut-offs and redundant stock locations. About a third of shipper respondents indicate that maintaining high levels of inventory to ensure availability is a top logistic challenge.

FAST-MOVING CONSUMER GOODS

Large volumes and low margins mean fast-moving consumer goods companies must respond quickly to deliver in-demand, on-trend products to increasingly demanding shoppers. So after reducing costs, their logistics top priorities include perfect order fulfillment (87%), rapidly sensing and responding to changes in consumer demand (83%) and shortening new product time-to-market and supply chain integration (81%). Consumers increasingly look for sustainability, driving shippers' interest in strategies such as improving shipment density and load utilization (87%).

Fast-moving consumer goods shippers and 3PLs agree on top logistics challenges, but have some divergent views of the role 3PLs can play in helping shippers address them. Both see 3PLs helping with shipment density/load utilization, reducing logistics costs and putting a supply chain disruption/mitigation strategy in place, but shippers are less likely than 3PLs to see 3PLs playing a role in shortening new product time-to-market and supply chain integration.

Shippers are involving 3PLs in cost-reduction strategies less often than one might expect, particularly in improving forecasting and visibility and redesigning the supply chain network. 3PLs perceive themselves playing a much larger role in cost reduction efforts – perhaps another sign of ongoing trust issues.

Fast-moving consumer goods companies' efforts to reduce logistics costs include warehouse and transportation sharing. Two-thirds of those engaging in these strategies have recognized cost savings, but the level of savings have been limited (58% of respondents recognize less than 5% cost savings).

STRATEGIC ASSESSMENT

Inclusion of 3PLs in the survey group for the *Annual 3PL Study* beginning last year was intended to help explore both sides of the 3PL relationship, and indeed, results reveal some disparate views. Most notable is the 68% of shipper respondents, versus 95% of 3PLs, which indicate that 3PLs provide shippers with new and innovative ways to improve logistics effectiveness. But 3PLs say it's difficult to be more innovative unless shippers are more open in sharing their challenges and strategies.

As economic conditions improve the time has come to look back and consider the role 3PLs played in helping shippers weather the storm. Increased use of outsourcing and high satisfaction levels suggest that 3PLs can certainly take some credit for their customers' results; now it's time to document the lessons learned.

Another issue emerging as conditions improve is the impact this will have on the non-asset owning 3PL sector (the majority of 3PLs), including capacity limitations of asset-based providers and consequential impacts on pricing and availability of needed services. How will this affect 3PLs' and shippers' ability to procure needed services?

Despite the challenges, 3PLs also have the opportunity to continue to mature and grow by offering value-added opportunities revealed in this report, including acting as a clearinghouse for e-pedigree and temperature tracking data, uncovering resource-sharing opportunities for shippers and providing total landed cost calculation as a service.

When shippers or 3PLs hesitate to share ideas of a strategic or operational nature with each other, they put up hurdles that are very difficult to clear. The future growth and development of the 3PL sector depends on both parties to approach their relationships with an open and collaborative spirit in order to conceptualize and implement innovative solutions to logistics and supply chain problems.



NO COUNT
NEXT
PLAYER
SPINS

TWO
EXTRA
SPINS

CURRENT STATE *of* THE 3PL MARKET

Shippers Continue to Rely on 3PLs to Help Address Economic Volatility

Third-party logistics providers continue to provide strategic and operational value to many shippers throughout the world, as reaffirmed by the findings of the *2010 15th Annual Third-Party Logistics Study*. Shippers regard logistics and supply chain management as key components of their overall business success, and many of them credit their relationships with 3PLs with helping them to achieve critical goals related to service, cost, and customer satisfaction.

These results are based on survey responses from a total of 1,133 industry executives representing users and non-users of 3PL services (referred to as shipper respondents throughout this report), as well as firms that provide 3PL services (called 3PL respondents). 3PLs were added to the survey group in 2009 to help obtain information from both sides of the buyer-seller relationship. Please see About the Study on page 44 for more information about survey responses and the four streams of research used to fully analyze the state of the 3PL market: a web-based survey, desk research, focus interviews with industry experts, and a facilitated workshop with shippers held at the eyefortransport 3PL Summit in Atlanta.

CURRENT GLOBAL ECONOMIC CLIMATE AND USE OF 3PLS

Over the past two to three years, shipper-3PL relationships have been affected significantly by the prevailing uncertainty and economic volatility impacting global markets. **Figure 1** includes data developed by Armstrong & Associates that estimates the magnitude of global 3PL revenues (US \$507.1 billion) and provides breakdowns for the four major geographies that are included in the *2010 3PL Study*. Armstrong & Associates also reports that 3PL revenues in the US declined from US \$127B in 2008 to US \$107B in 2009, but were expected to increase to US \$121B in 2010. While the past couple of years have been challenging for the global economic picture, the near-term outlook is for a modest comeback to growth in the 3PL sector.

THE CHALLENGES CONTINUE

One major purpose of the *2010 3PL Study* is to better understand how shippers and 3PL providers are continuing to adapt and improve, albeit within an environment that still includes significant economic uncertainty. Additionally, the challenges of supply chain orchestration – rethinking supply chain choices as conditions change – and of structuring and sustaining successful 3PL-customer relationships are still on the front burner. Overall, there is increasing clarity on the extent to which competent logistics and supply chain practices can lead to organizational efficiency and effectiveness. It is also becoming increasingly evident that the effective use of outsourced logistics services can be a key to this success.

As one supply chain executive put it, “today’s businesses are faced with significant economic volatility, and the ability to be changeable and adaptable is clearly a primary factor for success. Also included among these factors is the ability to structure and improve supply chains that can adapt and evolve as business needs and environmental factors require. The use of 3PLs can be a very useful resource to companies who are striving to keep their supply chains current, flexible, and adaptable.”

FIGURE 1

Global 3PL Revenues for 2009

Region	2009 Global 3PL Revenues (US\$ billions)
North America	128.1
Europe	162.3
Asia-Pacific	136.7
Latin America	27.6
Other Regions	52.4
Total	507.1

Source: Armstrong & Associates, Inc., 2010

SPENDING ON LOGISTICS AND 3PL SERVICES

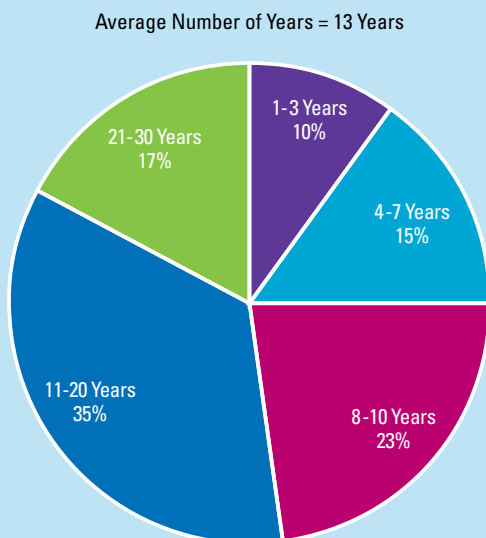
Shipper respondents to the *2010 3PL Study* devote an average 11% of their companies' sales revenues to total logistics expenditures (amounts spent on logistics in 2009). The range among regions studied was a fairly tight 9% to 13%. For purposes of this survey, total logistics expenditures include transportation, distribution, warehousing and value-added services.

Of this total, an average of 42% is directed to outsourcing. In recent years this number was approximately 10-15 percentage points higher, depending upon the region studied. One possible reason for this current finding is that average expenditures for outsourced logistics services may have decreased recently at a faster rate than did total logistics expenditures – meaning that on average, shippers were able to scale back their expenditures for 3PL services faster than they were able to scale back their total logistics expenditures. Average percentage of logistics spending devoted to outsourcing by region are: North America 35%; Europe 49%; Asia-Pacific 51%; and Latin America 41%.

Longevity of 3PL Use: Figure 2 reveals how many years shippers have used 3PL services. Shipper respondents clearly have significant experience over many years with outsourcing logistics services, with an average of 13 years, and 52% have used 3PLs of some type for 11-30 years. European shippers are most likely to have used 3PLs for 11-30 years (57%), and Latin American shippers are the least likely (48%). Comparable figures for North America and Asia-Pacific are 50% and 54%, respectively.

FIGURE 2

Shippers Report Significant Long-Term Experience Using 3PLs



Source: 2010 15th Annual Third-Party Logistics Study

Changing Use of 3PL Services: A significant number of shippers are shifting their use of 3PLs:

- **Increasing use of 3PL services:** Overall, 65% of shipper respondents report an increase in their use of outsourced logistics services, and 78% of 3PL respondents agree this is what they are seeing from their customers. Regionally, 57% of North America shippers have increased use, as well as 65% of European shipper respondents, 81% of Asia-Pacific and 69% of Latin American shippers. One important point to keep in mind is that shippers reporting an increase in the use of outsourced logistics sources may have increased outsourcing in comparison to insourcing, but as reported earlier, the overall spend on 3PLs may have decreased due to a number of factors. For example, the fees some shippers are paying for 3PL services may have declined, and some may be changing the mix of 3PL services they purchase and use.
- **Returning to insourcing:** An average of 24% of shipper respondents are returning to insourcing some of their logistics activities, and 36% of 3PL respondents observe that some of their customers are insourcing certain logistics activities.
- **Reducing or consolidating the number of 3PLs used:** Nearly one-half (46%) of shipper respondents are consolidating the number of 3PLs they use, and 73% of 3PLs feel that customers in general are reducing or consolidating the number of 3PLs they use.

Based on these results, it seems that while some shippers are considering a return to insourcing of some logistics activities, the predominant direction is to move toward increased use of outsourced logistics services, confirming findings also reported in the *2009 3PL Study*.

3PL-SHIPPER RELATIONSHIPS: CONTINUED PROGRESS AND IMPROVEMENT

Overall, 89% of shipper respondents view their 3PL relationships as generally successful, compared with 97% of 3PL respondents; both figures are consistent with previous years' results for this study. Shipper findings by region are: North America 92%; Europe 87%; Asia-Pacific 90%; and Latin America 83%.

Also, 68% of shipper respondents indicate that 3PLs provide them with new and innovative ways to improve logistics effectiveness, whereas 95% of 3PL providers feel they provide customers with new and innovative ways to improve logistics effectiveness. Again this year – the second year 3PLs were included in the survey – there is a persistent gap between the ratings that shipper respondents assign to various aspects of the 3PL-shipper relationship and somewhat more positive evaluations provided by the 3PL respondents themselves. This gap should be an eye opener for many 3PLs, and may be due to a perceived lack of innovation and pro-active, continuous improvement suggestions by 3PLs, explored further in the strategic assessment chapter.

Success Factors: Survey findings suggest that a number of elements make for the most optimal 3PL-shipper relationships:

- **Openness, transparency and good communication:** 70% of shipper respondents and 64% of 3PLs report they are satisfied with this factor as contributing to successful experiences with each other. One important observation is that 3PLs are less satisfied with these attributes of relationships with shippers than shippers are. This finding will be closely tracked in future studies to see if 3PLs and shippers are able to achieve a higher level of proficiency in meeting these objectives.
- **Agility and flexibility to accommodate current and future business needs and challenges:** Responses to this statement reveal a very striking difference between how shippers and 3PLs perceive one another. Specifically, 72% of shippers agree their 3PLs are sufficiently agile and flexible to accommodate their current and future business needs and challenges, whereas 98% of 3PLs report they are expected by their customers to be capable on this dimension. One interpretation of these results is that while 3PLs recognize the objectives to be met, there is room for improvement.
- **Interest in “gainsharing” between 3PLs and shippers:** Although the structure of this question was modified somewhat for the *2010 3PL Study*, just over one-half of shipper respondents (56%) have become more interested in “gainsharing,” and 52% of 3PLs respondents agree that their customers have become more interested in “gainsharing” arrangements. Considering these percentages, and given some of the discussions with industry experts through the focus interview process, it appears that recent economic events have resulted in a greater interest on the part of shippers to share risk as an important attribute of a successful relationship.

One retailer comments, “Negotiating, tracking, and managing gainsharing agreements is difficult. It may require significant investment by the 3PL that is hard to recover, especially if that capability becomes the new ‘what is expected.’”

- **Interest in collaborating with other companies, even competitors, to achieve logistics cost and service improvements:** Asked for the first time about this issue, 68% of shipper respondents and 80% of 3PLs expressed interest in these strategies. Considering the potential benefits to both shippers and 3PLs that can result from collaboration, it is reassuring to see percentages that suggest a true interest by both parties in working with other companies, even competitors. One possible explanation for this is that the global economic recession has made it very clear that companies of all types need to take whatever

steps are possible to reduce cost and enhance service – and that the concept of collaboration of people, process, and technologies can help significantly in achieving these objectives.

Measurable Benefits: As seen in **Figure 3**, shipper respondents report measurable benefits from 3PL services. Metrics relating to logistics cost reduction, logistics fixed asset reduction, and inventory cost reduction are consistent with what was reported in 2009.

FIGURE 3

Shippers Report Measurable Benefits from Use of 3PLs

Results		All Regions
Logistics Cost Reduction (%)		15%
Logistics Fixed Asset Reduction (%)		25%
Inventory Cost Reduction (%)		11%
Average Order Cycle Length	Changed From	17 days
	Changed To	12 days
Order Fill Rate	Changed From	73%
	Changed To	81%
Order Accuracy	Changed From	83%
	Changed To	89%

Source: *2010 15th Annual Third-Party Logistics Study*

Users report improvements in order cycle time, order fill rate, and order accuracy resulting from use of 3PLs, however the absolute levels of these metrics are somewhat lower than those reported in the *2009 3PL Study*. Again, the impact of the global economic recession may be responsible here, and it will be important to look at these changes once again in next year’s *2011 3PL Study*.

Finally, 60% of the shipper respondents report that their use of 3PLs has led to “year-over-year incremental benefits,” however, only 52% of the 3PL respondents agree. This result is actually a bit unusual, in that the shipper average is higher than the 3PL average. One possible explanation is that 3PL providers see greater opportunities for improvement in year-over-year incremental benefits, thus the lower average reported for this question.

Average expenditures for outsourced logistics services may have decreased recently at a faster rate than did total logistics expenditures.

Information Technology: Figure 4 provides a nine-year summary of shipper respondents' opinions on whether they feel information technologies are a necessary element of 3PL expertise, and whether they are satisfied with their 3PL providers' IT capabilities, known as the IT Capability Gap. Based on the information included in Figure 4, in 2010 there has been improvement for the third consecutive year in the percentage of shippers who indicate satisfaction with IT capabilities from their 3PLs.

This IT Capability Gap has received considerable attention in recent years. The narrowing of this gap is consistent with the finding that 69% of 3PLs feel their customers are satisfied with the IT services 3PLs provide. Although this figure is higher than the 54% reported by shipper respondents in 2010 it does indicate a positive development in the relationships between 3PLs and shippers.

WHAT 3PL USERS OUTSOURCE AND WHAT 3PL PROVIDERS OFFER

Figure 5 shows the percentages of shipper respondents outsourcing specific logistics activities. Following are some general observations about the 2010 results and the contrasts they reveal from previous years:

- The most frequently outsourced activities tend to be those that are more transactional, operational, and repetitive. These include domestic and international transportation (83% and 75% across all regions studied), warehousing (74%), customs brokerage (58%), and forwarding (53%). However, usage varies across each of the regions. It is important when looking at these results not to think of these activities as "commodities," even though they are sometimes thought to be common, routine activities and processes. In fact, some of these activities are provided by 3PLs in a highly unique and differentiated manner that makes them anything but commodities.

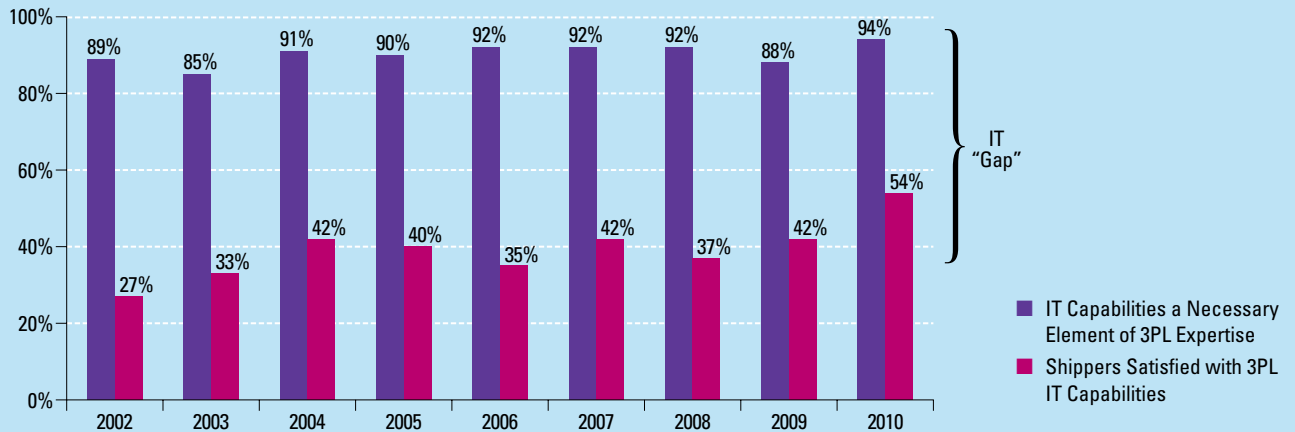
- The less frequently reported activities indicated in Figure 5 tend to be somewhat more strategic, customer-facing, and IT-intensive. These include: IT services; supply chain consultancy services; order entry; processing and fulfillment; fleet management; customer service; and LLP/4PL services.
- Again in 2010, the percentages of 3PL users outsourcing individual logistics activities (versus overall outsourcing) tend to be higher for respondents from Europe and Asia Pacific than for North America or Latin America. As has been noted over the past several years, the Latin American market continues to provide significant latitude for increased use of 3PL services.
- Likely due to impacts of the globally volatile business environment, the percentages of shippers outsourcing international transportation declined from a reported 84% in 2009 to 75% in 2010. Over the same time frame, the use of customs brokerage declined from 71% to 58% and the use of forwarding services declined from 65% to 53%.

