PROFITABLE SUPPLY CHAIN EXECUTION WITH CUSTOMER- AND EVENT-DRIVEN OPTIMIZATION

January 2016

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Report Highlights

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Up to 92% of companies want to utilize mobility to be more event-driven, promote warehouse and transportation efficiency, and make omni-channel fulfillment more profitable.

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Only 35% of cloud-based Leaders and 10% of Followers have the "Cost-to-Serve" modeling analysis at the item, product, and customer level today.

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Top performers, who are at 78% adoption rate of closed-loop integration, are nearly twice as likely to "close the loop between planning and execution."

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When it comes to dynamic event processing and profitability, top performers can no longer afford to batch orders. They invest in integrated systems and workforce/workflow dynamic optimization capabilities at 2 times the rate of the Followers.

The growth and complexity of today's end-to-end supply chain is driving renewed focus on optimizing supply chain cost and profit to become more event and customer-driven. Up to 92% of companies will be looking for more collaborative optimization solutions. This represents a call to action. We examine the pressures, capabilities, and best practices specific to top performers who tend to be more real-time and cloud-ready.

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> **Online consumers require cloud-ready visibility, device connectivity, and want their products within 2 days of placing an order. Systems and processes are undergoing transformation to support emerging logistics formats, like DC Bypass or "direct-to-consumer" shipments.**

The Business Case

The omni-channel world we live in requires online, cloud-ready orchestration of events and activities across an increasingly multi-party end-to-end supply chain. Supply chain execution is both customer-specific and event-driven. This dictates that workplace devices be 1) always-on, 2) utilize device-to-cloud-connectivity 3) and provide real-time statuses in support of a cloud-based "Internet of Things" (IoT). The connected customer demands the ability to "order from anywhere, fulfill from anywhere, and return to anywhere." To ensure a seamless experience, the impacts are global and extend to the long-tail of the supply chain, from inbound source-to-pay and outbound order-to-fulfill/deliver. To address this challenge, we recently presented research on 5 Key Steps to Build a Cloud-ready Supply Chain. The first step we examined in that research is repeated below.

> *Step 1 - Provide a holistic and unified view of costs and activities with cloud-ready interoperability for each inventory and fulfillment stream.* First, ensure cloud-readiness for an always-on, holistic view of customer and workflow events, as well as points of engagement in order fulfillment across B2B and B2C lines-of-business. Enable connectivity across customers, shipments, order rates and costs, as well as web-enabled access/interoperability to all supply-chain software and partners. Up to 92% of companies want to utilize mobility to be more event-driven, promote warehouse and transportation efficiency, and make omni-channel fulfillment more profitable.

Defining and Quantifying the Automation Advantage

There were 95 companies in our survey. Aberdeen used four performance criteria, covering key cost and service metrics to

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distinguish the optimization Leader and Follower organizations (see sidebar Maturity Class Definition).

Supply Chain Customer Fulfillment Optimization Capabilities

The top 30% of companies, the Leaders, are more profitable and do better on key metrics than the Followers (see next section for definitions).

Figure 1: Profitable Customer Fulfillment Optimization Capabilities
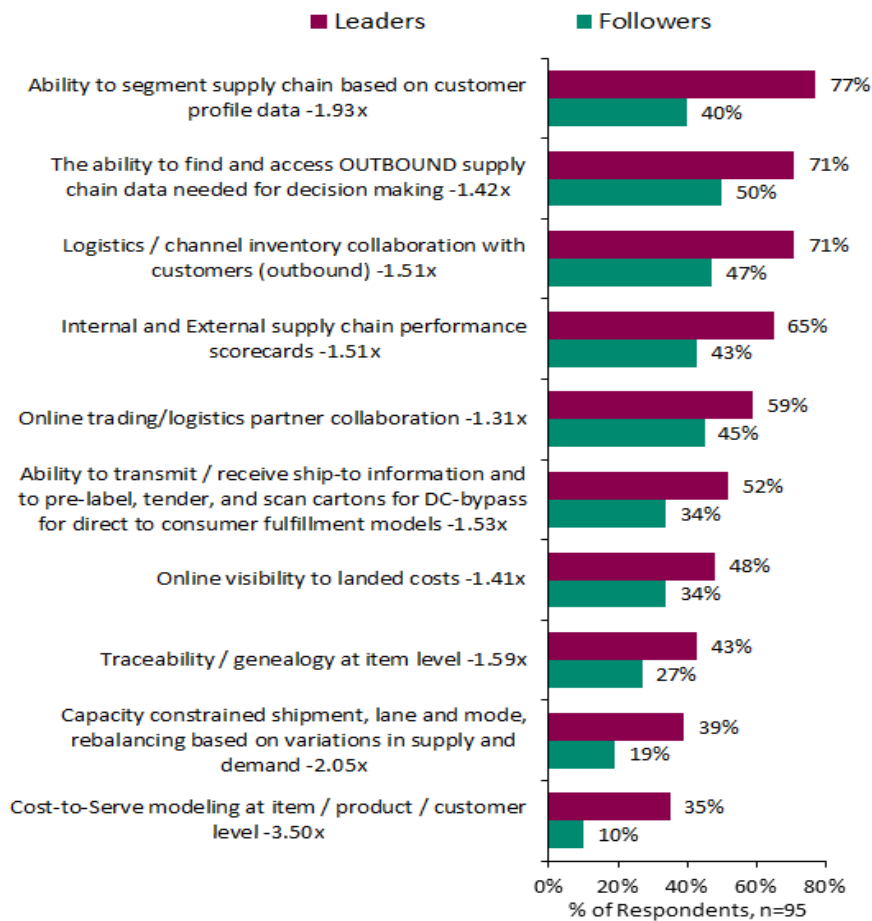
Source Aberdeen, November 2015

