

IDC VENDOR SPOTLIGHT

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Logistics service providers must harness the power of digital to survive in today's competitive environment. Business process services should leverage big data analytics, automation, and SaaS/platform delivery models to drive value for customers.

Intelligent Shipping and Logistics Services Pave the Way for Transformed Business Operations

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Introduction

Digitization is at the core of business process services today. By embedding robotic process automation (RPA), artificial intelligence, analytics, and platform delivery models, business process services have been reshaped, unlocking significant value and insight for shipping and logistics firms. Technology-enabled business process services provide greater value than traditional outsourced services by creating efficiencies and unearthing data-driven insights to improve processes and transparency throughout the supply chain. Combined, these technologies are creating new business models, which lead to greater speed of service and elimination of legacy systems, ultimately helping companies reduce costs.

According to IDC, the trend toward the digitization of logistics not only is on an upward swing but also is essential for shipping and logistics firms to adopt to remain competitive. IDC data suggests that buyers of outsourced

AT A GLANCE

KEY STATS

The worldwide logistics business process outsourcing market, excluding the 3PL market, is expected to reach \$3.9 billion by 2023, growing at a five-year CAGR of 6.5%.

KEY TAKEAWAYS

Automation, analytics, and platform delivery models are changing how logistics business process services are delivered, providing deeper insights into supply chain operations, greater efficiencies, and improved productivity.

logistics services plan to increase their annual logistics business process outsourcing services budget by an average of 15% in the next three years. Furthermore, they expect to dedicate 34% of that budget to technologies such as robotic process automation and artificial intelligence in the same time frame.

Definitions

IDC defines logistics business process outsourcing services as the process of managing activities associated with the flow of goods, funds, and related information between a point of origin and the end destination. These activities support transportation management, warehousing and fulfillment, returns management, and transaction processing.

Logistics business process outsourcing includes asset-based and non-asset-based logistics services. Providers of assetbased logistics services own many or all of the assets necessary to run a client's supply chain. These assets may include equipment, trucks, distribution centers, or ships. Providers of non-asset-based services, also referred to as non-assetbased third-party logistics (3PL) or fourth-party logistics (4PL) services, do not own the assets (i.e., equipment, trucks, distribution centers, ships) necessary to manage the transportation and storage of goods; rather, they provide the broader scope of managing the processes and bringing in-depth expertise and technology necessary to manage the supply chain and movement of goods and funds.

Logistics refers to the transportation, storage, and delivery of goods to a business (an enterprise receiving goods from a supplier). Business processes associated with logistics include transportation management and inventory management, which includes warehouse management, distributed order management, and reverse logistics.

Benefits of Technology-Driven Logistics Services

Outsourcing logistics services today is a far cry from the old labor arbitrage model, leveraging resources offshore to drive cost efficiencies. Delivery models are evolving with more onshore and near-shore capabilities, and how services are paid for is vastly different. Hybrid pricing models, combining both FTE and transaction-based models, in addition to pure outcome-driven and risk/reward models, have become imperative for providers to showcase their relationships as true partnerships where if one "wins," so does the other. Automation, analytics, and cloud/SaaS platform delivery models have taken center stage as a means for providers to show value to clients beyond just reducing costs.

A key benefit of technology-enabled logistics services is the ability to improve efficiencies by reducing manual tasks through automation. Today, providers have made this part of delivery for most business process services helping clients to reduce or eliminate human error and improve employee productivity by upskilling and reskilling talent. Using robotic process automation enabled by machine learning and natural language processing allows for more advanced analytics that help predict future outcomes, optimize processes, and minimize risks.

As shipping and logistics companies strive to better make sense of their data, providing these data-driven insights to make better business decisions is essential. Managing and analyzing the data generated from logistics processes and operations greatly improve transparency and visibility into the supply chain while real-time availability of data via self-intuitive dashboards and visualization tools improves the customer experience. Furthermore, with new technologies such as blockchain, which provides similar benefits around efficiency and lower costs, there is an added element of increased trust through shared processes, record-keeping, and immutability.

Shipping and Logistics Market and Technology Trends

Rise of eCommerce, Cost Pressures, and Customer Expectations Increase Demand for Logistics Services

A myriad of market trends is driving demand for shipping and logistics services, one of the most obvious being the rise of ecommerce. As buyers have access to a plethora of products via multiple channels, logistics service providers are charged with improving delivery times, improving route optimization, and effectively standardizing business processes to have real-time access and insight to inventory movement while reducing their costs of operations. With the expectation of one-day, two-day, and now same-day delivery courtesy of Amazon, buyers have a heightened expectation of how products should be delivered. Beyond timely delivery, buyers expect hyper-personalized services and complete transparency of the process from start to finish.