Transportation and warehouse operations spend continue to dominate the total logistics expenditures managed by third parties.

- On average transportation spend represents 54% of total logistics expenditures. By region these percentages are North America 41%; Europe 64%; Asia-Pacific 67%; and Latin America 54%.
- Warehouse operations spend represents an average 40% of total logistics expenditures. By region, it's North America 39%; Europe 44%; Asia-Pacific 48%; and Latin America 27%.

FIGURE 4

The Gap Continues Between Shipper Expectations and Experiences of 3PL IT Capabilities



Source: 2010 15th Annual Third-Party Logistics Study

FIGURE 5

Shippers Continue to Outsource a Wide Variety of Logistics Services

Outsourced Logistics Service	User Percentages				
	All Regions	North America	Europe	Asia Pacific	Latin America
Domestic Transportation	83%	75%	94%	89%	80%
International Transportation	75	62	89	86	74
Warehousing	74	73	82	77	63
Customs Brokerage	58	57	54	68	65
Forwarding	53	47	54	70	48
Cross-Docking	38	33	47	42	34
Product Labeling, Packaging, Assembly, Kitting	36	32	41	41	34
Reverse Logistics (Defective, Repair, Return)	35	27	47	46	25
Transportation Planning and Management	31	32	32	30	26
Freight Bill Auditing and Payment	28	40	22	23	15
Information Technology (IT) Services	20	20	15	19	25
Supply Chain Consultancy Services Provided by 3PLs	18	20	11	25	17
Order Entry, Processing and Fulfillment	16	17	11	21	14
Fleet Management	15	15	17	14	20
Customer Service	13	9	10	21	15
LLP/4PL Services	13	9	13	16	19

Source: 2010 15th Annual Third-Party Logistics Study

Figure 6 offers a summary of the types of logistics services provided by 3PLs participating in the 2010 survey and reveals that many 3PLs provide a wide range of services to meet the needs of their customers. To provide some insight into this thought, **Figure 7** shows how many of the responding 3PLs offer a total number of logistics services from one through 16. This data indicates that it is very common for 3PLs to offer many, or even most, of the sixteen services included in the question – and that the typical model is for a 3PL to offer a substantial range of services in order to respond effectively to their customers and their logistics needs.

THE VOICES OF NON-USERS OF 3PL SERVICES

The annual 3PL survey also reaches a substantial number of organizations who do not currently use 3PLs. These respondents are asked why they do not choose to outsource at the present time. As indicated in **Figure 8**, among the most common reasons are: logistics is a core competency at our firm (19%); cost reductions would not be realized (15%); control over the outsourced functions would diminish (14%); logistics is too important to consider outsourcing (13%); service level commitments would not be realized (11%); and we have more logistics expertise than 3PL providers (10%). In addition, 8% of respondents indicate their reason for not outsourcing is that it is too difficult to integrate their IT systems with the 3PL's systems.



CURRENT STATE OF THE 3PL MARKET: KEY TAKEAWAYS

Key findings regarding the Current State of the Market for the *2010 15th Annual 3PL Study* include:

- **3PLs Are Critical:** Again in 2010, companies across industries and around the globe regard logistics and supply chain management as key components of their overall business success, and many credit their relationships with 3PLs with helping them achieve critical goals related to service, cost, and customer satisfaction.
- **Share of Logistics Spending is 11%:** Across all regions included in the 2010 survey, shipper respondents report that total logistics expenditures represent an average of 11% of sales revenues, and they spend an average 42% of total logistics expenditures on outsourcing.
- **3PL Use is Long-Term:** Generally, most shippers have used 3PLs for a significant time, an average 13 years, and many report significantly longer 3PL use.
- **3PL Use Increasing:** A majority of shipper respondents, 65%, are increasing their use of 3PL services, while 24% are insourcing some 3PL services and 46% are reducing or consolidating the number of 3PLs they use.
- **3PL Relationships Seen As Successful:** Most shipper respondents (89%) and most 3PL providers (97%) view their relationships as successful, though as indicated in last year's study, 3PLs tended to provide more positive ratings of relationship success and lower ratings of problems that may creep into 3PL-customer relationships. Two-thirds of shippers say 3PLs provided them with new and innovative ways to improve logistics effectiveness – whereas 95% of 3PL providers feel this is the case.
- **Many Factors Account for Success:** The *2010 3PL Study* provides insight into several factors that relate to the success of 3PL-shipper relationships: openness, transparency, and good communication; agility and flexibility to accommodate current and future business needs and challenges; interest in “gainsharing” between 3PLs and shippers; and interest in collaborating with other companies, even competitors, to achieve logistics cost and service improvements.
- **3PLs Have Measurable Impact:** Metrics including logistics cost, fixed asset and inventory reductions due to use of 3PLs, and order cycle time, order fill rate, and order accuracy validate the cost and service improvements resulting from successful use of 3PL services.
- **Shipper Outsourcing Choices Consistent:** The logistics activities most frequently outsourced continue to include those that are more transactional, operational and repetitive, while those less frequently outsourced are those that are more strategic, customer-facing and IT-intensive. In the future customers may continue to be more receptive to strategic services that may be available from 3PLs.
- **Transportation Is Most Outsourced:** On average, transportation spend represents 54% of shipper respondents' total logistics expenditures; warehouse operations represent 40%.
- **IT is Key:** Information technology remains a key component of 3PL-shipper relationships, and the *2010 3PL Study* results indicate that a larger number of shipper respondents, 54%, are satisfied with 3PL IT capabilities, indicating a narrowing of the traditional IT capability gap, but continuous investment is needed.
- **Some Choose Not to Outsource:** Among the most prevalent reasons why some firms choose not to outsource logistics services: logistics is a core competency at our firm; cost reductions would not be realized; control over the outsourced functions would diminish; logistics is too important to consider outsourcing; service level commitments would not be realized; and we have more logistics expertise than 3PL providers.

FIGURE 6

3PLs Provide a Wide Range of Outsourced Logistics Services

Outsourced Logistics Service	3PL Provider Percentages
	All Regions
Domestic Transportation	86%
Warehousing	85
Transportation Planning and Management	76
Customer Service	71
Cross-Docking	70
International Transportation	67
Product Labeling, Packaging, Assembly, Kitting	67
Supply Chain Consultancy Services Provided by 3PLs	65
Order Entry, Processing and Fulfillment	65
Reverse Logistics (Defective, Repair, Return)	62
Information Technology (IT) Services	58
Forwarding	56
Customs Brokerage	54
LLP/4PL Services	45
Freight Bill Auditing and Payment	40
Fleet Management	31

Source: 2010 15th Annual Third-Party Logistics Study

FIGURE 8

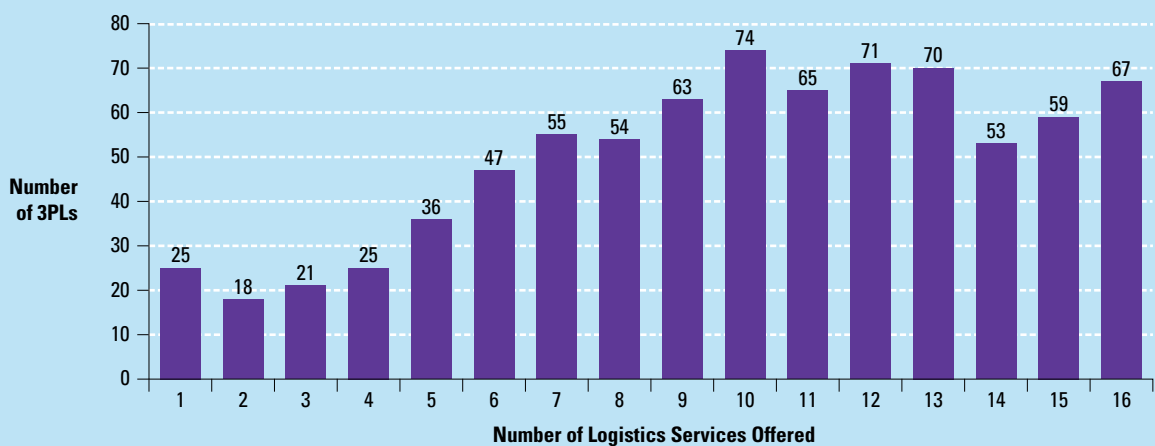
Why Non-Users Do Not Use 3PLs

Reason	Percent in Agreement
Logistics is a Core Competency at Our Firm	19%
Cost Reductions Would Not be Experienced	15
Control Over the Outsourced Function(s) Would Diminish	14
Logistics Too Important to Consider Outsourcing	13
Service Level Commitments Would Not Be Realized	11
We Have More Logistics Expertise Than Most 3PL Providers	10
Corporate Philosophy Excludes the Use of Outsourced Logistics Providers	9
Too Difficult to Integrate Our IT Systems with the 3PL's Systems	8
Global Capabilities of 3PLs Need Improvement	6
Issues Relating to Security of Shipments	5
We Previously Outsourced Logistics, and Chose Not to Continue	5
Inability of 3PL Providers to Form Meaningful and Trusting Relationships	3

Source: 2010 15th Annual Third-Party Logistics Study

FIGURE 7

Most 3PLs Offer a Substantial Number of Services



Source: 2010 15th Annual Third-Party Logistics Study



TOTAL LANDED COST

A Powerful but Challenging Metric

In last year's *2009 Third-Party Logistics Study*, a substantial number of shipper respondents (64%) cited total landed cost (TLC) reporting and analysis as a critical capability they would like to see in their 3PLs. This suggests a strong interest in total landed cost both as a useful supply chain metric and as a 3PL value-added service.

We define total landed cost as the sum of all costs associated with making and delivering products to the point where they produce revenue.

Total landed cost is an attractive metric because it enables companies to capture both obvious and hidden costs associated with product movement, revealing the true cost of sourcing and logistics decisions. See the box below for an example of the potential impact of total landed cost.

This example reveals the types of unforeseen costs that can quickly increase the total delivered cost of a shipment. Without considering all relevant costs before the purchase is made, a shipper may have excess product or materials that may be sold at a loss or that otherwise may prove to be unprofitable.

However, calculating the total landed cost of materials and finished goods is not always an easy task. Difficulty in defining all of the factors contributing to total cost, and then obtaining all of that data, can be challenging. Because of that, too many businesses rely on partial data or inaccurate estimates that can lead to incorrect results.

Conversely, having the means to quickly and accurately compute total landed cost enables shippers to realize important benefits, including:

The Impact of Total Landed Cost

A Swiss industrial company is considering sourcing of a product from three possible distributors, in China, Vietnam or in Europe.

At first glance the buying price of the Vietnamese distributor seems to be the cheapest. However, the cost of transportation in this case is more expensive than out of China, and the trade agreement between Vietnam and Switzerland incurs higher customs charges for products imported into Switzerland (VAT of 7.6% and duties based on the imported weight).

The European distributor's price is much higher. But sourcing from Europe means lower transportation cost and no customs fees, making the total landed cost better than those of the international distributors. Product quality, replenishment time, and inventory carrying cost were not quantified for this example, but the European supplier's higher quality product and shorter lead times were also considered factors in its favor.

Price Components	Country of Origin		
	China	Vietnam	EU
Net purchasing price for a specific volume of the product from 3 different suppliers	CHF 10,000.00	8,000.00	12,000.00
Total transportation cost to Switzerland - Ocean freight from China/Vietnam - Road freight within Europe	4,000.00	6,000.00	1,200.00
Customs according to trade agreement	1,000.00	1,500.00	0.00
VAT (Switzerland 7.6%) based on value of goods	1,140.00	1,178.00	1,003.20
TOTAL Landed Cost	CHF 16,140.00	16,678.00	14,203.20

Decision-Making

- More agility and confidence in decision-making, with the realization that all relevant costs are being included.
- TLC calculation can also help build a solid business case to justify to management decisions that appear to increase transactional or functional costs but actually minimize TLC.

Cost Insight

- Better understanding of cost tradeoffs. For example, it may sound sensible to use low cost ocean freight instead of air freight, but for high value/short product life cycle products the inventory carrying cost might be excessive.
- Earlier insight into liabilities by estimating accrued costs in advance of receiving suppliers' and service providers' invoices.
- Tighter inventory control when inventory carrying costs are used as a component of total landed cost. For example, longer lead times typically equate to higher inventory carrying cost for both in-transit inventory and DC safety stock. Overall, higher levels of supplier risk can impact total landed cost.
- Correct cost declarations to ensure accurate tax calculations and exclusions, including the ability to adhere to country-specific value documentation in support of import duty calculations.

Often 3PLs need to prove that they are meeting certain service levels and have built a long and stable relationship before going into TLC.

Price and Margin Insight

- More accurate price-setting and a better understanding of which product groups or items are driving the most margin as well as improved insight into the financial performance of customers, providers and other partners.
- Higher profit margin. A retailer, for example, might be willing to expend greater supply chain costs to get a "fast fashion" item into stores quickly to sell at a disproportionately higher price and support a strategy to increase store traffic.
- Enabling reverse engineering of a supplier's price quote to understand if the price is competitive. In other words, by modeling the supplier's supply chain and estimating the supplier's total landed cost relative to their price to you, you can make a better, more informed sourcing decision.

Communication

- Supply chain visibility, as a result of integrating accurate cost data from relevant data sources (including third parties), potentially available in near real time.
- Improving communication among separate organizations such as finance, logistics and manufacturing, which sometimes operate as silos.

Accurate TLC can deliver significant competitive advantage. "In the absence of TLC you still can make valid supply chain decisions – but not optimal," says Pascal Gielen, Director EMEA Transport at Philips General Purchasing. "Therefore you need end-to-end visibility. TLC can be perceived as the next level for supply chain cost optimization."

Transitioning to TLC is a challenging undertaking, but an increasingly important one as the dynamic global economy throws old assumptions into question. For example, 53% of 3PLs respondents note a trend toward their customers manufacturing or sourcing closer to home to reduce total landed cost. Indeed, 21% of North American manufacturers said they've returned some production to North America from low-cost countries in the second quarter of 2010 and 38% were researching this strategy for the third quarter, according to a survey by MFGWatch. This decision requires some method of accurately determining such costs.

CURRENT USE OF TLC

Just under half (45%) of shipper respondents report extensive use of TLC to make decisions (Figure 9). It is likely, however, that perceptions differ among respondents as to what constitutes extensive use. Another 41% use TLC just somewhat for this purpose, suggesting there is plenty of room to enhance TLC efforts and apply TLC calculations in a more disciplined fashion.

A minority, 11%, are making minimal use of TLC and another 3% are not using this metric at all to make business decisions. Figure 9 notes the major reasons for these responses, with “necessary data is not available” and “do not have the right tools” leading the list.

Fragmented IT resulting from acquisitions and functional silos impedes the collection of global data essential for TLC calculation. Obtaining the right data can be challenging even within a single platform. “Although some shippers are using ERP systems, data often is not structured very well and in different databases that are not linked to each other,” says Ramon Veldhuijzen, Principal Consultant at Capgemini Consulting. Another impediment, Veldhuijzen adds, is a lack of deep supply chain understanding among some C-level executives.

“Most companies don’t have a corporate supply chain manager who owns TLC,” says Sven Hoemmken, Corporate Head of Supply Chain

Management for Panalpina. “TLC is mostly dispersed amongst various functions in the company.”

According to Mark Holifield, Senior VP, Supply Chain, at The Home Depot, the reality is that, “everyone wants to get there – not everyone can.”

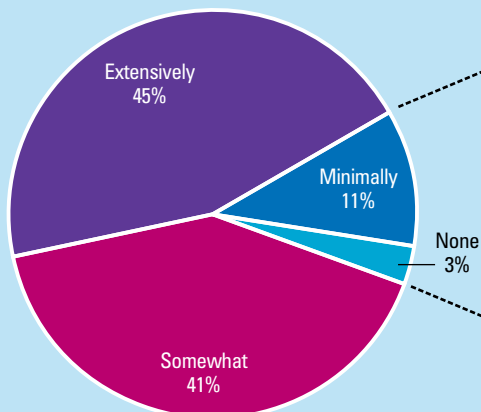
Vertical industries differ in their use of total landed cost calculation. According to Erin Johansson, Product Strategist, Global Trade Management– Oracle Landed Cost Management, Oracle Corporation, mature industries with margin sensitivity such as retail, distribution and process industries, as well as industries with large import volume such as some high tech companies, may be heavier users of TLC. Manufacturer interest is increasing as those organizations seek to lower costs and upgrade systems.

