On-Demand Applications in Supply Chain: Enable Flexible Business Processes

August 2007

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Executive Summary

Aberdeen benchmarked the supply chain software investment and roadmap strategies of over 455 companies to identify the abilities of supply chain applications in managing risk and the ability to change and adapt business processes over time. The report assesses the capabilities of users of on-demand applications versus other delivery models like on-premise or custom/home grown approaches.

Best-in-Class Performance

Aberdeen used four key performance criteria to distinguish Best-in-Class companies from Industry Average and Laggard organizations. These metrics are an indicator of the process level competency for overall supply chain excellence. The Best-in-Class metrics as well as the mean class performance are:

- Perfect order percentage (operation's percentage of on-time and complete deliveries to customer request dates) – 95%

- Percentage of respondents who have seen an improvement in transportation spend relative to revenue – 100%

- Percentage of respondents who have seen an improvement in warehouse costs relative to revenue – 93%

- Percentage of respondents who have seen an improvement in inventory carrying costs relative to revenue – 96%

Weights were assigned to the respondents based on their improvements in these metrics and an overall score was identified for each of the respondents.

Competitive Maturity Assessment

Survey results show that the firms enjoying Best-in-Class performance shared several common characteristics involving various aspects of process, reporting, data, technology, etc. Results show that Best-in-Class companies are:

- Four times more likely to be able to on-board new trading partners quickly

- Three times more likely to support unique business processes for select product categories, customers, or channels

- Two-and-a-half times more likely to support electronic collaboration with trading partners (suppliers, carriers, and customers)

- Two times more likely to have a highly skilled IT staff

- One-and-a-half times more likely to have the ability to share data with internal stakeholders

"With on-demand, we are hoping to reduce the amount of time required to implement the system by selecting a vendor with a high number of existing carrier relationships. We also want to be able to easily upgrade and stay on the current version of the software, and the feeling is that an on-demand application may make that process easier."

~ IT Director for a $20 Billion USD multi-national Manufacturer with close to $500 million in annual freight spend

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- Three times more likely as Laggards to have internal and external intellectual property security

Across the key functional areas of supply chain applications (B2B connectivity, Supply Chain Execution, Supply Chain Collaboration & Supply Chain Planning), Best-in-Class companies are 2X more likely to be using on-demand applications than All Others.

In addition, users of on-demand applications are on average three times more likely to have better process capabilities in the areas of logistics and supply chain collaboration.

Required Actions

Because on-demand Supply Chain Management outperforms traditional applications strongly across several processes and functional areas, *companies of all supply chain maturity levels* should be evaluating whether this model is appropriate for select aspects of their business. In most cases, companies use on-demand SCM to create extensions around their existing supply chain IT investments or to replace select modules that manage external processes.

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Chapter One:
# Benchmarking the Best-in-Class

Research Background

Aberdeen benchmarked the supply chain software investment and roadmap strategies of over 455 companies. The study specifically focused on identifying the capabilities of supply chain applications in managing risk and the ability of companies to change and adapt their business processes over time. This report focuses on assessing the relative priorities of on-demand applications versus other delivery models, such as on-premise or custom / home grown approaches. In addition the report highlights the advantages that on-demand solutions provide for enabling flexible business processes.

Top Factors Compelling Companies to Invest in Supply Chain Applications

Globalization, along with customer centricity strategies, is fundamentally changing how manufacturers, distributors, and retailers need to think about and operate their supply chains (Figure 1). One of the key elements of a successful supply chain as a service strategy is assembling a technology architecture built for change. On-demand applications are intrinsically well-suited for this model, given their faster time to value, subscription or transaction payment models, and elimination of the need to buy and maintain hardware.