Shipping and logistics firms have undoubtedly felt upward pressure on shipping and freight costs. Amazon has seemingly invested more and more in its own comprehensive logistics network, relying less on key transportation partners to



reduce shipping costs. Similarly, the trucking industry has faced truck capacity and truck driver shortages, which have increased labor rates. Due to this environment, shippers and buyers alike have turned to logistics providers to most importantly identify means of reducing costs, whether warehousing operating costs, transportation costs, or operating costs. With economic factors such as international trade and regulatory policies, tariff wars, and fuel costs, buyers are also looking to service providers to identify more agile systems to accommodate changing business conditions and help with risk and compliance management.

Platforms and Automation Drive Technological Innovation

Digitization of business processes has hit mainstream and become a commonly embedded component of outsourced services. With the use of robotic process automation and machine learning capabilities, enterprises have been able to reduce manual tasks in the front/middle/back offices and streamline operations in areas such as order processing, billing and payment disputes, freight bidding, and shipment/order scheduling and tracking. With this also comes greater access to advanced analytics and predictive insights, which can be used to optimize travel routes, assess transportation and warehouse operating costs, and identify and minimize areas of risk in delivery times.

Platform delivery models have emerged considerably over the past 5–10 years as venture capitalists have invested heavily in technology platform start-ups focusing on discrete supply chain services — whether freight forwarding marketplaces, express parcel delivery, order fulfillment/warehousing, or platforms specifically for predictive analytics services. The attractiveness of these platforms is twofold. Buyers not only have a broader range of suppliers to choose from but also are benefiting from the technological advancements these platforms bring with cloud and software-as-aservice (SaaS) capabilities as well as real-time management and analysis of business processes and highly automated environments.

Third-party logistics providers (3PLs) have invested in their own digital freight platforms and have leveraged partnerships with some of the new market entrants (e.g., DB Schenker and uShip) to enhance their delivery models and provide greater transparency and visibility across customers' supply chain. Similarly, ecommerce giants such as Amazon, Alibaba, and eBay have begun to explore how they can create logistics services to help their sellers increase sales and more efficiently manage inventory and complete orders (e.g., Amazon's Fulfillment by Amazon service, Amazon's digital freight forwarding service, eBay's Managed Delivery service).

The Internet of Things (IoT) can revolutionize the logistics industry and continues to be adopted for multiple applications. As depicted in Figure 1, IDC data suggests that the adoption of IoT as part of business process services engagements is higher than the adoption of other technologies such as automation and analytics. The applications of IoT in the industry span multiple use cases, including monitoring equipment in warehouse operations (preventive maintenance), track and trace of resources and assets, inventory management, and vehicle tracking.

Opportunities will arise for IoT integrations with other technologies such as blockchain. As blockchain matures, there's potential for enabling IoT data as a blockchain transaction or integrating IoT platforms with blockchain technologies. As Figure 1 suggests, blockchain adoption is most nascent, with 25% of buyers "not planning" for it. However, we see industry players, including supplier/technology providers (e.g., IBM, SAP), buyers (e.g., Walmart), and industry consortiums, working to build standards and explore use cases in food safety, contract management, cross-border remittances, and trade finance.



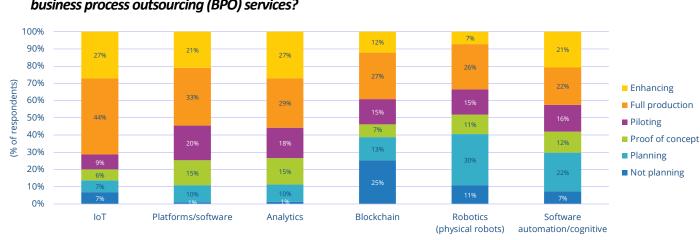


FIGURE 1: Technology Adoption in Logistics Services

• Please indicate at what stage your company is in using the following technologies as part of your logistics business process outsourcing (BPO) services?

n = 187

Source: IDC's Logistics Business Process Outsourcing Buyer Survey, 2018

Buyers Expect Cost Reductions, Automation, and Innovation with Logistics Services