Despite the relatively high number of shipper respondents reporting some level of use of TLC, the precision and level of detail of those calculations differs widely.

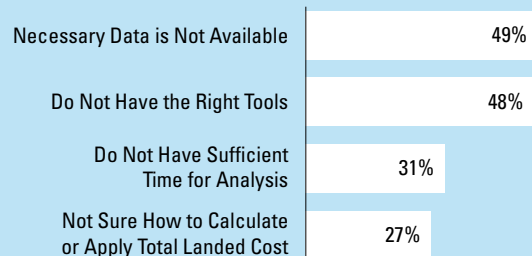
According to Capgemini’s Veldhuijzen, “In general most companies don’t know how to do it; especially TLC calculations on a more strategic level are difficult. On an operational/tactical level, if we talk about customer profitability, they are using so called activity-based costing methodologies.”

FIGURE 9

Nearly Half of Shipper Respondents Use TLC Calculations



% Respondents by Reasons Why They Are Not or Are Minimally Using TLC



Source: 2010 15th Annual Third-Party Logistics Study

THE TIP OF THE TLC ICEBERG

The real value in total landed cost calculation comes by combining commonly known costs – the proverbial tip of the iceberg – with less obvious sources of cost. As seen in **Figure 10**, transportation, unit price, tariffs/taxes and warehousing costs are the most often used in TLC calculations.

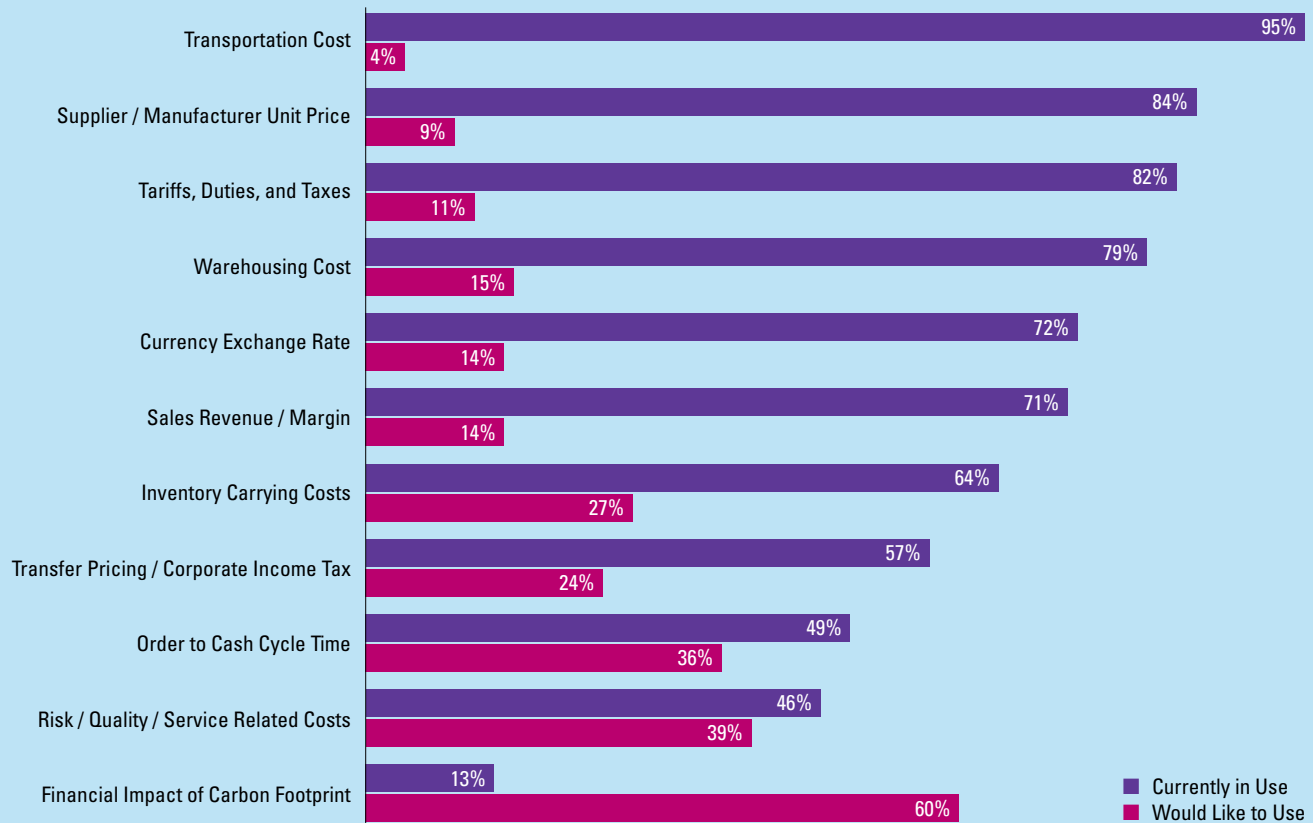
In our results, however, some factors seem to be cited by a higher percentage of respondents than one would expect, such as inventory carrying costs. Several other studies completed over the last three years have reported a much lower use of inventory carrying costs in TLC calculations. This high percentage may be because survey respondents “consider” inventory carrying cost at some level, but don’t necessarily apply this metric in a consistent and disciplined fashion.

Identifying factors that contribute to TLC can be difficult. “The big question is, how far up and down supply chain should you go?” says Dr. Chris Caplice, Executive Director, MIT Center for Transportation and Logistics.

Interestingly, shipper respondents express a high level of interest in factors that are currently little-used, particularly the financial impact of carbon footprint. This may be because green is quickly transitioning from an area of concern to one of regulation. The European Union has been more proactive in emissions controls, as evidenced by their adoption of both the Kyoto Protocol and the Copenhagen Accord. In the US new regulations in California require oil companies to report the carbon intensity of their gasoline and diesel fuel products and as of 2011 these companies must start reducing intensity or buy a credit that may lead to higher costs for customers, indirectly affecting their transportation costs. In addition, the US Securities and Exchange Commission has approved a requirement for publicly owned companies to disclose their carbon risk exposure as a material impact to their financial performance. These developments imply carbon-based fees will be reflected in some of the largest logistics expense categories such as transportation.

FIGURE 10

Common and “Hidden” Factors Contribute to TLC



Source: 2010 15th Annual Third-Party Logistics Study

Other factors worthy of consideration in TLC calculations include fuel price volatility, currency exchange rates, labor cost volatility, and political uncertainty. For example, China's recent decision to float its currency will most certainly be felt in product and supply chain costs. Such significant but difficult-to-quantify factors are feeding the need for tools to test multiple TLC scenarios and perform sensitivity analysis.

APPLYING TECHNOLOGY

The most common TLC calculators in use today are spreadsheets and internally developed tools (Figure 11). Another 16% of respondents use commercially available applications to calculate total landed cost, while 27% of shipper respondents employ supply chain network optimization and modeling tools.

TLC calculators can be fashioned by leveraging a variety of tools and approaches:

- **Activity-Based Costing** is a costing model that identifies activities in an organization and assigns the cost of each activity resource to all products and services according to the actual consumption by each.
- **ERP Systems.** Companies often draw data from various Enterprise Resource Planning modules to support TLC calculation.
- **Global Trade Management.** These applications provide duty/tariff data and possibly transportation data, but usually lack other cost factors.

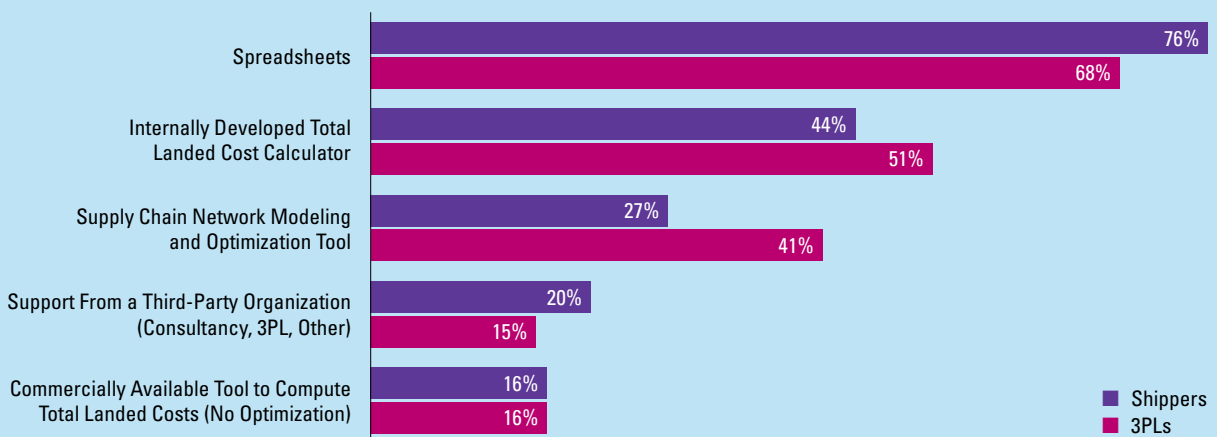
- **Transportation Management Systems (TMS),** which can be used to compute the freight cost component of TLC.
- **Business Intelligence** on top of ERP and/or Supply Chain Management systems. BI enables analysis, but since these systems rely upon an historical view of data, they may lack the real- or near-real-time dynamic view useful for short-term tactical decision making.

As the number of factors contributing to total landed cost calculation multiplies and the importance of TLC increases, some shippers are moving to more sophisticated commercially available TLC calculation tools. Oracle Landed Cost Management (LCM), for example, pulls together the data that would otherwise be distributed across multiple ERP modules, adding value by integrating this information.

Finally, some organizations are taking TLC one step further by deploying advanced supply chain network modeling and optimization tools. The significant advantage of these tools is their ability to perform optimization, helping users identify both strategic and tactical changes to a supply chain network to minimize total landed cost. They can also perform total landed cost modeling and simulations based on various scenarios. For example, what is the lowest cost method to source a product offered by multiple vendors? Does the answer change if fuel price increases by 25 percent?

FIGURE 11

Spreadsheets Lead as Current TLC Cost Calculators



Source: 2010 15th Annual Third-Party Logistics Study

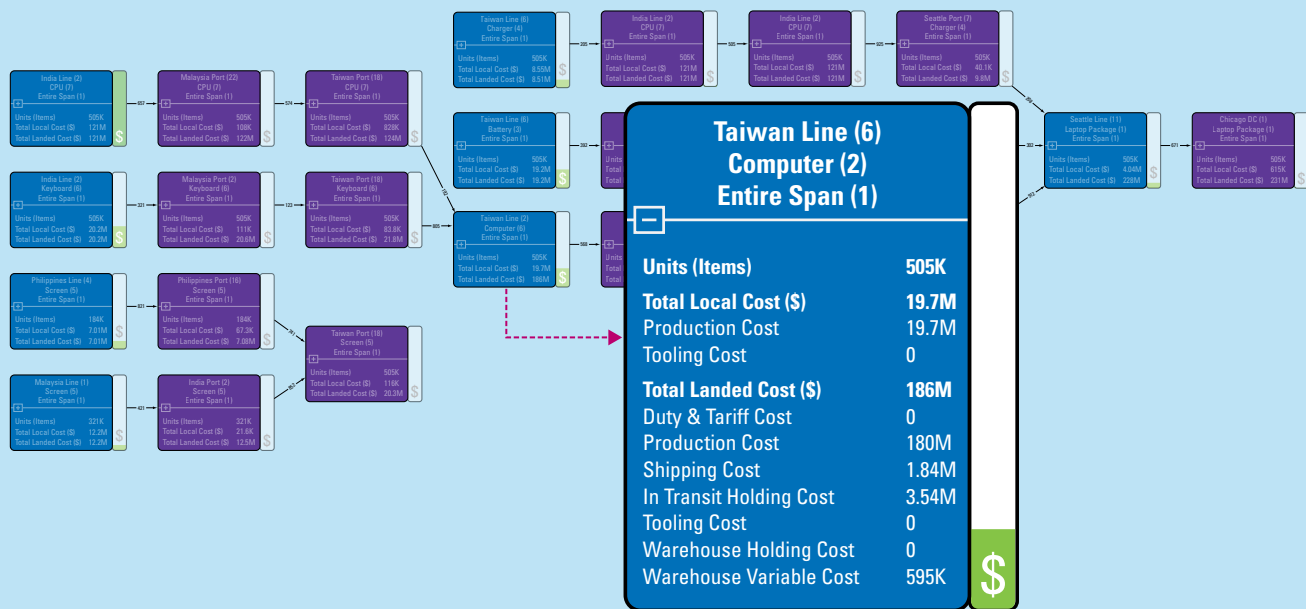
The newest generation of supply chain network modeling and optimization tools add visualization and dashboard capabilities to TLC calculation, enhancing understanding of how factors contribute to cost. IBM's LogicNet Plus, for example, (Figure 12) features Landed Cost Visualization, which allows the user to choose any location and product within a supply chain network and shows how costs build at each successive node within the network, according to Ronan O'Donovan, Product Manager, ILOG Supply Chain Applications, for IBM. Green bars indicate the relative amount of cost at each node so one can quickly identify the critical elements. Clicking on any individual node reveals the details of that node.

Today's use of sophisticated computer models to analyze the performance of supply chains is a requisite for continued improvement in a competitive marketplace.

FIGURE 12

Use of Visualization and Dashboard Tools for TLC

The Landed Cost Visualization will allow the user to choose any location and product and see the entire supply chain and the costs added at each step of the chain. The green bars indicate the relative amount of cost at each node so one can quickly identify the critical elements. By clicking on any individual node, you can see the details.



Source: IBM

3PLS' ROLE IN TLC

While 64% of shipper respondents to the *2009 Third-Party Logistics Study* cited total landed cost (TLC) reporting and analysis as a critical capability they would like to see in their 3PLs, this year's results show just 23% of 3PL respondents reported extensively providing TLC analysis/reports to their customers, 47% are doing so "somewhat," and 30% do so minimally or not at all.

3PLs express interest in engaging in TLC calculation services to add value to their shipper relationships, solidify their relationships with customers, differentiate their businesses and enhance customer satisfaction. As the responsible party for many supply chain operations, 3PLs would seem well-positioned to contribute significantly to TLC calculation. This is particularly the case for small- and mid-size shippers, which may not have internal resources to undertake internal calculation, or for those that have complex international supply chains and/or outsource a substantial portion of it. In the workshop held at eyefortransport, one shipper remarked that his company "needs the outside expertise of the 3PL to help validate what we're doing as an organization, help supplement our efforts, and provide data in a format that can be utilized, such as integrated into an ERP system."

The vast majority of 3PL respondents agreed with these statements: It is important that 3PLs articulate their value proposition in terms of their net effect on TLC; and, It is important for 3PLs to provide tools and capabilities that support an accurate view of total landed cost.

"Often 3PLs need to prove that they are meeting certain service levels and have built a long and stable relationship before going into TLC," says Panalpina's Hoemmken.

In addition to the inherent benefits of TLC, in a 3PL-shipper relationship, TLC "can be of benefit when analyzing bids, and also to help monitor success of relationship," says MIT's Dr. Caplice.

Considerable discussion is required among 3PLs and their customers to better understand factors, roles and KPIs to be used in a shared end-to-end cost calculation effort. This level of interaction demands a high level of trust, usually the result of a long-term, successful 3PL-shipper relationship. Ben Cubitt, VP Supply Chain at Rock-Tenn Company, notes, "use of TLC creates a need and an opportunity for more senior people from customer firms and from LSPs to work together."

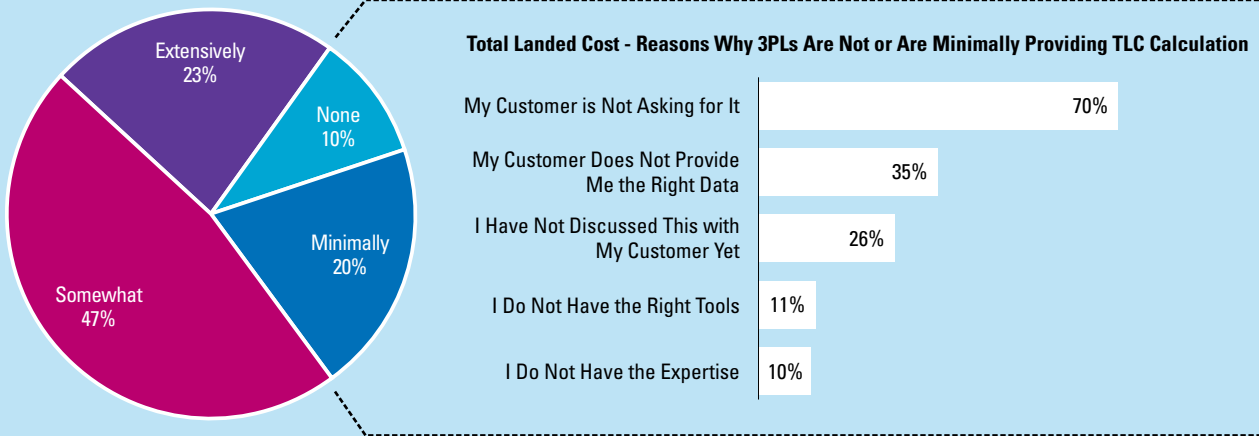
However, 58% of 3PLs respondents report that shippers are hesitant to share information with them, and a third say shippers are fearful that the information they share with the 3PL for TLC calculation will be used to increase their prices.