Figure 1: The Top Pressures Forcing Companies to Invest in Supply Chain Applications
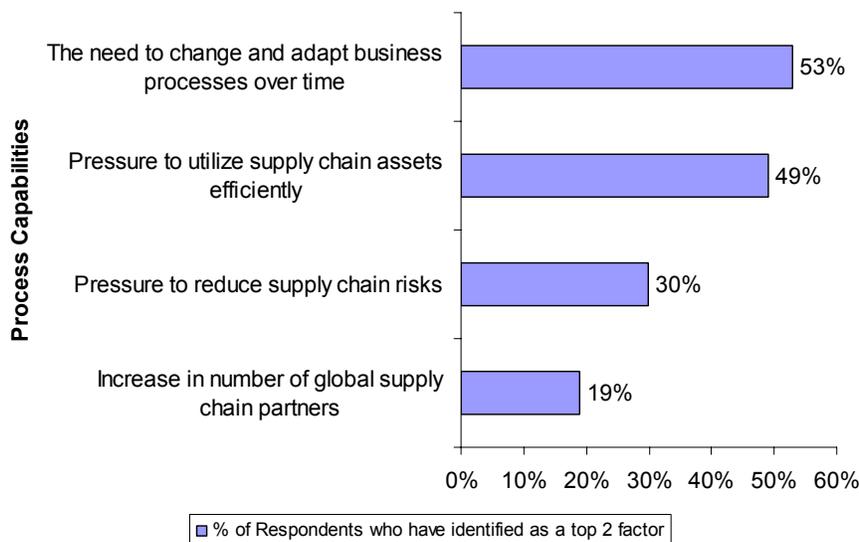
Source: Aberdeen Group, August 2007

Fast Facts

√ 53% of respondents indicate that the need to change and adapt business processes over time is a key factor for investing in supply chain applications

√ 30% of respondents indicate that the pressure to reduce supply chain risks is a key factor for investing in supply chain applications

On-Demand Defined:

On-demand solutions are playing an increasingly important role in enabling electronic communication and process collaboration. These solutions are also called "hosted applications" or "software as a service." Unlike traditional applications that are paid for with an up-front license fee and are installed on the company's premises (referred to in this report as "on-premise applications"), on-demand solutions are hosted by the vendor and typically paid for with a subscription.

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Top Strategic Actions That Companies are Taking

The need to keep up with business change is compelling companies to focus on continuous process improvement initiatives (54%). The investment that has been made in existing software applications is resulting in upgrade efforts to keep up with process changes (44%). However, this is not enough – 39% of companies are implementing on-demand supply chain applications. Other approaches (such as purchasing new licenses, installing supply chain applications, managed services, or custom development) are not as highly prioritized currently.

Figure 2: The Top Strategic Actions that Companies are Taking in Response to Pressures

Strategic Actions:

- Focus on business process re-engineering — 54%
- Evolve or upgrade our current software applications — 44%
- Implement on-demand supply chain applications — 39%
- Implement traditional "license and install" supply chain applications — 21%
- Focus on outsourcing supply chain business processes (managed services) — 20%
- Create a custom-developed software solution in house — 13%

(X-axis: 0% 10% 20% 30% 40% 50% 60%)

■ % of Respondents

Source: Aberdeen Group, August 2007

Definition of Best-in-Class

Aberdeen used four key performance criteria to distinguish Best-in-Class companies from Industry Average and Laggard organizations. These metrics are an indicator of the process level competency for overall supply chain excellence.

- Perfect order percentage (operation's percentage of on-time and complete deliveries to customer request dates)

- Percentage of respondents who have seen an improvement in transportation spend relative to revenue

- Percentage of respondents who have seen an improvement in warehouse costs relative to revenue

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- Percentage of respondents who have seen an improvement in inventory carrying costs relative to revenue

Weights were assigned to the respondents based on their improvements in these metrics and an overall score was identified for each of the respondents.

The Maturity Class Framework

The maturity framework in Table 1 provides companies with the opportunity to benchmark themselves and identify which performance category they fall into.

Table 1: Companies with Top Performance Earn Best-in-Class Status

Definition of Maturity Class	Mean Class Performance
Best-in-Class: **Top 20%** of aggregate performance scorers	Perfect order percentage: 94% • Percentage of respondents who have seen improvement in transportation spend relative to revenue: 100% • Percentage of respondents who have seen improvement in warehouse costs relative to revenue: 92% • Percentage of respondents who have seen improvement in inventory carrying costs relative to revenue: 96%
Industry Average: **Middle 50%** of aggregate performance scorers	Perfect order percentage: 81% • Percentage of respondents who have seen improvement in transportation spend relative to revenue: 56% • Percentage of respondents who have seen improvement in warehouse costs relative to revenue: 33% • Percentage of respondents who have seen improvement in inventory carrying costs relative to revenue: 31%
Laggard: **Bottom 30%** of aggregate performance scorers	Perfect order percentage: 74% • Percentage of respondents who have seen improvement in transportation spend relative to revenue: 0% • Percentage of respondents who have seen improvement in warehouse costs relative to revenue: 3% • Percentage of respondents who have seen improvement in inventory carrying costs relative to revenue: 1%

Source: Aberdeen Group, August 2007

The Best-in-Class PACE Model

Table 2 indicates the key pressures, actions, capabilities, and enablers that are being prioritized by Best-in-Class companies for their supply chain application investments. This will help identify the key capabilities that are being considered as part of their supply chain initiatives.