Cost-to-Serve (CTS) and Profitable Fulfillment Challenge

Linking financial costs and logistics activities/events together enables the proper cost allocations to product/customer and channel for more accurate P&L reporting.

Online visibility to Landed Cost and their accrual as an order or shipment progresses is a great example of this.

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Maturity Class Definition:

Cloud Leaders – Top 30% of performers

- **95.4%** of orders delivered [outbound] to customers complete and on time
- **94.6%** of orders received from suppliers complete and on time
- **-0.5%** decrease in total landed per unit costs in the past year
- **-7.5%** decrease in the frequency of out-of-stock inventory in the past year

Followers – Bottom 70%

- **86.4%** of orders delivered to customers complete and on time outbound
- **84.8%** of orders received from suppliers complete and on time
- **+8.5%** increase in total landed per unit costs in the past year
- **+0.9%** increase in the frequency of out-of-stock inventory in the past year

n=95 companies

The Leaders have adopted advanced automation capabilities with cloud-connected interoperability and are using them to better synchronize profitability and service levels across customer cost-to-serve, products, and omni-channel logistics flows. This is the essence of profitable execution in a more event-driven, omni-channel world. Across a variety of capabilities (Figure 1), the Leaders are proving to be anywhere from 1.3 to 3.5 times as likely as Followers (the remaining 70%) to move supply chain systems, multi-party orchestration/collaboration, and omni-channel customer fulfillment to the cloud. System by system, internally and externally, they are more integrated and synchronized.

From the customer or demand-group of processes, the cloud-based leaders are better connected across processes from order to deliver/service/cash. It is important to note that companies have to increase their interconnectivity and interoperability of systems, spanning cloud and IoT devices to keep up with the speed of modern business. 80% of the leaders have or will deploy expanded cloud-based solutions, and are leveraging device and mobility solutions that allow real-time event and data collection, aggregation, and analysis.

There is a clear correlation that links the first item in the chart, *ability to segment by customer,* and the last item, *Cost-to-Serve (CTS)*. Indeed, only 35% of cloud-based Leaders and 10% of Followers have the Cost-to-Serve" modeling analysis at the item, product, and customer level today. This means that the Leaders are 3.5 times more likely than Followers to have this capability. For more details of CTS segmentation, see *Supply Chain Visibility and Segmentation: Control Tower Approach*.

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Top Performing Companies Collaborate to Deliver a Balance of Cost and Service

Across a complex set of competing priorities (depicted in Figure 1) and an evolving global network, there is a need to coordinate supply chain activities in a multi-party, dynamic fashion.

How are the leading companies addressing inbound to outbound activities under the pressures of emerging omni-channel logistics formats in B2B and B2C convergence?

Inbound to outbound product and data flow can be categorized by the Supply and Demand Process Stages found in the sidebar. Focusing on the various capabilities found in Figure 1, we can identify process capability gaps in cloud-based interoperability during supply-demand execution. These gaps serve to identify "visibility and cost blind spots" to be addressed in order to improve orchestration across the supply and demand side processes found in the sidebar.

The best practices exhibited by the cloud-based Leaders widen the gap of capability to include more advanced details, like in-flight rebalancing or cost-to-serve modeling (Figure 1). By examining these gaps, we can find areas for potential improvement and optimization of process and cloud-connectivity/operability.

Closing the loop on planning and execution requires harnessing big data and making it cloud-ready. The big data challenge is compounded when considering the requirement to link both events and costs of orders/shipments throughout the fulfillment process. This requires a closed-loop approach, and from our recent research, Operational Readiness for B2B and B2C Convergence: Are You Prepared?,

Supply and Demand Process Stages:

Supply-side (Inbound)
- Design: ideation through commercialization,
- Plan/Make: plan to produce
- Procure: source to settle and pay

Demand-side (Outbound Omni-channel Customer Order-to-fulfill)
- Order-to-Deliver
- Order-to-Cash: information flows service/cash

These various process stages link buyer, seller, and supply chain partner networks

They support specific customer/ product/channel segmentation and optimization needs

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Answering the Call – 5 Key Reengineering Process Steps to Enable Omni-channel Fulfillment

1. Assess upstream and downstream demand-fulfillment models
2. Consider the Demand-side Requirements Upfront
3. Reengineer and Streamline B2B and B2C Fulfillment Processes
4. Link Demand and Fulfillment Process with Integrated Systems
5. Embark on a Journey of Continuous Improvement

If gaps are uncovered, at least annually, repeat the 5 Step Process above.

the top performers, who are at a 78% adoption rate of closed loop integration, are nearly twice as likely as the Followers to "close the loop between planning and execution." Again, there is a crying need for granular bottom-up aggregation of big data analytics to support these needs.