As indicated in **Figure 11** on page 19, like shippers, 3PLs are most likely to employ spreadsheets (68%) in their TLC calculation efforts, followed by internally developed tools (51%). However, a significant number, 41%, are using supply chain network modeling and optimization tools and 16% employ commercially available tools to compute total landed costs. Just 29% of 3PL respondents agreed with the statement that their customers have the internal integration required to take advantage of TLC analysis.

"In the absence of TLC you still can make valid supply chain decisions – but not optimal."

FIGURE 13

Lack of Customer Interest and Commitment Causes 3PL Inactivity in TLC



Source: 2010 15th Annual Third-Party Logistics Study

Surprisingly, despite the strong level of shipper interest uncovered last year, 3PL respondents' chief reason (70%) for not providing TLC analysis/reporting is a lack of expressed interest from customers (**Figure 13**). More than two-thirds (69%) of 3PLs find those shippers to be more focused on the price of their services than on how their services might impact total landed cost.

A significant 43% of shipper respondents admit that they procure 3PL services based on lowest transactional cost, while 57% say they use a holistic approach that considers the net impact of 3PL selection on total landed cost. To find the lowest TLC, it is critical to view supply chain cost as the sum of many potentially interdependent cost elements. 3PLs will contribute to certain costs, such as transportation and warehousing, but they may help mitigate other costs through improved efficiency, such as offering or introducing cross-dock, consolidation, and other value-added services. The key point is to weigh all of these costs in assessing the value of a 3PL to the organization.

TOTAL LANDED COST TRANSFORMATION ROADMAP

A majority of shippers are currently using spreadsheets and homegrown tools to calculate the total landed cost of their products and shape decision-making. To gain the considerable benefits of a more sophisticated approach requires an evolution of commitment, process and technology.

Commitment: C-level leadership and organization-wide commitment, including adequate financial resources, are essential to the success of the transformation effort, as well as to the TLC-enabled culture that follows. The enterprise must move away from siloed thinking and adopt a holistic mindset. For example, salespeople must be trained and incented to base price quotes on TLC to preserve margin. Key performance indicators should change to reflect the importance of reducing total landed cost, which sometimes may cause an increase in a particular functional area, such as transportation. If everyone is looking to reduce cost just in their own local silos, the result may not create a global reduction in total landed cost.



TOTAL LANDED COST: KEY TAKEAWAYS

Process Change: The process of defining and implementing an advanced TLC solution brings people together that wouldn't normally be a part of one group. This approach is critical for developing the TLC calculator and catching factors that might otherwise be overlooked, for example, the costs of demurrage, which for one workshop participant were incurred by one department but covered by another's budget. It is important to take baseline measurements in order to measure progress. Outside consultants or facilitators can be valuable in overcoming such process and change management issues.

Technology: Systems transformation is often required to deliver all of the data necessary in a newly defined TLC calculator, including data cleaning, synchronization and validation, as well as software integration to centralize all cost elements. Master data management can be an invaluable element toward normalizing data. Timeliness of data can also be an issue, to enable real-time decisions in the wake of fluctuating market conditions. Training is often necessary both in use of a TLC calculator and in how to apply TLC outputs to decision-making.

According to Oracle's Johansson, when shippers transition to using an advanced tool such as the company's Oracle Landed Cost Management model, "the piece that takes a long time is to determine what cost method to use: standard cost, or an average cost method (FIFO, LIFO, Weighted Average or Period Average), which is more appropriate to TLC. Other time-consumers are determining which buckets to track and to what level of granularity, how to estimate costs, and systems integration for data sources. Usually companies start off with big goals on granularity, scale back a bit, and then build maturity and start adding more integration points and refining estimates."

While the importance is high, because of the complexities, TLC adoption must be approached as an evolutionary, rather than revolutionary, process.

- A substantial 64% of shipper respondents consider total landed cost reporting and analysis as a critical capability they would like to see in their 3PLs, according to our 2009 report. The ability for total landed cost calculators to capture both obvious and hidden expenditures and reveal the true cost of sourcing and logistics decisions is critical in a fluctuating economy, delivering benefits including more agile and confident decision-making, more accurate price-setting and better operational control.
- A substantial 45% of shipper respondents report extensive use of TLC, although respondents may differ in their interpretations of the term extensive. However, difficulty in defining all of the factors contributing to total cost, and then obtaining and integrating all of that data, can be challenging. Because of that, too many businesses rely on partial data or inaccurate estimates that can lead to poor decisions. That's evident in the heavy use of spreadsheets and internally developed tools for TLC calculation by shippers and 3PLs alike. Technology issues may be one of the reasons that just 23% of 3PL respondents report they are extensively providing TLC analysis/reports to their customers. Trust issues are also interfering with provision of more advanced TLC cost calculation services by 3PLs. To gain the considerable benefits of a more sophisticated approach to TLC calculation requires strong commitment and a steady evolution of mindset, process and technology.



LIFE SCIENCES

Managing Precious Cargo

In early 2010, a major pharmaceutical manufacturer shut down production and recalled 43 over-the-counter children’s medicines made by a subsidiary, after federal investigators found several manufacturing deficiencies at a production facility. The recall affected more than 100,000 bottles of medicine and at least 12 countries, and led the US Congress to launch an investigation.

This prominent recall highlights just some of the challenges facing those participating in life sciences supply chains. Highly in demand medicines and devices produced by this US \$1.2 trillion industry have the power to transform health, so when errors and poor practices occur, they can impact not just balance sheets, but human lives. Handling is often critical; 11% of global healthcare products are inherently temperature-sensitive and can lose efficacy or cause adverse effects if they are not maintained at the right temperature or stored in inventory too long. Because of this, control and visibility is essential throughout every node and mode that makes up the life sciences supply chain.

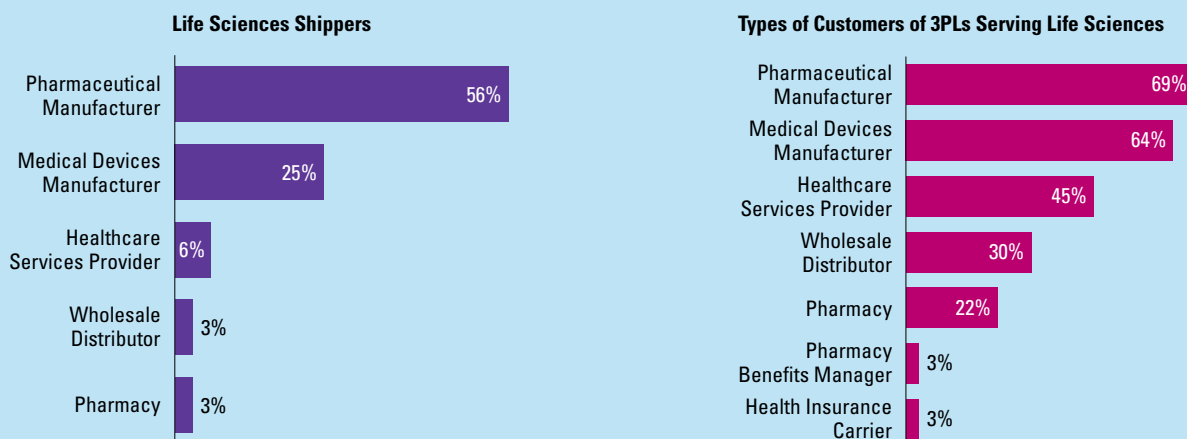
“It’s very difficult for individuals to understand how ‘precious’ the product is; they’re irreplaceable in some ways,” says Mick Sutherland, Director of Logistics – Americas for CSL Behring.

Life sciences industry supply chain challenges fall into three major buckets: product integrity and compliance requirements, an inherently complex trading partner ecosystem, and demanding customer service and cost requirements.

Life sciences shippers and 3PLs serving the life sciences market who participated in the 2010 *Third-Party Logistics* study were asked to respond to specific questions about their supply chain challenges. Shipper respondents mainly represent pharmaceutical and medical device manufacturers and healthcare services providers. (Figure 14) 3PL respondents came from a somewhat more diverse array of life sciences industry segments.

FIGURE 14

Life Sciences Survey Respondents Were Mainly Manufacturers and Service Providers



Source: 2010 15th Annual Third-Party Logistics Study

PRODUCT-RELATED CHALLENGES

Many pharmaceutical products are of high monetary and treatment value, and that makes them tempting targets. Both counterfeit drugs and drug diversion are believed to have doubled globally over the past five to six years, threatening patients' health and manufacturers' reputations. The World Health Organization defines counterfeit medicines as those that are deliberately and fraudulently mislabeled with respect to identity and/or source. Diversion occurs when a pharmaceutical product approved via a manufacturer trade agreement or government regulation for sale in one country or sales channel is intercepted and sold in another.

A multi-faceted approach is required both to prevent counterfeit and diversion and to ensure safe and secure passage from point of manufacture to patient administration. This includes product visibility, quality and compliance procedures, stringent inventory control, temperature control capabilities and security.

Product Visibility: The need for visibility is driving serialization – the process of uniquely identifying one unit of a product so it can be distinguished from another – and e-pedigree, an electronic documentation of a product's chain of possession as it passes through the supply chain. Many countries including Australia, Japan and Turkey have introduced their own requirements to promote serialization. In the US, California has legislated a phased approach to e-pedigree implementation

Control and visibility is essential throughout every node and mode that makes up the life sciences supply chain.

starting in 2015, and the federal government is working out the specifics of its own serialization requirements. Due to their complexity and financial implications, serialization and e-pedigree legislation has been subject to multiple delays.

While linear bar codes can be used for serialization, some countries including Italy and Belgium are requiring higher density solutions such as 2-D symbologies, which can encode additional data such as lot number, manufacturing date, make and expiration date. Momentum is moving toward use of RFID tags, which transmit the identity of an object wirelessly without requiring line-of-sight.

RFID requires significant investment and the technology is continuing to evolve, but this technology has special applicability to life sciences given the accurate and real-time traceability of products required by e-pedigree. Business cases developed by McKesson¹ and Warner Chilcott (formerly Procter & Gamble's prescription drug business)² proved the benefits of serialization through RFID including increasing visibility and reducing costs. In the P & G/Warner Chilcott test, increased asset visibility led to an improved returns process, recall process, and decreased cycle times, which reduced inventory and holding costs. About half of shipper and 3PL respondents to our study agree that there is a strong business case for RFID in life sciences. Regardless of its potential benefits, a third of shipper respondents agree that e-pedigree is a challenge.

3PLs can be key enablers in providing the visibility critical for life sciences products, particularly in biologics (products created through biologic processes from natural sources), vaccines and APIs (Active Pharmaceutical Ingredients). As the industry moves toward e-pedigree, 3PLs have an important role to play not just by scanning product as part of the chain of custody, but by potentially offering a managed business service for e-pedigree data. 3PLs may also offer services to label and package to individual country e-pedigree requirements. As seen in **Figure 16** on page 28, shipment visibility is the service shippers would most like to receive from 3PLs.

¹ "Data Sharing in the Pharmaceutical Supply Chain: A Series of Case Studies," Center for Healthcare Supply Chain Research, June 3, 2009

² "IDEAS IN ACTION: A Case Study AIT Business Process Model for Procter & Gamble: Forecasts Opportunities and ROI," July, 2008

Quality, Compliance and Risk: Life sciences companies devote substantial resources to developing and manufacturing safe products to benefit the health of their ultimate customer, the patient. Governments also want to ensure the safety of drugs and other healthcare products and continue to implement additional stringent regulations to ensure public safety. With so much at stake, life sciences shippers are highly concerned about the proper handling of products as they make their way from production line to patient, to ensure product integrity, regulatory compliance and risk management.

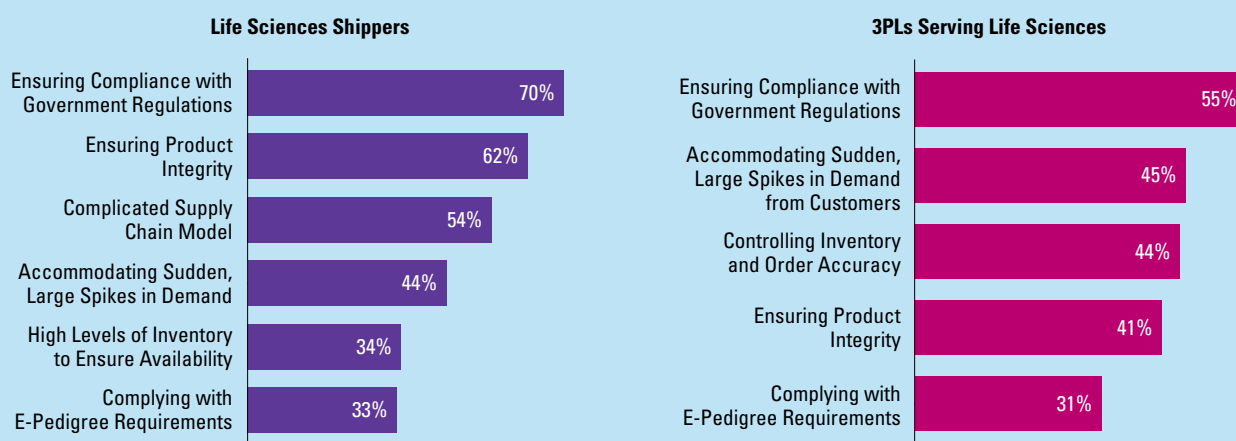
The World Health Organizations’ Good Distribution Practice (GDP) guidelines have been adopted globally to guide the proper handling of medical products, including import, temperature control and distribution control practices. The GDPs cover everything from security to monitoring devices to data sharing to reverse logistics procedures, seeking to bring the same rigor first created for manufacturing quality systems to product distribution. According to a supply chain executive who closely monitors Good Distribution Practice applications, there are more than 30 different interpretations of life sciences GDPs across the world.

IT is also critical to both assure and document quality and compliance. “If quality is 1-A then IT systems are 1-B” in importance, says Kevin Hickman, Senior Manager (NADC) for CSL Behring, with systems that are “well designed, very robust, and simple to use. The IT system has to help manage the quality aspects.”

Concern about quality and compliance is evident throughout the survey responses of life sciences shippers. However, differing rankings to survey questions between life sciences shippers and 3PL providers that serve life sciences companies suggest a possible disconnect between the two on the importance and value of ensuring product integrity through the supply chain. In **Figure 15**, for example, 62% of life sciences shippers cite ensuring product quality as a significant challenge, second only to compliance, while 3PLs rank this fourth, with only 41% noting this challenge. In **Figure 16**, shippers also rank quality procedures highly (70%) as a service they want 3PLs to provide, while just 45% of 3PLs currently provide them. Similarly, 60% of shippers would like to see 3PLs offer processes to ensure compliance with state and federal regulations, while just 44% of 3PLs currently offer these.