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Table 2: The Best-in-Class PACE Framework

Pressures	Actions	Capabilities	Enablers
• Constant change resulting in the need for adapting business processes over time	• Implement on-demand supply chain applications • Evolve or upgrade current software applications	• Ability to onboard new trading partners quickly • Electronically collaborate with a network of customers • Electronically collaborate with a network of suppliers • Electronically collaborate with a network of carriers • Ability to support unique business processes for selective product categories, customers, or channels	• B2B connectivity (EDI, XML) • Supply chain execution (WMS, TMS) • Supplier / customer collaboration (VMI, forecast) • Supply chain planning and manufacturing (network design, inventory optimization)

Source: Aberdeen Group, August 2007

Aberdeen Insights – Strategy

Even though companies are rightfully focused on total cost of ownership, faster implementation times and reduced up-front costs, they need to focus more on the additional benefits like business flexibility, the ability to connect with a pre-existing community of trading partners in order to obtain strategic benefits of going with on-demand solutions.

Figure 3: Why Companies are Interested in the On-Demand Model
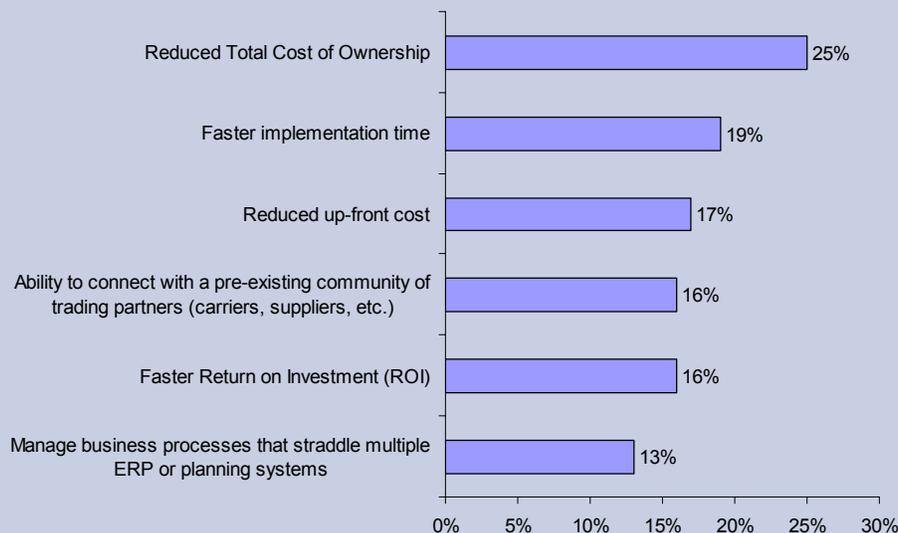
In the next chapter, we will see what the top performers are doing to achieve these gains.

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Chapter Two:
Benchmarking Requirements for Success

The selection of on-demand supply chain solutions and successful integration and implementation can result in significant benefits as exemplified by the following case study.

Hitachi GST Slashes IT Costs to
Reduce TCO for End-to-End Process Collaboration

Hitachi Global Storage Technologies (Hitachi GST) was created in March 2003 as a result of the merger between IBM and Hitachi's hard disk drive businesses. As part of the merger, Hitachi GST had to execute an IT separation from IBM without interrupting mission-critical direct materials and B2B collaboration systems. The company wanted:

1) To implement new business processes to improve their suppliers' experience in doing business with Hitachi GST, as well as conduct business electronically with its customers to increase customer satisfaction

2) To reduce the IT costs to manage the B2B collaboration system and reduce total cost of ownership

Solution:

Hitachi GST decided to use an on-demand collaboration platform for mission-critical supply chain processes on both the supply and the demand sides. The company felt that it took a dedicated set of skills to build and manage a B2B collaboration system, and that it was not an effective use of Hitachi GST's internal IT development or support staff to develop internally. Further, the company believed that it was faster and less expensive to use an on-demand platform provider that could manage the community.

Business benefits included:

- **Total Cost of Ownership Impact:** A 35% reduction in total cost of ownership of legacy systems that supported the customer and supplier collaboration processes. As a result, Hitachi enjoyed a six-month payback period on its on-demand initiative.