In our recent report, *B2B and B2C Convergence: A Call To Action*, we examined the growing challenges that companies face as the requirements for B2B and B2C execution converge and companies attempt to be profitable, while retaining a customer and event focus. This constitutes a "Call to Action" for today's business executive across retail, wholesale, manufacturing and logistics, and eCommerce industry segments, as the lines become more blurred.

In that report we examined the 5 specific steps for reengineering in B2B and B2C Convergence: A Call to Action . We repeat those steps in the sidebar to the left.

There are many best practices to follow when using interactive warehousing, transportation, and visibility solutions, and "event-driven" mobility to improve the "order-to delivery" fulfillment challenge in B2B/B2C ecommerce, in the omni-channel era. In the sections that follow, we give recommendations and examples for how top performing companies are becoming more agile and profitable as they address the B2B/B2C convergence challenge.

Best-Practices for Cloud-based Supply Chain Orchestration and Execution Capabilities

80% of top performing firms are moving to cloud-based visibility, and more event-driven warehouse and transportation management. They provide a customer-connected, single version of the truth; seamless and unified across channels, customers, costs, and activities. In addition, the leaders are providing tailored yet secure cloud-based views and interoperability to internal and external stakeholders,

customers/suppliers, and partners. Below are some best practice automation capabilities utilized by the Leaders to embrace omni-channel orchestration and execution requirements.

→ **Omni-channel Multi-Party Support** – Across multiple commerce channels, including web, field sales, store, call/contact center, and mobile. This includes all the emerging B2B/B2C logistics channels, such as DC bypass and direct to consumer.

→ **Dynamic order, location, and landed cost optimization** – Automated order sourcing and routing systems that can allocate and monitor orders across numerous sources and channels, based on parameters such as geography and landed costs. These solutions are capable of fulfilling orders at the optimal location, while minimizing costs. The Leaders provide cloud-based interoperability and connectivity to their end-to-end network of customers, suppliers, carriers, and trading partners.

→ **Profit optimization, dynamic warehousing and fulfillment from order-to-deliver** – Customer and line-level order fulfillment capabilities that identify the right fulfillment process for each order, and seamlessly fulfill each line item on an order from the right location, at the best price. Profit optimization includes visibility and online interoperability across warehousing, transportation, trade management, and eCommerce systems/process flows**. In today's customer-driven era, it also involves support for same and next day delivery requirements.**

Companies face a growing challenge posed by any CTS or segmentation strategy – **how to link financial costs and logistics activities together, in order to enable proper allocations to products /customers/channels. This challenge is further compounded as more devices come online in IoT.**

The Bottom Line:

When it comes to dynamic event processing and omni-channel profitability, the top performers demonstrate that companies can no longer afford to batch orders or work in a paper-based model. Top performers are investing in integrated warehousing, transportation systems, and workforce/workflow dynamic optimization capabilities at 2x the rate of the Followers.

➔ **Cost-to-Serve decision support** – Overarching optimization process with rule-based configurations that provide flexibility, views of rates, as well as cost at the item, product and customer local level, in addition to monitoring, oversight, and interoperability at the enterprise customer/product/channel levels.

Key Takeaways

New customer/event driven tools are needed to deal with the increasingly fast-paced omni-channel environment. As B2B/B2C eCommerce continues to evolve, businesses adapt to more dynamic, event-driven mobility and integrated supply chain execution solutions. When it comes to dynamic event processing and omni-channel profitability, the top performers demonstrate that you can no longer afford to batch orders or work in a paper-based model. Top performers are investing in integrated warehousing, transportation systems and workforce/workflow dynamic optimization capabilities at 2x the rate of the followers.

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For more information on this or other research topics, please visit www.aberdeen.com.

Related Research

Omni-channel Retail Mobility: Align Merchandising, DC & Store Logistics; October 2015

5 Key Steps to Build a Cloud-ready Supply Chain for your Organization; September 2015

Answer The Call: 5 Process Steps for B2B & B2C Convergence; July 2015

Strategic Sourcing and Segmentation: Prescriptive Control Tower Approach; June 2015

Strategic Sourcing and Segmentation Prescriptive Control Tower Approach; April 2015

Supply Chain Intelligence: Descriptive, Prescriptive, and Predictive Optimization; February 2015

Supply Chain Visibility and Segmentation: Control Tower Approach; August 2014

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