FIGURE 15

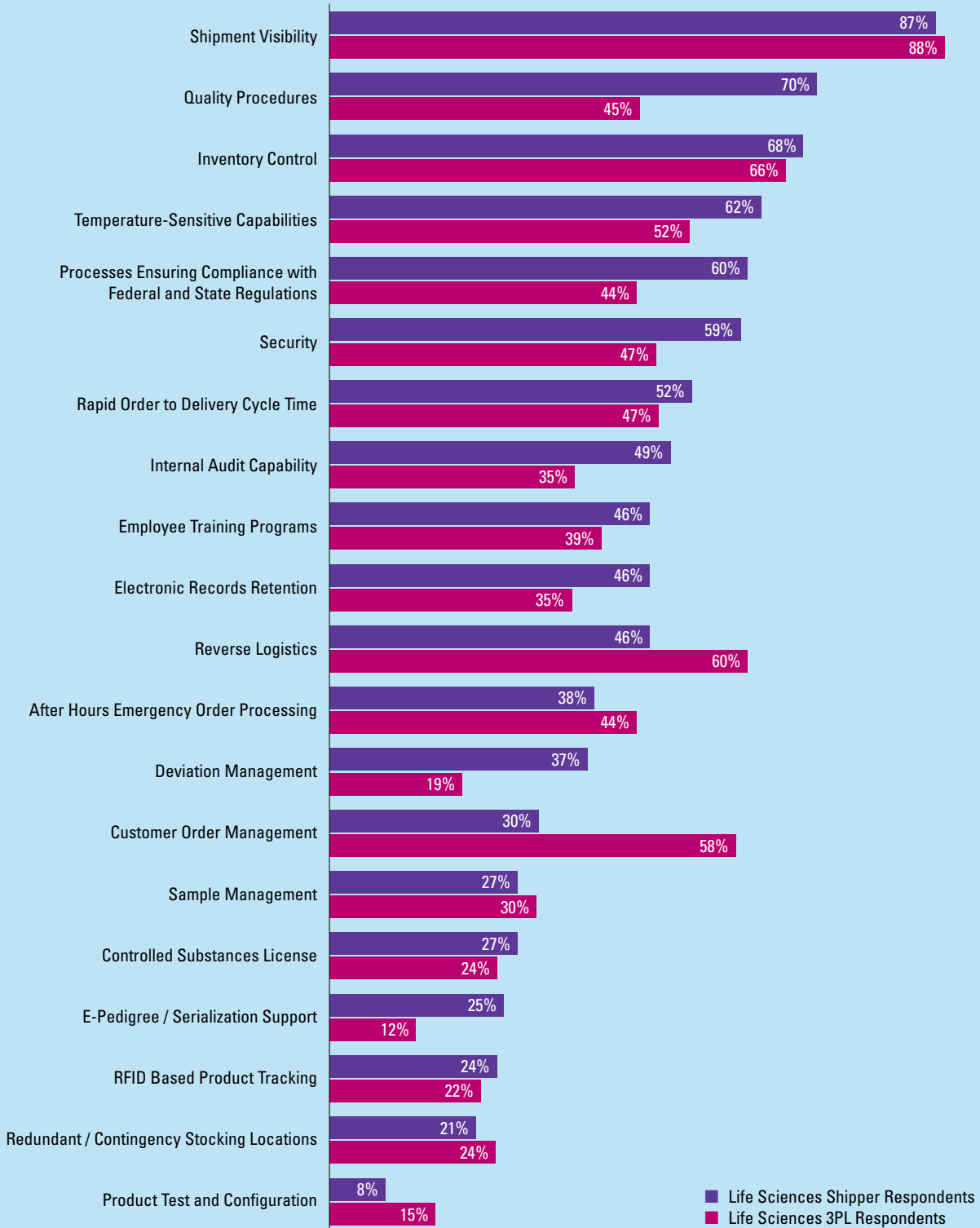
Government Regulations Top the List of Supply Chain Challenges



Source: 2010 15th Annual Third-Party Logistics Study

FIGURE 16

What Life Sciences Shippers Would Like Life Sciences 3PLs to Offer Vs. What 3PLs Currently Offer



Source: 2010 15th Annual Third-Party Logistics Study

In pharmaceutical logistics, “The challenge is getting the providers to truly understand the customer’s business,” says CSL Behring’s Sutherland. “It really takes a good solid year to understand the requirements. 3PLs tend to be too confident with the sales process as opposed to understanding the business.”

Ronald van Zitteren, UCB Pharma, Director Global Warehousing & Logistics, recommends 3PLs “hire people from pharma companies that have a background in quality and logistics.” 3PLs seeking success in life sciences need to “build up a network with GDP-controlled [Good Distribution Practices] warehouses at strategic points to be able to hold and store Pharma products,” says Corné van Raak, Manager Transportation, Abbott Logistics B.V.

Perhaps the desire to maintain more control over product handling is the reason life sciences respondents are less likely than the overall survey shipper respondents to use 3PLs for warehouse services (59% versus 74%). Life sciences shippers spend just 27% of outsourced logistic budgets on warehousing compared with 40% overall.

Balancing Quality and Price: In **Figure 17** on page 30, 73% of shippers say quality, compliance and risk mitigation are significantly more important than price in selecting 3PLs, while just 49% of 3PLs agree that their customers prioritize these over price.

“Cost is not a minor thing; sometimes you have to pay for quality,” says one pharmaceutical supply chain executive. “You have to meet a minimum for quality, security, and then cost can come into play.”

Inventory Control: Inventory control in life sciences is more than just ensuring adequate inventory levels to meet demand. Processes are also required to quarantine goods, including notification, record preparation, segregation and distribution processes.

Temperature Control: More than three-fifths of shipper respondents list temperature-controlled capabilities as an important 3PL selection criterion. 3PLs must be knowledgeable about the complex interplay of product, packaging materials, transportation methods and compliance with an evolving regulatory landscape while working to limit costs. Temperature control capabilities continue to grow in importance; the most expensive drugs tend to be temperature sensitive. The loss of a single LD3 (about 3 meters cubed) container of one type of cancer-fighting antibodies would generate additional costs of approximately US \$34 million.

Consider this potential scenario: a temperature-sensitive pharmaceutical arrives at a distribution facility prior to receiving government approvals to market the drug to the public. This inventory must be isolated both logically and physically, and data must be collected from temperature loggers within the shipment and communicated back to the manufacturing plant. The product cannot move from quarantine area to a primary storage location until the plant indicates that temperature readings were okay, assuring product safety and compliance, and government authorities have approved the product for sale.

Temperature logging is important and could increase many fold if rumors prove true and new regulations emerge requiring a temperature monitor inside every package, regardless of package validation. Feedback requirements for temperature deviations in transit could increase many times and this may cause the need to interact with small customers, not just wholesalers.

However, life sciences companies’ priorities differ according to industry sub-category. Biologics companies highly value a 3PL’s network of temperature-controlled capabilities, while these are only of medium importance to small molecule (many drugs are small molecule) and vaccine companies and of low importance, on average, to Active Pharmaceutical Ingredients companies.

3PLs’ assets and experience in managing temperature-controlled services for other industries has the potential to help shippers avoid capital-intensive investment. They also allow shippers to take advantage of better pricing on commodities like validated containers, and take advantage of 3PL temperature-controlled expertise. 3PLs can offer additional services related to temperature tracking as requirements become more granular and more parties are involved in the process. Dr. Thomas Lenhard, Head of Quality at Sanofi-aventis Distribution Platform Frankfurt, notes that in the future, “We not only want to know the position of the shipment on the map but also product quality related transport KPIs like online temperature tracking and remote control of quality parameters.”

Security: Safe passage of products from sourcing through manufacture to consumption or waste management also requires stringent logical and physical security practices and compliance with government security regulations, from prescribed handling processes to container locking procedures.

Both life sciences shippers and the 3PLs that serve them regard ensuring compliance with government regulations as the top challenge facing life sciences supply chains (**Figure 15**).

A COMPLEX ECOSYSTEM

Products, information and cash all flow via separate but related paths through the life sciences supply chain. This supply chain is characterized by stringent rules, specialized handling needs and multiple players, including drug and device manufacturers, wholesale distributors, pharmacies, pharmacy benefit managers, healthcare insurers, myriad types of healthcare providers, and patients. Fifty-four percent of shipper respondents say the complex supply chain model represents a significant challenge (Figure 15).

One example of the complex life sciences ecosystem is the existence of companies that operate both as wholesalers and as 3PL service providers. Is there a conflict of interest in using a 3PL for logistics services, so that they are your vendor, and selling them product, so that they are your wholesale customer? If, for example, the 3PL side needs to get pricing information to carry out order fulfillment with customers, potentially the wholesale side of the company could obtain this information and use it to their advantage.

In our survey results, 41% of shipper respondents would have concerns with using 3PL services associated with a wholesaler that is also a customer.

Despite such challenges, shippers seeking to manage the complexities of supply chains see a role for 3PLs. A significant number, 87%, of those surveyed indicate that 3PLs can add significant value by linking all parties that interact in the life sciences supply chain. (Figure 17). 3PLs feel strongly that differentiating through breadth of capability is key to gaining customers.

“Providers should look at the implementation of extended SOPs, Standard Operating Procedures, in order to have a link between the different parties involved,” says Ludovic Ménédème, Director Transport & Distribution Services EMEA for Baxter World Trade SA.

CHALLENGING CUSTOMER SERVICE REQUIREMENTS

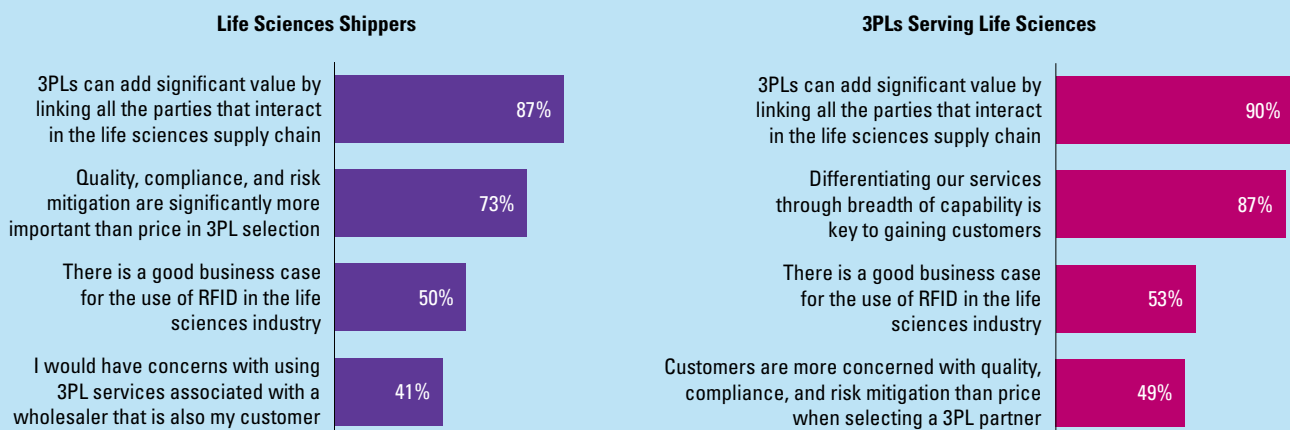
Never is having the right product at the right place at the right time more important than when that inventory can preserve health or save a life. That requirement accentuates the need for a flexible and responsive supply chain for life sciences products. Requirements include:

Flexibility: Life sciences production and supply chain activity must accommodate spikes in demand, such as the need to quickly distribute seasonal flu vaccine. Temperature-sensitive products may also require timely handling; often, for example, manufacturers don’t want these products to ship out on a Friday to avoid weekend delays, so shipping is compressed into to a four-day period each week. In such cases a 3PL may offer more staffing and operational flexibility to accommodate these spikes. Forty-four percent of shipper respondents cite the need to accommodate sudden, large spikes in demand as a supply chain challenge (Figure 15).

New Markets: Entering new markets, such as in the fast-growing BRIC countries of Brazil, Russia, India, and China, is a costly and complex endeavor for life sciences companies. 3PLs can play an important role in facilitating logistics for these efforts.

FIGURE 17

Life Sciences Shippers’ and 3PLs’ Views on Supply Chain Issues



Source: 2010 15th Annual Third-Party Logistics Study

Recall Capability: A newly discovered contaminant in heparin products sourced in China and sold by a leading pharmaceutical company in 2008 led to sickened patients and a recall that spread to include medical devices such as catheters. The ability to enact reverse logistics, including recalls, in an organized fashion is critical to containing the potential damage from such an incident; products not properly reclaimed and destroyed may end up being resold by an unscrupulous party. Sixty percent of 3PL respondents that serve life sciences provide reverse logistics services.

Inventory: Balancing the desire for high fill rates with the cost of carrying inventory is a challenge for any industry. When the product in question can save lives, the pressures increase; some of these life-saving medications are very expensive. About a third of shipper respondents indicate that maintaining high levels of inventory to ensure availability is a top logistic challenge (Figure 15).

Redundant Locations: Life sciences companies with life-saving products often maintain redundant stocking locations, either themselves or via a 3PL, to ensure availability in the event of an operational failure or natural disaster at a primary location.

Next Flight Out/Late Cut-offs: Some life-saving products need to ship on short notice, even outside of normal operating hours. One major pharmaceutical company reports using a 3PL that is close to a major airport in order to provide life saving transport-next flight out (NFO) service. The 3PL maintains validated, medical-grade coolers that store a small amount of life-saving drugs. 3PLs may offer more staffing and operational flexibility to accommodate such extraordinary needs.

Sustainable Supply Chain: Sustainability concerns have survived and even grown through the recession. Life sciences shippers are interested in 3PLs' ability to help reduce their environmental impact in everything from transportation emissions to packaging design. "Environmental aspects will become more and more important," says Richard Groenenboom, Head of Global Logistics (PTSL), F. Hoffmann-La Roche Ltd. "If a provider can guarantee efforts in the direction of green logistics, this can be seen as a clear bonus."

On-time Delivery/Responsiveness: On-time delivery/pickup and responsiveness are also important 3PL requirements for life sciences companies. One pharmaceutical supply chain executive sees issues with responsiveness as inherent to the business model: "3PLs must balance competing client priorities, which inhibits or slows down their ability to make changes or serve customer-specific needs" due to contractual and legal considerations, he says. "It is easier to implement changes within network 3PLs

where the clients are all in the same industry. It is important for Pharma companies that the majority of the 3PL's clients are Pharma companies as well." Size can be a factor in the level of responsiveness, but this can be ameliorated in part through strong, industry-aware account management.

Employee Training: Life sciences shippers are also concerned with ensuring the right level of training for 3PL employees to address industry-specific needs, such as ensuring drivers understand the sensitivities of their cargo and adhere to prescribed handling processes. "As the name supply chain suggests, this is a chain and it will always break at its weakest point," says Robert Müller, Head, Global Warehousing & Distribution, Novartis Vaccines & Diagnostics. "Most of these weak points are the people. So we need training and also better payment for some of them."

LIFE SCIENCES: KEY TAKEAWAYS



- The medicines and devices produced by the life sciences industry support life and health. Product sensitivity, security concerns and network complexity make moving this precious cargo from point of manufacture to point of consumption continually more challenging, with errors and poor practices exacting a high price. Life sciences companies' supply chain challenges lie in three major areas: product integrity and handling, an inherently complex trading partner ecosystem, and a demanding set of customer service requirements. These challenges command a multi-faceted approach that includes product visibility, quality and compliance procedures, stringent inventory control, temperature control capabilities and security. Regulation is a key consideration, with emerging serialization and e-pedigree requirements adding to the list. About half of shipper and 3PL respondents to our study agree that there is a strong business case for RFID in life sciences to address these needs.
- Products, information and cash all flow through the life sciences supply chain, which is characterized by stringent rules, specialized handling needs and multiple players, some playing seemingly conflicting roles. A significant 87% of shipper respondents indicate that 3PLs can add significant value by linking all parties that interact in the life sciences supply chain. The critical nature of many life sciences products accentuates the need for a flexible and responsive supply chain, including the ability to accommodate emergency needs and quickly and efficiently enact recalls. Quality, compliance and risk mitigation are essential in life sciences, but shippers and 3PLs have different views on their relative importance to price in securing 3PL services.

FAST-MOVING CONSUMER GOODS

Demanding Consumers Increase Supply Chain Pressures

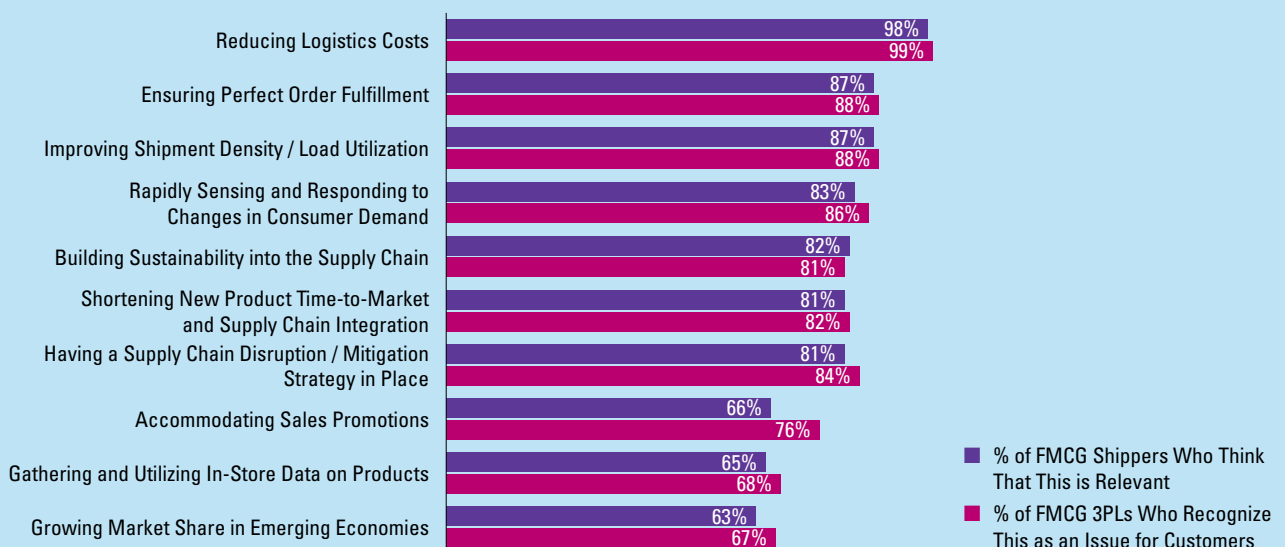
A more cautious, less loyal shopper has emerged in the global recession, challenging consumer goods manufacturers and their supplier and retailer partners to become more demand-driven and responsive. A value-conscious customer is particularly challenging for producers of fast-moving consumer goods, defined as products replaced or used up in a short period of time – such as trendy apparel, toiletries, and groceries – that are non-durable and sold directly to the end consumer. With large volumes and low margins, fast-moving consumer goods companies (FMCG) must respond quickly to deliver in-demand, on-trend products to shoppers when and where they want them, to avoid getting stuck with undesirable merchandise.