- **Business Value Impact:** The on-demand platform collapsed the cycle time required to flow demand and supply information smoothly throughout the supply base. This information cycle time reduction has increased supplier responsiveness.

  Hitachi GST trading partners are also benefiting from better visibility into Hitachi GST product demand and inventory positions.

Fast Facts

√ Best-in-Class companies are nearly 2.5 times as likely as the rest to have the ability to support unique business processes for selective product categories, customers or channels

√ Best-in-Class companies are 2.5 times more likely as all other companies to electronically collaborate with a network of suppliers, customers, and carriers

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**Hitachi GST Slashes IT Costs to
Reduce TCO for End-to-End Process Collaboration**

- **Speed Impact:** The on-demand environment enabled a rapid go-live. For example, the first business release took just four months from project launch to go-live. The project involved cutoff of legacy applications evolved over decades and spanning 10 sites worldwide. Today, thousands of Hitachi GST's direct and indirect suppliers use the system.

In addition, the creation of an electronic framework enabled by the on-demand platform has allowed swift additional automation of new business processes with Hitachi GST's customers and suppliers.

Competitive Assessment

The aggregated performance of surveyed companies determined whether they ranked as Best-in-Class, Industry Average, or Laggard.

In addition to having common performance levels, each class also shared characteristics in five key categories: (1) process (the ability to detect and respond to changing conditions without placing additional burdens on the organization); (2) organization (corporate focus and collaboration among stakeholders); (3) knowledge management (contextualizing data and exposing it to key stakeholders); (4) technology (the selection of appropriate tools and intelligent deployment of those tools); and (5) performance measurement (the ability of the organization to measure the benefits of technology deployment and use the results to improve key processes further).

These characteristics (identified in Table 3) serve as a guideline for best practices and correlate directly with Best-in-Class performance across the key metrics.

Table 3: The Competitive Framework

	Laggards	Average	Best-in-Class
Process	Ability to support unique business processes for selective product categories, customers, or channels		
	14%	21%	52%
	Ability to on-board new trading partners quickly		
	12%	14%	56%
	Electronically collaborate with a network of customers		
	16%	21%	67%
	Electronically collaborate with a network of carriers		
	21%	20%	56%

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	Best-in-Class	Average	Laggard
Organization	Have highly skilled IT staff		
	22%	31%	55%
	Have well organized supply chain teams with line of business as well as IT participants		
	5%	23%	33%
Knowledge	Have a well integrated application and data infrastructure		
	18%	25%	34%
	Ability to quickly change or modify business processes in software		
	6%	9%	25%
	Internal and external access and identity assurance to secure Intellectual Property (IP)		
	10%	27%	35%
Technology	Supply chain applications in use (includes on-demand, on-premise, and home-grown)		
	• B2B Connectivity (47%) • Supply Chain Execution (15%) • Supplier Collaboration (26%) • Supply Chain Planning and Manufacturing (21%)	• B2B Connectivity (57%) • Supply Chain Execution (44%) • Supplier Collaboration (32%) • Supply Chain Planning and Manufacturing (35%)	• B2B Connectivity (85%) • Supply Chain Execution (63%) • Supplier Collaboration (55%) • Supply Chain Planning and Manufacturing (49%)
Performance	Ability to share data with internal stakeholders		
	24%	28%	55%

Source: Aberdeen Group, August 2007

Technology Enablers

In this section, the technology enablers that are being used across the three major functional categories within supply chain are explored. Supply Chain Execution is the area where there is maximum interest in on-demand applications followed by supply chain collaboration. Supply chain planning is the area where there is least penetration of on-demand applications.

A) Supply Chain Execution

Transportation Management Systems (TMS) / Logistics

An average of 15% of respondents uses on-demand applications across different functional areas within supply chain execution. This is compared to 40% of respondents that use traditional applications (Figure 4).