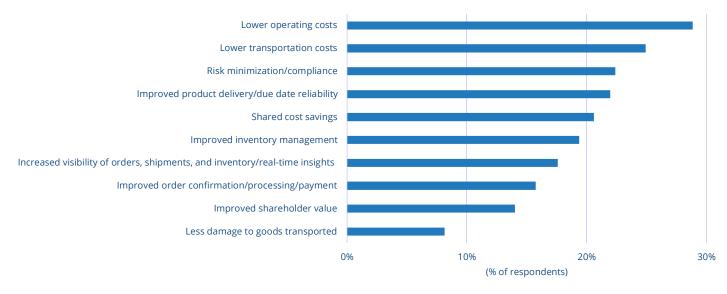
Buyers of outsourced logistics services expect service providers to lower operating costs and transportation costs. Cost has typically been the top expectation of any outsourced service, and while this has remained relatively unchanged year over year, today's buyer suggests differentiation must go beyond lowering costs. Value must be shown through other means, whether helping customers minimize risk and improve compliance, improving product deliverability, or achieving shared cost savings with variable pricing models that allow for risk/reward or outcome-driven cost structures (see Figure 2).

The key challenges faced by buyers today truly speak to their need for a more digitally enabled supply chain. IDC data suggests that buyers are focused on both business process standardization/automation and introducing new process designs and innovation faster. This presents an interesting challenge for service providers as buyers want cost-effective solutions but want to innovate quickly.



FIGURE 2: Benefits of Outsourced Logistics Services

• What are the top 2 benefits you expect from outsourcing your logistics business process services (or would expect — for those currently not using logistics business process outsourcing services)?



n = 407

Source: IDC's Logistics Business Process Outsourcing Buyer Survey, 2018

Considering WNS' Shipping and Logistics Services

WNS partners with shipping and logistics companies across all segments — ocean, 3PL, trucking, freight forwarders, ports and terminals, and air express — to drive efficient business processes and co-create sustainable value through digital transformation. The company leverages deep domain knowledge, innovative business models, analytics capabilities, and expertise in artificial intelligence, machine learning, and robotics to power efficiencies, cost reduction, and revenue growth. WNS' shipping and logistics vertical is a distinct business unit within the company. WNS has 10 global delivery centers meeting onshore, near-shore, and offshore requirements of its shipping and logistics customers, with over 3,000 employees supporting shipping and logistics centers of excellence (CoEs).

WNS supports clients with mission-critical front- and back-office processes, including both horizontal and industry-specific processes:

- » Front-office activities
 - Customer services: booking and help desk
 - Sales: quotations, lead generation, customer profiling
- » Middle-office activities
 - Sales support: tariff management, service contract maintenance, and updates
 - Operational planning: delivery order creation, sailing schedules, empty repositioning



» Back-office activities

- Bill of lading/waybill processing for less than load (LTL), truckload, NVOCC, ocean line, and air express
- Export/import documentation and customs filing
- Finance and accounting: accounts payable, accounts receivable, freight brokerage accounting, and fixed assets
- Human resources: payroll, learning and development, compensation, benefits
- Technology: workflow/OCR platform, LTL billing platform, robotics, analytics, tool wrappers

A key differentiator for WNS is its deep vertical expertise coupled with industry-specific solutions that address critical customer challenges and pain points. WNS' services have helped customers achieve desired business outcomes, improve customer experiences, and digitally transform operations to allow for greater efficiencies. With its suite of proprietary technologies, the company has successfully implemented big data services and cognitive processing on behalf of clients.

A Closer Look at WNS' Proprietary Shipping and Logistics Solutions

- Bill of Lading Platform WNS Malkom: WNS Malkom is a cloud-based, end-to-end bill of lading processing platform used for processing non-templatized bills of lading, waybills, and shipping instructions for multiple modes of transportation. With an OCR-enabled scanning app and easy-to-use interface, users can seamlessly scan their documents. The use of machine learning algorithms enables customers to benefit from faster turnaround times and improved accuracy. WNS Malkom also performs validations against standard operating procedures and customer specific requirements. The final output for WNS clients is more accurate invoices, fewer disputes, and improved cash flow.
- Cognitive Data Capture & Processing Platform: This platform is used to ingest and capture unstructured data from PDFs, images, handwritten documents, emails, audio, and invoices. It is used to categorize shipping documents, using custom modeled machine learning algorithms and deep neural network customizable rules to classify and contextualize data. This platform was created to support the rise in unstructured data across major shipping and logistics processes including billing, rate management, vendor management, and disputes and cash applications.
- » Risk and Audit Analytics Offering: This cross-industry offering is based on advanced statistical algorithms, natural language processing, and machine learning functionalities to analyze employee or vendor spend. It can identify areas where expenses can be reduced and patterns of fraud and compliance. It includes pay-group analysis, trend analysis, behavior patterns, and digit distribution analysis.
- » Big Data Analytics Platform Agilius: Agilius is a cloud-based business intelligence self-serve analytics platform with embedded domain knowledge. It provides end-to-end "infrastructure to insights" including data ingestion, integration, storage, and analytics supported by WNS' deep domain expertise. It provides KPIs (e.g., days sales outstanding) with available APIs.