TOP LOGISTICS CONCERNS

It's not surprising that manufacturers of fast-moving consumer goods cite a long list of high-priority concerns for their supply chains. Reducing logistics costs is the perennial number one goal across all industries in the *Annual 3PL Study* (Figure 18), but other priorities speak to the particular challenges of the fast-moving consumer goods category, including perfect order fulfillment (87%) rapidly sensing and responding to changes in consumer demand (83%) and shortening new product time-to-market and supply chain integration (81%).

FIGURE 18

Reducing Logistics Costs is a Top Concern for FMCG Companies



Source: 2010 15th Annual Third-Party Logistics Study

Swedish manufacturer Oriflame Cosmetics, for example, delivers direct-to-consumer within 24 to 48 hours of when the order is placed; in some markets that means home delivery or delivery to one home on behalf of several customers, while other markets favor pickup at a kiosk or service center. That's challenging the manufacturer to increase order accuracy and work to avoid out-of-stocks while coping with the costs incurred by operating so many delivery models.

Fast-moving consumer goods manufacturers are acting on growing global awareness of the need to mitigate the environmental impact of manufacturing and logistics processes, with 82% placing priority on building sustainability into the supply chain. Green is no longer leading edge or pioneering; it is now a normal part of a company's operations, driving the need for manufacturers and others to develop cohesive and comprehensive earth-friendly sourcing strategies.

Improving shipment density and load utilization is one of these strategies (87%), enabling manufacturers to maximize use of shipment capacity to reduce emissions, wasted capacity and potentially costs as well. Limited Brands Logistics Services, for example, continues to work on new configurations of its carton proportions to fit as much merchandise into containers as possible.

"Sustainability is a mandate to do a better job in the logistics area," says one FMCG executive, whose company has been testing hybrid electric delivery trucks and working to comply with emerging sustainability

Bringing 3PLs into the planning of promotions "allowed an extra set of hands and eyes beneficial to getting products to the shelves faster."

regulations in jurisdictions such as California. "Because only 160 to 170 miles is the usual length that our products travel to get to their final destination, it's difficult for us to take advantage of multimodal alternatives, like truck/rail or truck/ship," he says.

3PLS AND SHIPPERS SHARE PERSPECTIVE

Fortunately, fast-moving consumer goods manufacturers and the 3PLs that serve them are remarkably aligned in their assessment of these top concerns. These results seem to imply a much closer agreement between the two groups than there might have been ten to fifteen years ago.

The only slight deviation occurs in accommodating sales promotions, where 3PL respondents are more likely to consider this a top priority than shipper respondents (76% vs. 66%). Perhaps this is due to fast-moving consumer goods companies' often heavy reliance on promotions; for many in this category, much of the business is promotional, so the inventory spikes promotions create are simply business as usual. Additionally, accommodating the spikes in volume generated by a promotion requires speed, visibility and IT connections. One shipper says bringing their 3PLs into the planning of promotions "allowed an extra set of hands and eyes beneficial to getting products to the shelves faster. Our 3PLs assist in expediting shipments through changing ocean moves to airfreight or cross-docking at the destination to reduce handling time."

While fast-moving consumer goods shippers and 3PLs may agree on the issues, they view differently the role 3PLs can play in addressing them. **Figure 19** reveals what issues fast-moving consumer goods shipper respondents see 3PLs helping them to manage, versus the types of issues 3PLs think shippers will implement along with them.

Fast-moving consumer goods shipper respondents are closely aligned on their view of 3PLs' role in helping to improve shipment density/load utilization, reduce logistics costs, and put a supply chain disruption/mitigation strategy in place, as well as on perfect order fulfillment and sustainability projects.

"Sustainability is very important to our company," says Frits Voortman, Director, Corporate Supply Chain at FrieslandCampina. "We will be coming out with new, improved sustainability program post-merger and we will expect 3PLs to help."

But shippers are less likely than 3PLs (46% vs. 62%) to see 3PLs playing a role in shortening new product time-to-market and supply chain integration. This is another area that, like sales promotions, requires speed, visibility and a strong shipper-3PL IT connection; issues of trust and collaboration may also be at play. “Shippers likely see a goal of shortening new product time-to-market as a broadly cross-functional effort that requires the shipper to manage activity among internal functions (from design to production to logistics to sales to marketing) and external partners,” including the 3PL, says a leading retailer.

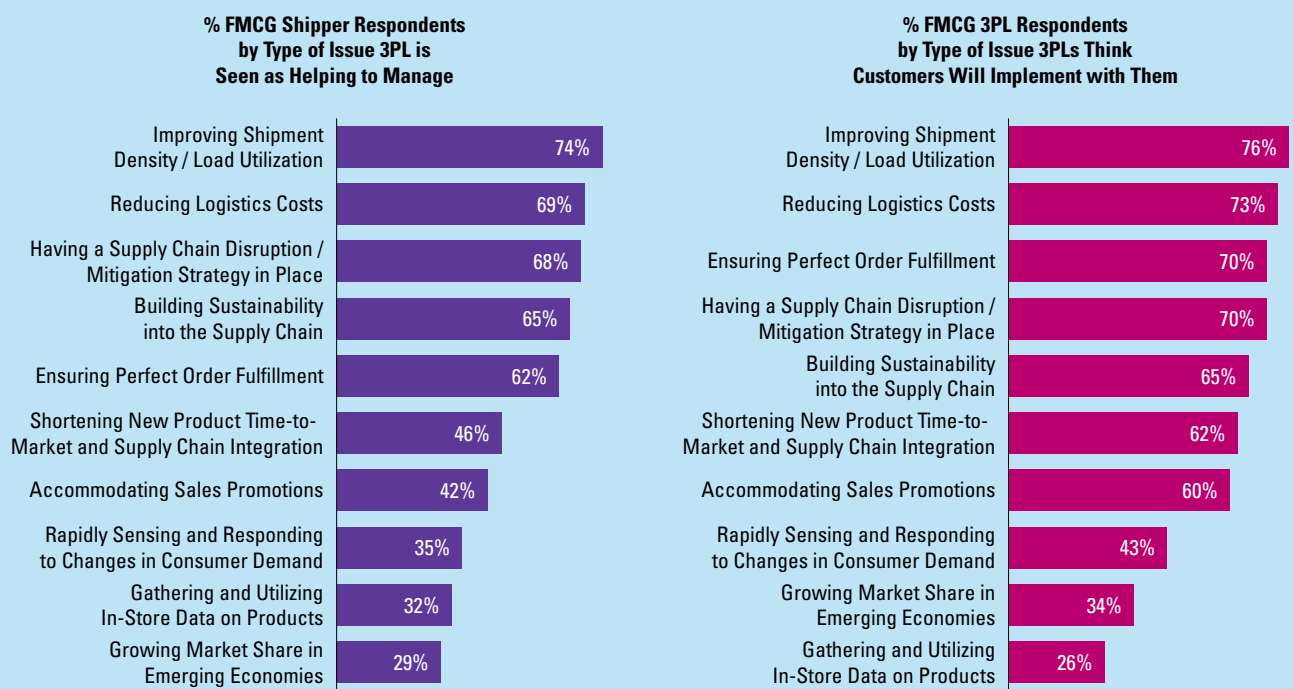
The disparity seen earlier in sales promotion occurs again here, with just 42% of shipper respondents seeing a role for 3PLs, while 60% of 3PLs see one. At one FMCG shipper, for example, creation of a 3PL joint venture with a sister company means high-velocity and high-volume – and presumably more

heavily promoted – goods are handled internally, while 3PLs are used for not-core business, such as products that are low volume or not fast moving, or where the company has not migrated to new IT systems.

But others rely on 3PLs precisely for the excess capacity demanded by things like promotions. For example, Oriflame Cosmetics, which conducts as many as 40 promotional campaigns each year for each of the eight European countries being served from its Warsaw DC, shares its forecast with its 3PL a year in advance to jointly plan labor and other needs. “This joint planning certainly brings us benefits in the warehouse operation,” says Gokhan Cakmak, Logistics Manager, Global. “In transport this is more difficult where we need to sometimes find up to three times more capacity. The 3PL assists to then bring in more capacity, working with other companies.”

FIGURE 19

FMCG Shippers and 3PLs See 3PLs’ Capabilities Differently



Source: 2010 15th Annual Third-Party Logistics Study

COLLABORATING ON COSTS

Despite the priority placed on reducing logistics costs and the fairly close alignment in how fast-moving consumer goods shipper respondents and 3PLs see the 3PL's role in helping to reduce logistics costs, shippers are involving 3PLs in cost-reduction strategies less often than one might expect (**Figure 20**).

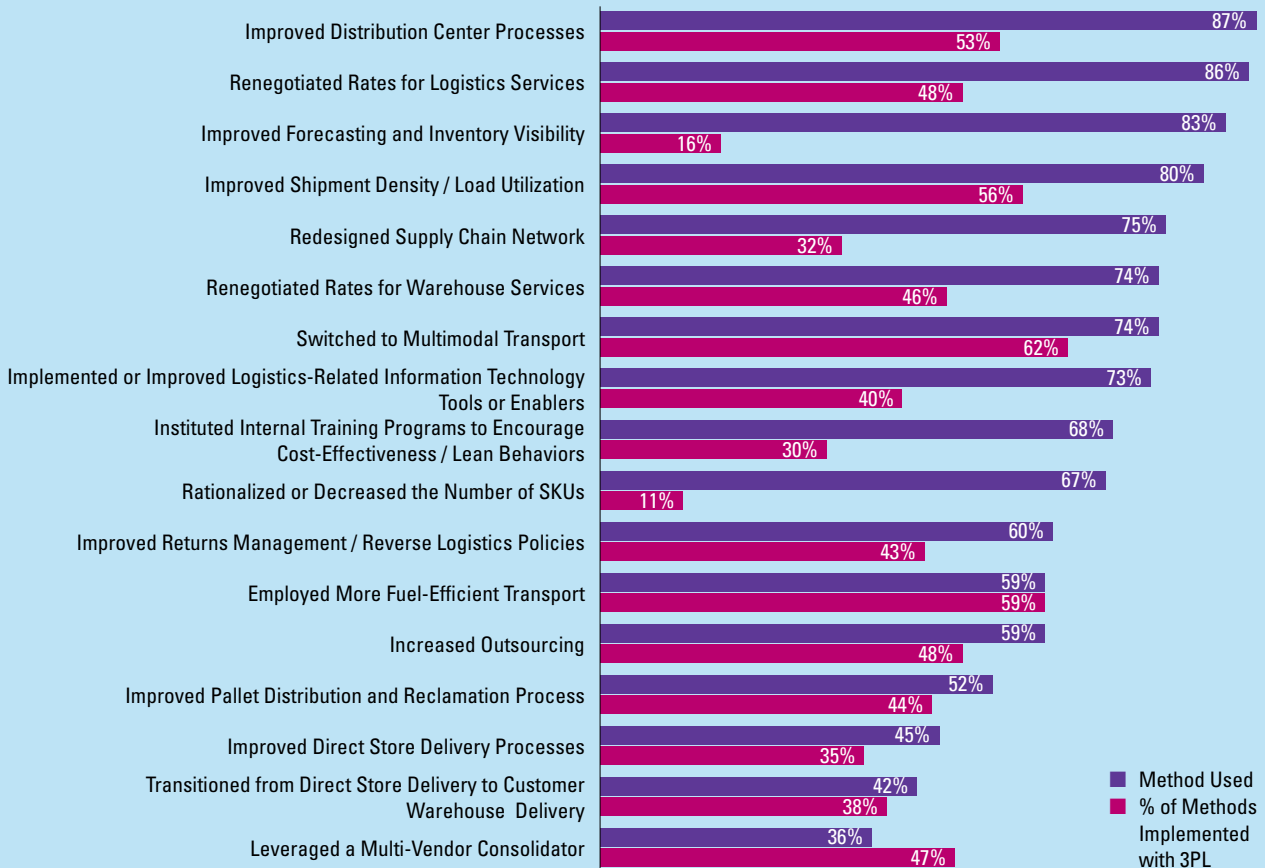
Improved Distribution Center Processes: Seeking strategies to improve warehouse processes and attain better KPIs is the most-used cost-reduction strategy (87%) by fast-moving consumer goods shipper respondents. Beverage distributor Ben E. Keith Company, for example, is using its warehouse management system to better track manpower and hours and is bringing in temporary workers to address spikes in volume. However, just 53% of shipper respondents are implementing DC process improvements in partnership with a 3PL, despite the fact that 73% of this group outsources warehousing to a 3PL. One possible interpretation is that these process reform efforts are focused more often on those warehouse operations retained internally rather than those outsourced.

Renegotiated Rates for Logistics Services: A high number of shipper respondents use renegotiation of rates as a method to reduce logistics costs (86% for logistics services and 74% for warehouse services). Shippers also have the opportunity to use 3PLs to help them renegotiate rates with other supply chain vendors, but more than half of the respondents do not report doing this. This could mean that these negotiations are one-sided, or shippers question 3PLs' capabilities or availability for this service. It is possible that joint negotiations could drive increased savings and improve collaboration and relationships between the parties.

Improved Forecasting and Inventory Visibility: A great number (83%) of fast-moving consumer goods shipper respondents are seeking to improve forecasting and inventory visibility to reduce costs, but a limited number of respondents have implemented solutions with 3PLs (16%). During interviews several shippers and 3PLs noted the increased importance and reliance on reliable forecasting and visibility; this requires increased collaboration and trust among 3PLs and shippers to drive improvements. One shipper comments, "We

FIGURE 20

FMCG Shippers' Most-Used Cost-Reduction Strategies Don't Always Involve 3PLs



Source: 2010 15th Annual Third-Party Logistics Study

understand the importance of improved forecasting and visibility and continue to invest in initiatives that drive productivity and operating improvements. A current project will improve forecasting and inventory visibility across our trading partners and enable us to improve visibility and availability of product to our 3PLs for scheduling and movement of goods.”

Some 3PLs and carriers are looking to push shippers for more sharing of forecasts to even out the peaks and troughs that put extra costs into the supply chain. The recent economic crisis and subsequent shipment recoveries put increased pressure on 3PLs and carriers who either sat on empty space or sat with too much cargo to move. Uncertainty leads to increased costs in the supply chain for both shippers and 3PLs. 3PLs are anxious to work with shippers to increase their forecasting visibility and accuracy and have started looking at implementing reward/penalty systems to achieve a more reliable supply chain. The challenges we are seeing now used to be evident over shorter and more anticipated peaks (for example, summer peak season, Christmas or Chinese New Year). This year there has been a more tidal capacity

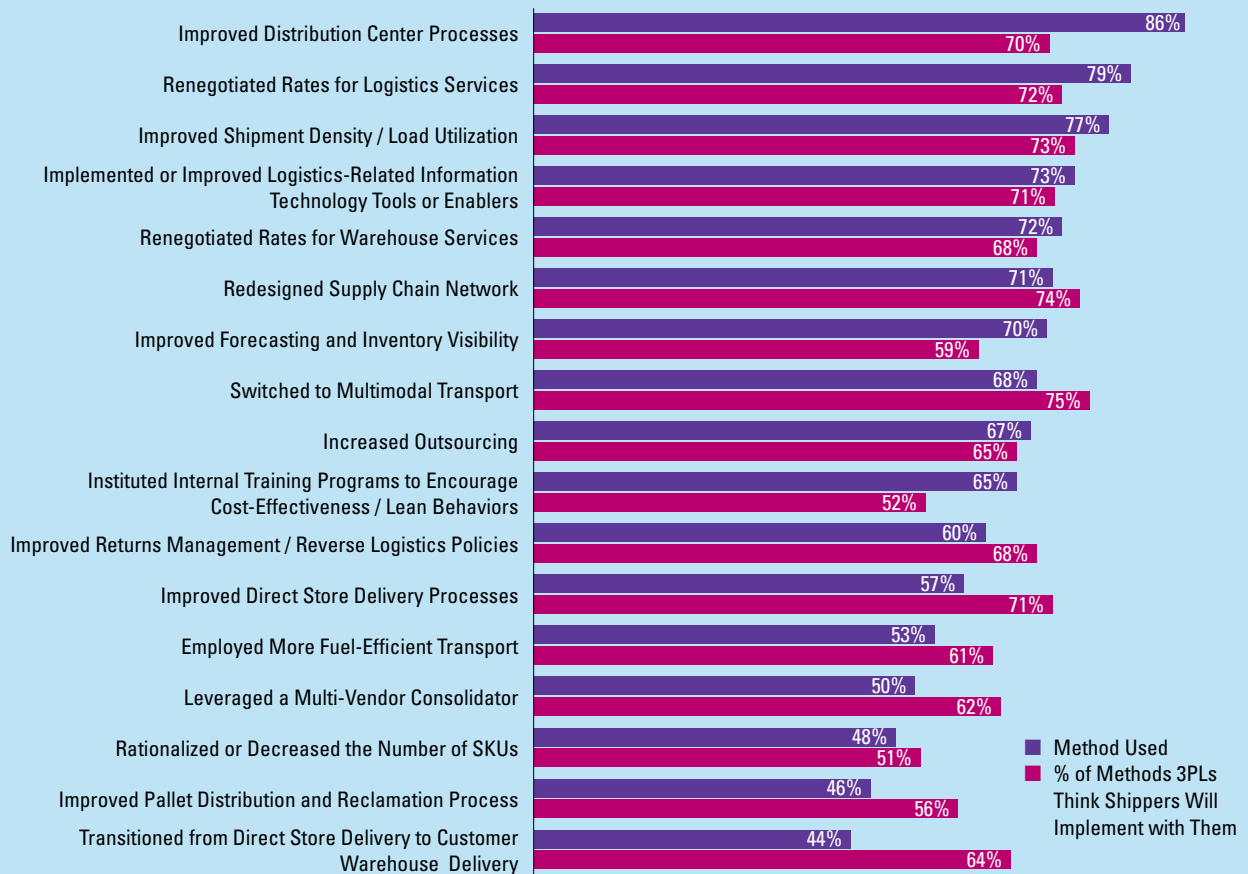
challenge, says one 3PL provider, which is causing carriers and 3PLs to cap commitments and consider penalizing significant short shipment/no-shows.