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Figure 4. Technology Usage for Logistics/TMS

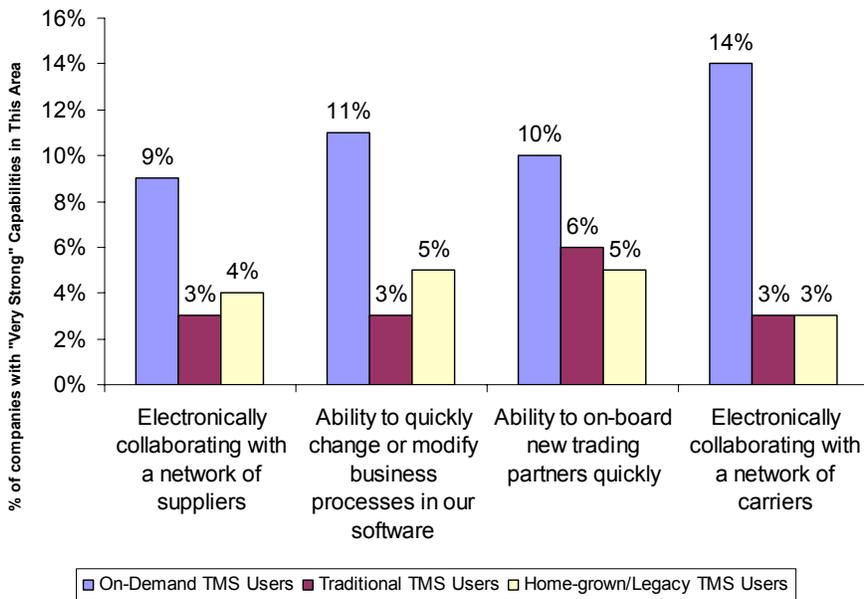|	On-Demand TMS	Traditional TMS	Home-grown/Legacy TMS
Parcel Shipping & Manifesting	20%	52%	28%
Fleet routing & scheduling	19%	52%	28%
Shipment track and trace	20%	42%	38%
Freight audit and pay	21%	35%	44%
Freight mode and carrier selection	20%	43%	37%
Freight load building and optimization	15%	51%	34%
Transportation contract procurement	13%	56%	32%
Carrier Collaboration	12%	53%	34%
Supplier shipment collaboration	11%	57%	32%

Source: Aberdeen Group, August 2007

The use of on-demand solutions clearly has resulted in the presence of stronger process capabilities for companies in comparison to other available approaches (Figure 5). For example, companies using on-demand solutions are four times more likely to have the ability to collaborate with carriers.

Figure 5: The Process Capabilities Across Application Delivery Options for TMS

% of companies with "Very Strong" Capabilities in This Area

	On-Demand TMS Users	Traditional TMS Users	Home-grown/Legacy TMS Users
Electronically collaborating with a network of suppliers	9%	3%	4%
Ability to quickly change or modify business processes in our software	11%	3%	5%
Ability to on-board new trading partners quickly	10%	6%	5%
Electronically collaborating with a network of carriers	14%	3%	3%

Source: Aberdeen Group, August 2007

Warehouse Management Systems (WMS)

Only about 2% of respondents indicate that they leverage an on-demand warehouse management solution as compared to 50% of traditional applications. However, the users of on-demand warehouse applications are 2 times more likely to have the ability to quickly change or modify business processes in their software. This is an area where is significant opportunity for small and mid-size companies which are currently operating using spreadsheets and human capital to adopt an on-demand solution. Please refer to "The On-demand Warehouse: WMS for the Future (August 2006)" for more details regarding the solutions available in the marketplace in this regard.

B) Supply Chain Collaboration

An average of 7% of companies in this study indicated that they use on-demand applications in supply chain collaboration (Figure 6). There is a lack of automation through packaged applications for the majority of companies, thus indicating there is an opportunity for companies to explore on-demand delivery options.

On-demand solution providers often have much greater resources and experience in on-boarding trading partners onto a collaboration platform than a company has in-house. Many on-demand providers also come to the table with networks of pre-connected suppliers and carriers, which helps to further reduce rollout times and increase trading partner acceptance.