In addition to its proprietary solutions, WNS leverages a partner ecosystem of best-in-class domain-led and technology partnerships, including Locus Software for ERP in the shipping industry, Portrix Logistic Software for global rate management, and major RPA software vendors including Blue Prism, Automation Anywhere, and WorkFusion.



WNS' Supply Chain Management Analytics Capabilities

Leveraging productized offerings such as Agilius and the Cognitive Data Capture & Processing Platform, WNS offers domain-led operations and supply chain analytics services, combining both business intelligence and artificial intelligence. WNS focuses on delivery excellence by embedding analytics to improve the performance of operations and hiring and retaining top talent with rich analytics, domain, and vertical and niche expertise (i.e., in areas such as machine learning, text mining and pattern recognition). In collaboration with clients, WNS develops an analytics-led transformation road map that enables clients to understand and envision how analytics and automation can improve their operations over time.

WNS provides finance and accounting analytics for shipping and logistics clients, including spend analytics, payables and collections analytics, supplier performance analytics, accounts receivable analytics, credit management, dispute management, and revenue analytics. For supply chain management analytics, WNS helps clients address industry-specific challenges while delivering continuous impact. These services include:

- » Demand Forecasting for Shipments and Inventory
- » Intelligent Network and Route Optimization
- » Predictive Bill of Lading Volumes/Forecasting
- » Driver Performance Analytics, Compliance, and Behavior Audit
- » Freight Cost Analysis
- » Inventory Optimization
- » Workload Forecasting
- » Asset Management Analytics
- » Air Waybill Processing and Identification of Early Warning Indicators of Erroneous Air Waybills
- » Dispute Prediction Analytics/Modeling for Invoice Disputes
- » Analysis of Bill of Lading Prioritization Logic for Vessel Planning and Scheduling

WNS identifies and enhances these operations with products/frameworks and possible automation opportunities as they look to drive higher process efficiencies and transactional accuracy leveraging RPA capabilities, including intelligent automation. By augmenting RPA with industry-centric process knowledge and deep domain expertise, WNS enhances business effectiveness and drives productivity improvements for clients. Across supply chain management processes, WNS has deployed over 130 bots, including chatbots and emailbots. In addition, the company has instituted an RPA program for industry-specific processes as well as finance and accounting across all vendors for a leading ocean carrier.



Challenges

- The shipping and logistics services landscape is highly competitive as new, technology-driven players have entered the market and old players, such as traditional 3PLs, have revamped their services to be more digitally focused. Consequently for WNS, competition stems from three areas: logistics business process outsourcing service providers that offer similar end-to-end capabilities also infused by technology; technology start-ups that are focusing on platforms and providing services around prescriptive analytics, freight forwarding, or other discrete logistics functions; and traditional 3PLs that are also coming to market with their own platforms and managed service offerings while honing their own outsourced contract logistics services.
- » WNS has made great strides to improve its suite of technology and analytics offerings with the introduction of new industry-specific platforms and industry-specific analytics capabilities. However, there is an opportunity for WNS to increase its brand awareness with stronger messaging and marketing around the company's platform and technology offerings.

Conclusion

With globalization and increasingly complex supply chains, among other market factors, the need for services that provide greater efficiencies and data-driven insights will be key to digitally transforming core businesses. WNS has a significant opportunity for success leveraging its domain and analytics expertise, which is deeply rooted in the company's proprietary technologies and analytics offerings. As WNS diversifies its delivery footprint, invests in specialized consulting to further add to domain expertise, and deepens its domain analytics offerings, the company will continue to drive positive business outcomes for clients.

WNS' deep domain expertise, proprietary technologies, and data-driven insights have enabled clients across industry segments to meet long-term strategic goals.

About the Analyst



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Alison Close manages IDC's business process outsourcing practice focusing on finance and accounting, procurement, logistics, analytics, and blockchain services.



MESSAGE FROM THE SPONSOR

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