Redesigned the Supply Chain Network: Three-quarters of fast-moving consumer goods shipper respondents are employing supply chain network redesign to reduce logistics costs, but just 32% are doing so with a 3PL. For example, to support its retail operations, Limited Brands offers 3PL services to other retailers aggregating volume to more than 40 nodes around the US and is maximizing its use of a delivery agent network. Limited is also increasing shipments into Canada to support the company’s growth in the Canadian market. It may be the case that shippers don’t view their 3PLs as having the strategic or IT expertise necessary to carry out this type of initiative.

Interestingly, 3PLs perceive themselves playing a much larger role in fast-moving consumer goods shipper respondents’ logistics cost reduction efforts. **Figure 21** reveals what methods 3PLs believe their shipper customers are using to reduce costs and the percentage of those efforts implemented with a 3PL.

FIGURE 21

3PLs Perceive Themselves Playing a Much Larger Cost-Reduction Role



Source: 2010 15th Annual Third-Party Logistics Study

This study has consistently found that trust issues impede the progress of 3PLs and shippers toward more strategic and collaborative relationships, and that phenomenon could be at work here. 3PLs have the responsibility to demonstrate their capability to take on a more strategic role and convince users to accept them as strategic partners. In the *2009 Third-Party Logistics Study's* chapter on Supply Chain Orchestration, 38% of shipper respondents said 3PLs lack the business expertise that would coax them to increase outsourcing to 3PLs. Both sides have to be ready.

As a retailer involved with both fast-moving consumer goods companies and 3PLs put it, “Shippers outsource what they cannot do well – i.e., their problems. They want the 3PL to make the problems go away. To the extent the problem requires skills, assets and technology that the shipper does not have, the relationship can work. But to the extent the problem is an underlying economic or market condition, the problem is still there, but less immediate to the shipper via the outsourcing.”

FMCG AND TOTAL LANDED COST

Fast-moving consumer goods shipper respondents are slightly more likely than the overall 3PL survey respondent base to use total landed cost

calculation extensively in their businesses. As with the overall population, these users most often use spreadsheets for total landed cost calculation, followed by internally developed tools.

However, among those who use TLC minimally or do not use TLC calculation at all, their reasons for not doing so differ. While just 31% of minimal/non-users from the overall respondent base do not do so due to a lack of sufficient time for analysis, 61% of fast-moving consumer goods shipper respondents cite this, the biggest reason for non-use, perhaps reflecting the high-velocity nature of this vertical, where decisions must be made within a shorter period of time than spreadsheet-based analysis would permit. Lack of available data is the largest obstacle for overall users, a problem experienced equally by fast-moving consumer goods shipper respondents.

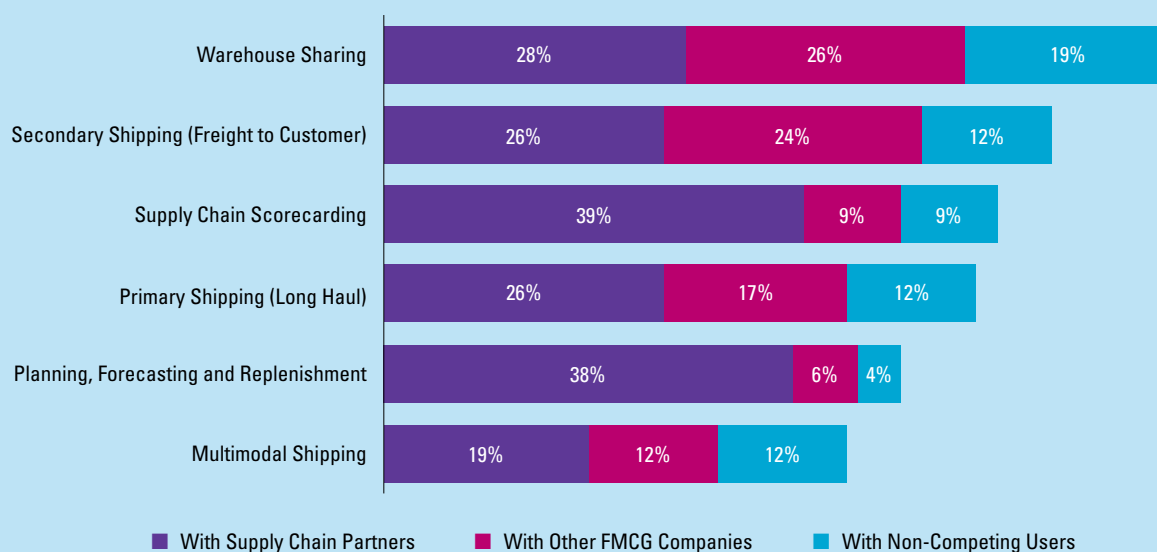
TRANSPORTATION AND WAREHOUSE SHARING

Some shippers are sharing transportation and warehouse capacity to reduce logistics costs and improve sustainability. **Figure 22** illustrates the various types of sharing initiatives and frequency of use.

Warehouse sharing is the most commonly used strategy, with 28% of fast-moving consumer goods shipper respondents engaging in this practice with supply chain partners, 26% doing so with other FMCG companies,

FIGURE 22

Many FMCG Shipper Respondents are Undertaking Transportation or Warehouse Sharing



Source: 2010 15th Annual Third-Party Logistics Study

and 19% with non-competing shippers. Some of this sharing, however, may be attributable to the use of 3PLs who maximize their assets by maintaining multiple customers' inventory in one facility, rather than an arrangement made at the shippers' direction.

One retailer notes that the organization's 3PL selection for outsourced distribution operations did consider the 3PLs' other customers as a potential benefit. However, "To the extent that cost savings were the result of sharing resources managed through a 3PL, we would expect that the 3PL would prefer not to fully share that information, as the leverage of shared resources is part of their profit model."

Shipping is also a popular place for resource-sharing. Secondary shipping (freight to customer) is the most widely used, and the most likely to be undertaken with another fast-moving consumer goods company. Primary shipping (long haul) is slightly less used, followed by multi-modal shipping.

"We collaborate on transportation with other, but non-competitive, food and beverage manufacturers -- not commingling, but sharing lanes," says one FMCG manufacturer. "It seems to work for us and for those participating." However, the company has resisted others' overtures to share warehouse space. "We feel it adds more touches (and cost) to the supply chain," he adds.

About half those shippers and 3PLs who have a transportation or warehouse sharing arrangement work with a 4PL to carry out the arrangement.

While two-thirds of those involved with warehouse transportation sharing initiatives have recognized cost savings, the level of savings has been limited (58% are less than 5%), 13% saw no savings, and 21% do not know the savings. This would suggest that KPIs need to be improved or supplemented to capture results from this type of initiative. KPIs used in the past to measure the supply chain are not necessarily the ones that will bring success in the future. **Figure 23** reveals a breakdown in the level of savings experienced by those fast-moving consumer goods shipper respondents that saw a savings.

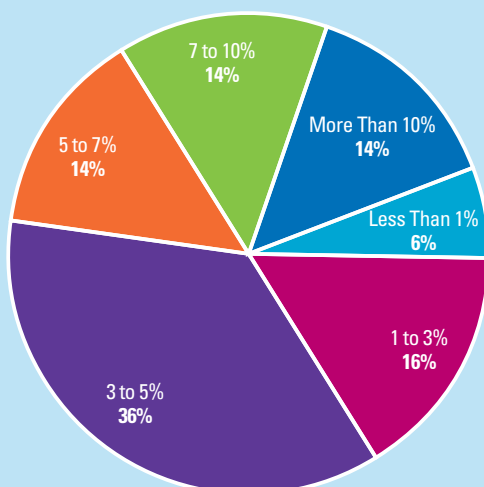
FAST-MOVING CONSUMER GOODS: KEY TAKEAWAYS



- The high-volume, low-margin fast-moving consumer goods manufacturer must become more demand-driven to serve a less loyal, more cautious post-recession shopper whenever and wherever they are motivated to buy. Those pressures are putting perfect order fulfillment (87%), rapidly sensing and responding to changes in consumer demand (83%), and shortening new product time-to-market and supply chain integration (81%) at the top of their list of supply chain priorities alongside reducing logistics costs. Fast-moving consumer goods manufacturers and the 3PLs that serve them are closely aligned in ranking top concerns, reflecting 3PLs' solid understanding of their customers' businesses.
- But they have some diverging views on the role 3PLs can play in helping shippers address these concerns. Shippers want 3PLs to help improve shipment density/load utilization, reduce logistics costs and establish a supply chain disruption/mitigation strategy, but they consider them less often for goals such as shortening new product time-to-market and supply chain integration. Shippers are also involving 3PLs in cost-reduction strategies less often than one might expect, with the biggest gaps in improved forecasting and inventory capabilities, rationalizing SKUs and redesigning the supply chain network. 3PLs see their role as much larger in these and other services. The trust issues that have consistently slowed the evolution of shipper-3PL relationships may be a factor in these gaps. Some shippers have tested sharing warehousing and transportation as a green and cost reduction strategy, with most reporting savings of less than 5%.

FIGURE 23

More Than Half the Savings Levels Experienced through Sharing Are Under 5%



Source: 2010 15th Annual Third-Party Logistics Study



STRATEGIC ASSESSMENT

Economic and Trust Issues Challenge 3PLs' Forward Momentum

For the last nine years the *Annual 3PL Study* has documented a gap between the importance shippers place on 3PLs' IT capabilities and their satisfaction with those capabilities, known as the IT Capability Gap. Ironically, as that gap shows signs of narrowing, another is emerging. The inclusion of 3PLs in the survey group beginning with the *2009 3PL Study* revealed a disparity between how shippers and 3PLs view 3PLs' ability to deliver innovation. Is there an Innovation Gap?

Evidence of 3PLs' more positive perception of their performance is found throughout this report. Most notably, 68% of shipper respondents, versus 95% of 3PLs, indicate that 3PLs provide shippers with new and innovative ways to improve logistics effectiveness. This thought has frequently been expressed by shippers participating in workshops for the *Annual 3PL Study*, who want 3PLs to draw from their experiences within their own and other industries to offer new ideas. Budgetary restrictions resulting from the economic crisis may also be dampening some shippers' and 3PLs' capacity for innovation.

But 3PLs see another side to this story: roadblocks erected by shippers that inhibit innovation. For example, in considering collaborating on total landed cost calculation, 58% of 3PLs respondents report that shippers are hesitant to share the required information with them. Shippers' reticence to share strategy and data is a consistent finding in the annual 3PL studies; for example in the *2007 12th Annual Third-Party Logistics Study*, in a chapter on Collaboration, some shippers reported feeling uncomfortable trusting the 3PL with maintaining the customer relationship or making sure there is enough inventory in stock, either of which can directly impact revenue. This was

despite the fact that shipper respondents to that study ranked inventory management and customer order management as the business processes that would most benefit from improved collaboration with 3PLs.

Insight into shippers' strategies enables 3PLs to leverage best practices and industry knowledge from their own and other industries. As with the IT gap, both sides must be open to change: 3PLs have to ask the right questions to probe for what the client needs and then offer innovation. Customers must be willing to share enough information to make this possible and worthwhile for the 3PL to pursue.

How long can 3PLs and shippers afford to neglect the importance of driving innovation to stay competitive in the future?

RETROSPECTIVE ON 3PL ROLE

The title of the *CSCMP's 21st Annual State of Logistics Report* sums up the dismal conditions of 2009 quite clearly: *The Great Freight Recession*. In the *2009 3PL Study*, a major theme was the role 3PLs may be able to help shippers play in an environment of significant economic instability and volatility. Now that things appear to be improving, the question arises: did the 3PLs actually play a substantial role in helping shippers throughout these turbulent times?

In the *2009 3PL Study*, the strategies shipper respondents said they would use in response to economic volatility that would increase their use of 3PLs included:

- Reducing operating costs because 3PLs have more scale in operations or sourcing and/or better processes and/or technology.

- Restructuring supply chain networks – 3PLs have the tools to help design new networks and can provide operating assets (DC and transportation capacity) to make it happen. Leveraging 3PL assets under a transactional fee structure can reduce risk by converting fixed costs to variable.
- Reducing order to cash cycle time; our findings support the opinion that 3PLs do help reduce cycle time.
- Expanding to new markets or helping to support the launch of new products.

Shippers also suggested that 3PLs could help them by increasing resource-sharing among customers, setting mutual supply chain optimization targets, offering flexible service menus based on delivery date requirements, and proactively communicating suggestions for improvement.

The discussion of the Innovation Gap above is evidence this last point has not succeeded to the extent expected by shippers.

But if 65% of shipper respondents have increased outsourcing, and if overall spending on 3PLs as a percent of total logistics expenditures is down, perhaps the strategies referenced above were not only enacted, but succeeded in reducing costs. In addition, shipper satisfaction levels remained consistent, as did metrics documenting improvements in costs, cycle times and fill rates resulting from 3PL services. In fact, 60% of shipper respondents report that their use of 3PLs has led to year-over-year incremental benefits. Something clearly worked well.

What are the lessons learned that will help 3PLs and shippers work together to weather future economic volatility?

The lack of innovative solutions provided by 3PLs indicate that there is still a substantial improvement potential for 3PLs to help shippers by delivering pro-active solutions for continuous improvement of logistic efficiency.

THE CIRCLE OF STRIFE

A related question might be, what lessons apply as the global economy emerges from recession? One of the hardest-hit segments in the logistics sector was asset-holders: those companies that own the trucks, ships, warehouses and other real property essential to the efficient functioning of supply chains. Most 3PLs are non-asset owning, and contract with these asset-owning companies to provide services to their customers. During the recent period of

economic volatility, when business volumes in many parts of the world were adversely impacted, these asset-based companies responded to decreases in demand by idling assets and reducing rates.

Now that things are improving, the asset-owning companies are in a better position than they had been recently, and are now beginning to call the shots again. Is this simply the circle of strife – a cycle the industry is stuck with? Or do the economic realities we see today require all parties to step back and find a way to remove the uncertainty and waste? Already, transportation rates are creeping up in some sectors, and are increasing significantly in areas such as international air and ocean. There are signs that shippers are starting to feel the shift, and are seeking strategies to mitigate their supply chain risk, which grows with rising rates, tightening capacity and a smaller number of surviving asset holders still in operation as a result of consolidation.

As reported on page 38, some fast-moving consumer goods shippers have begun sharing transportation and warehouse capacity to reduce logistics costs and improve sustainability – steps which also help contain their risk, especially if these shippers are using their own assets to do so. In mid-2010, retail publication *RIS News* was already sounding a warning to retailers to make themselves more attractive transportation customers by increasing capacity utilization, tapping carriers' backhaul routes, helping carriers fill empty trucks and improving communication with carriers, to survive the upcoming Christmas season.

As explored in the Current State of the 3PL Market chapter, 3PLs are already seeing some shippers becoming more involved in insourcing certain logistics activities and/or consolidating the number of 3PLs they use. Taking the cost-saving measure of consolidation one step further, the question is: Will shippers also take the initiative to form communities to achieve horizontal collaboration, or will 3PLs/4PLs step in and take the lead?

There are opportunities for both asset-owning and asset-light suppliers to offer shippers alternative solutions to reduce additional costs caused by the global economy's circle of strife. In addition, shippers and 3PLs should spend more time discussing alternative sourcing and shipping opportunities to lower the risk exposure and costs caused by uncertainty.

When will asset-light 3PLs and shippers start working together to strategically mitigate the supply chain risks (rising rates, tightening capacity) by developing alternative shipping opportunities?

3PL VALUE-ADDS

3PLs seeking to respond to shippers' calls for increased 3PL innovation will find several high value-add opportunities, both general and industry-specific, in the pages of the *2010 3PL Study*.

For 3PLs serving life sciences, two evolving regulatory areas are driving the need for data management: e-pedigree and, potentially, temperature tracking. A database recording movement of drugs, required to comply with emerging e-pedigree regulations, will have to reside somewhere. If not within the government, then 3PLs, as the glue that ties together many stages of the supply chain, are well-positioned to operate as e-pedigree clearinghouses. As noted in the Life Sciences chapter, 87% of those surveyed indicate that 3PLs can add significant value by linking all parties that interact in the life sciences ecosystem.

3PLs can serve a similar role for industries requiring temperature tracking, particularly if speculation proves true and tracking becomes a requirement even down to the individual package level. For example, a 3PL could potentially track a package containing a temperature-sensitive drug all the way to a physician's office and then provide support for office personnel to upload temperature monitor data to a 3PL-maintained web site. The 3PL could then provide an alert to the drug's manufacturer or distributor, who would review in-transit temperature data to confirm whether or not the drug is safe to use. The 3PL would then advise the physician's office accordingly via an e-mail, or even a phone call if there is a serious issue.

The resource-sharing explored in the chapter on Fast-Moving Consumer Goods suggests another 3PL value-add opportunity. As coordinator of multiple transportation modes and warehouse assets, 3PLs are well positioned to help merge shipments across multiple companies, even leveraging the transportation assets owned by those companies (e.g., trucks, air, ocean, rail, etc.).

As the responsible party for many supply chain components, 3PLs are similarly well positioned to provide Total Landed Cost calculation as a service, particularly if indicators of improving 3PL IT capabilities are correct.

Will 3PLs seize these innovation opportunities to drive both revenue and enhanced customer relationships? And if they do, will shippers embrace these innovations?

KEYS TO FUTURE SUCCESS FOR 3PLS AND SHIPPERS

As discussed earlier in this chapter, the presence of innovation in 3PL-shipper relationships will be a major factor in the success of those relationships. Allowing for the fact that a certain portion of the shipper community will always choose to retain the most strategic aspects of supply chain operations and then tactically use 3PLs to help accomplish the desired objectives, there will also be a large element of the shipping community that will rely on 3PLs for innovation in the design and execution of those same services.

The future growth and development of the 3PL sector will be highly dependent on the ability of the providers to work effectively with their shipper-customers to conceptualize and implement innovative solutions to logistics and supply chain problems. Key to the relationship between shipper and 3PL are:

- The trust required to meet agreed-upon quality standards, for example, in service level agreements.
- Willingness to share the information essential to developing a supply chain strategy and for understanding how total landed cost can be improved to optimize the supply chain.

The total landed cost calculations as illustrated on page 15 are very powerful, but shippers continue to underestimate their power in helping to evaluate supply chain costs and return on investment, for example, when entering emerging markets. But to the extent that either shippers or 3PLs continue to withhold information of a strategic or operational nature from each other, the full benefit of total landed cost calculation will remain unrealized. Only when both parties commit themselves to work together effectively, will the power of a meaningful 3PL-shipper relationship become a reality.

Are shippers and 3PLs willing to commit to the more open information and strategy-sharing essential to advance the value of their relationships?

ABOUT *the* STUDY

This report presents findings from the *2010 15th Annual Third-Party Logistics Study*, which was conducted in mid-2010.

With this report, the *Annual Third-Party Logistics Study* observes its 15th year in documenting the growth and evolution of the third-party logistics (3PL) industry. The study has evolved and expanded over its tenure, with questions modified, added and deleted and topics and formats changing to reflect current times. That continues with this report, which marks the second year that the study has included the viewpoints of both shippers and providers of 3PL services.

The *2010 3PL Study* includes four streams of research: a web-based survey, desk research, focus interviews with industry experts and a facilitated shipper workshop. Respondents represent a broad range of industries and are predominantly from North America, Europe, Asia-Pacific and Latin America, in addition to other locations throughout the world such as South Africa and the Middle East.

This broad array of perspectives and research streams provides a well-rounded, diverse sampling of attitudes, trends and results experienced by 3PL users, non-users and 3PL providers.

2010 STUDY OBJECTIVE

Discovering and exploring 3PL industry trends, issues, and opportunities is the overall objective of the *2010 Third-Party Logistics Study*. Considering the global economic uncertainty that has prevailed recently, the 2010 study also provides some perspectives on what shippers and 3PLs are doing to improve and enhance their businesses and their business relationships to cope with these conditions.

Each year, the study results as well as greater industry and global economic developments suggest trends that warrant closer examination. Included in the 2010 study are special topic reports on total landed cost, life sciences and fast-moving consumer goods.

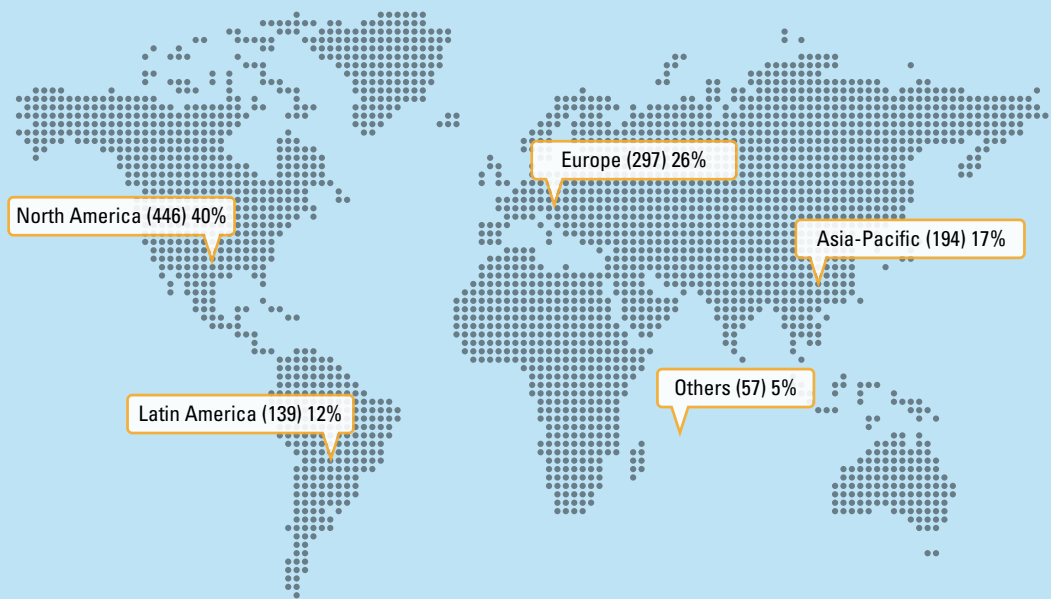
Goals for each portion of the study include:

Current State of the 3PL Market

- Understand what shippers outsource and what 3PL providers offer.
- Identify trends in shipper expenditures for 3PL services and recognize key shipper and 3PL perspectives on the use and provision of logistics services.
- Update our knowledge of 3PL-shipper relationships, and to learn how both types of organizations are using these relationships to improve and enhance their businesses.
- Quantify the benefits reported by shippers that are attributed to the use of 3PLs.
- Examine why companies outsource or elect not to outsource to 3PL providers.

Shipper Respondents Represented Several Major Geographies

(Users and Non-users of Outsourced Logistics Services)



Special Topics

- Examine key issues that are of relevance to relationships between shippers and 3PLs, including an in-depth look into the topic of total landed cost.
- Conduct in-depth analyses of two key industry verticals, life sciences and fast-moving consumer goods, to identify key issues relating to shippers and their 3PLs and how they work together to achieve individual and mutual objectives.

Strategic Assessment

- Based on the results and findings of the *2010 3PL Study*, to provide an introspective view of the future of the 3PL industry and shipper-3PL relationships.

2010 STUDY METHODOLOGY

Evolving economic conditions, rapidly changing global and industry dynamics and the maturing of the industry suggest the capabilities and uses of 3PLs have evolved considerably over the fifteen years of this study. To assess these changes, the study team uses four complementary channels of research.

Web-Based Survey

During the spring and summer of 2010, a web-based survey was sent to logistics and supply chain executives in North America, Europe, Asia-Pacific, Latin America, as well as other regions and geographies of the world. In addition to shippers, surveys were sent to executives from companies providing 3PL services in order to gain their perspectives on many of the issues and topics included in the user survey. Capgemini's Strategic Research Group assisted with web-based survey implementation and results analysis.

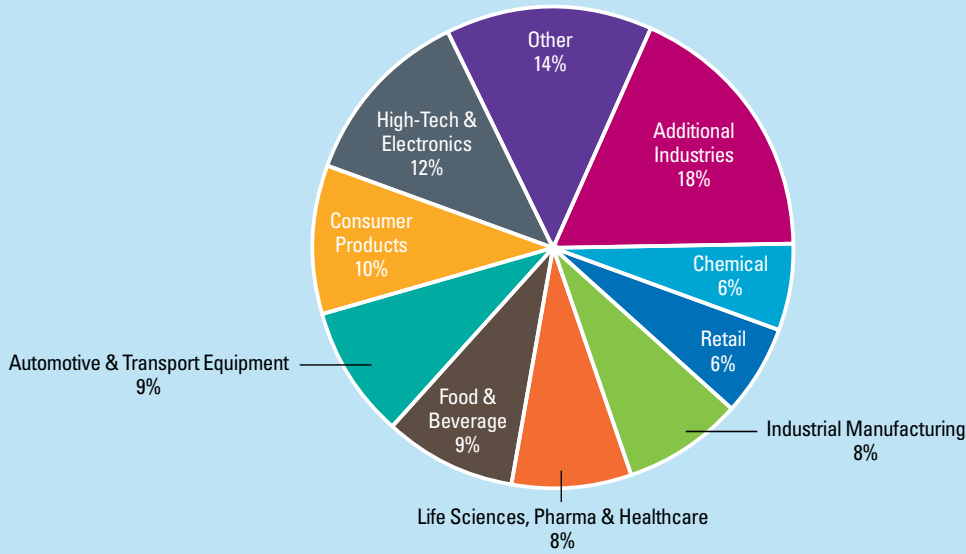
Executives were contacted by email. Those willing to participate were asked to click an Internet link that led them to an on-line survey. The survey was available in English, Spanish, Portuguese, French and German. To ensure confidentiality and objectivity, 3PL users were not asked to name which specific 3PL providers they used.

The contact database of logistics and supply chain executives represented a wide range of industries, including automotive, chemical, construction building, consumer products, food and beverage, high-tech and electronics, industrial manufacturing/defense industry, life sciences and healthcare, retail, telecommunications, and 3PL/4PL.

Survey recipients were asked to think of a "third-party logistics (3PL) provider" as a company that provides one or more logistics services for its clients and customers and a "fourth-party logistics (4PL) provider" as one that may manage multiple logistics providers or orchestrate broader aspects of a customer's supply chain.

3PL Users: Figure 24 indicates the survey responses received from logistics and supply chain executives (shippers) in various regions of the world. These totals reflect the numbers of users and non-users of 3PL/4PL services who responded to the web-based survey. Figures 25 and 26 on page 46 provide information on the industry and revenue levels of the respondents who identified themselves as users of 3PL/4PL services. Most of the 3PL/4PL user survey respondents held corporate positions including Manager/Director, VP/SVP, and Corporate Officer/President/CEO.

Eight Industries Represent About Two-Thirds of Shipper Respondents



Source: 2010 15th Annual Third-Party Logistics Study

3PL Non-Users: Included in the totals shown in **Figure 24** are 421 non-users of 3PL services who provided us with perspectives on why they do not currently use 3PLs, and on a number of other topics relevant to their classification as non-users.

3PL Providers: Responses were received from 746 executives and managers representing the provider side of the 3PL business. General characteristics of these respondents included: 1) a wide spread of operating geographies; 2) an extensive list of industries served (actually quite similar to the industries represented by the participating 3PL users); 3) a range of titles, from managers to Presidents/CEOs; 4) approximately 35% of the 3PL firms expected 2010 company revenues in excess of US \$1 billion (approximately €750 million), while about 56% reported revenues of less than US \$500 million (approximately €350 million).

Desk Research

The research team, with the support of Capgemini's Strategic Research Group, assayed a variety of published research related to the special topics to create survey questions and analyze the responses.

Focus Interviews

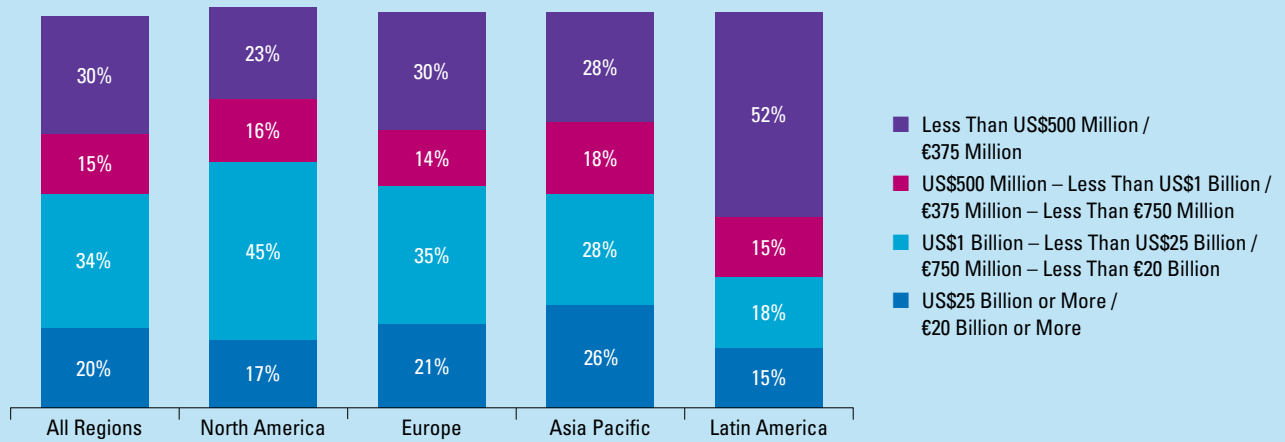
The study team conducted a significant number of "focus interviews" with industry observers and experts, primarily relating to the examination of the special topics that were identified for this year. These focus interviews provided exceptionally valuable opportunities to gather pertinent information and perspectives from a wide range of professionals who have knowledge about the 3PL sector and the special topics.

Facilitated Workshop

We conducted a brainstorming workshop at the eyefortransport 8th 3PL Summit and Chief Supply Chain Officer Forum in Atlanta, Georgia, where participants, all shippers, collaborated on shared issues to help us better understand the results of the survey and to gain their valuable perspective as 3PL users.

FIGURE 26

Just Over Half of Shipper Respondents Anticipated 2010 Sales Over US\$1 Billion (€750 Million)



Source: 2010 15th Annual Third-Party Logistics Study

FOLLOW-UP ACTIVITIES

In addition to this publication, the results of the 2010 15th Annual Third-Party Logistics Study will be presented in a variety of venues. These may include:

- Presentations at influential industry conferences such as the Council of Supply Chain Management Professionals (CSCMP), eyefortransport 3PL Summit and Chief Supply Chain Officer Forum, Transplace Shipper Symposium, International Warehouse Logistics Association (IWLA) National Conference, and NASSTRAC.
- Analyst briefings that are typically conducted in the weeks following release of the annual study results in September of each year.
- Magazine and journal articles in publications such as *Supply Chain Management Review*, *Logistics Management*, *Inbound Logistics*, *Logistics Quarterly*, and *Supply Chain Quarterly*.
- Webcasts conducted with media and publications such as *Supply Chain Management Review*, *Logistics Management*, and others.
- A web site, www.3PLstudy.com, which includes copies of the report for download as well as supplementary materials.

ABOUT *the* SPONSORS

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For more information, please visit www.isye.gatech.edu and www.scl.gatech.edu.





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Panalpina has extensive experience with customers in many key industries. With dedicated experts in key global markets, Panalpina has the people, products, skills and capabilities to meet the demanding needs of its global customers.

Panalpina's business is Global Supply Chain Management. Panalpina delivers compelling solutions that provide value to all customers - every time.

Panalpina has a passion for solutions.

For more information please visit www.panalpina.com.



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Established in 1998, eyefortransport has become one of the leading providers of business intelligence, independent research, news and executive level events for the supply chain & logistics industries. eyefortransport has two primary focuses.

1) To provide executive networking opportunities in the supply chain & logistics industries via the more than 15 events we annually organize and host in North America, Europe and Asia and online via the tens of thousands of users of www.eft.com. The events are designed to complement and enhance the business connections available through our online network, and bring together the industry elite. Regularly attended by CEOs and senior management from the transport and logistics industry and Heads of Supply Chain of major companies, the events focus on current developments and latest trends, and are enhanced by high-level, exclusive networking opportunities.

2) To deliver industry education through dozens of industry reports, surveys, newsletters, webinars and senior-level presentations at leading events.

For the list of current research, news and conferences we produce please visit www.eft.com.



CREDITS

The *15th Annual 3PL Study* team would also like to thank all of the companies and individuals who shared their experiences and insights with us through focus interviews and the workshop at eyefortransport. Your contributions are invaluable to the analysis of the survey results and the ideas expressed in this report.

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