Figure 6: The Technology Architecture for Supply Chain Collaboration

Source: Aberdeen Group, August 2007
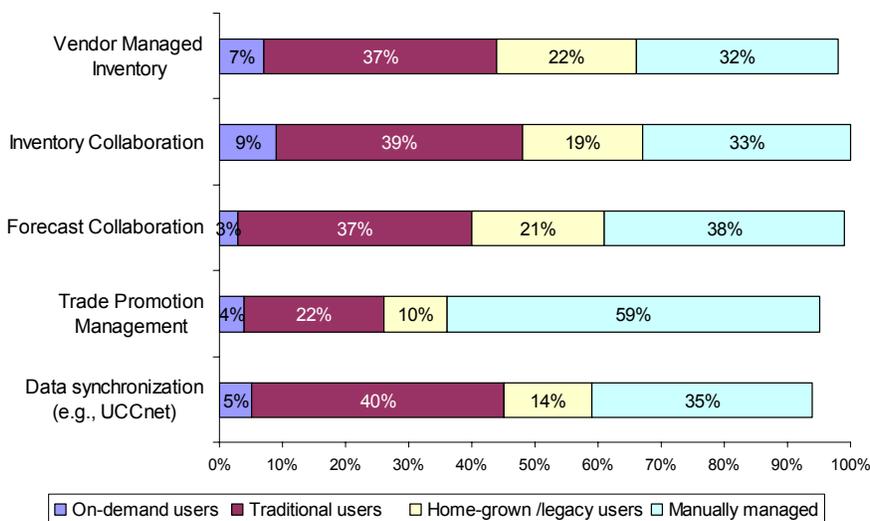
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Figure 7. indicates a strong correlation of advanced process capabilities and usage of on-demand applications. On-demand solution providers have much greater resources and experience in on-boarding trading partners onto the collaboration platform than a company has in-house. Many on-demand providers also come to the table with networks of pre-connected suppliers and carriers, which helps to further reduce rollout times and increase trading partner acceptance.
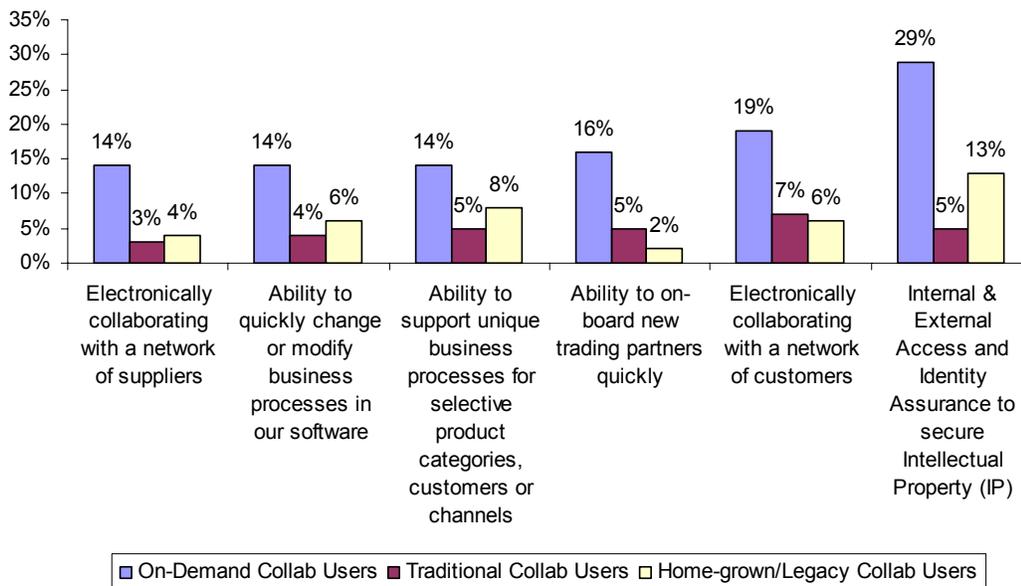
Figure 7. Process Capabilities Across Application Delivery Options for Collaboration

Source: Aberdeen Group, August 2007

Enabling support for unique business processes by customer, product line, or channel, an on-demand technology platform can lay a foundation for richer data exchange and more flexible process collaboration.

> **Raytheon Joins Supplier Network to Activate an Electronic Collaboration Backbone with Thousands of Suppliers**
>
> Raytheon is a leader in defense and government electronics, information technology, technical services, business aviation, and special mission aircraft. The company has seven large business units, which collectively have 20,000 main suppliers with which they regularly place purchase orders. Raytheon was interested in replacing its existing enterprise-wide system capability with one supporting multiple A&D companies. It also wanted a platform that could deliver a robust network of electronic services to member companies as e-commerce expanded and developed.

Raytheon Joins Supplier Network to Activate an Electronic Collaboration Backbone with Thousands of Suppliers

Solution:

Raytheon chose an on-demand platform as the solution provider for enabling supplier e-commerce transactions and collaboration. Their primary selection reasons included:

- The solution provider has a subscriber base of 34,000 suppliers. Raytheon has been able to tap into this existing network and onboard 3,400 of its key suppliers (comprising about 60% of Raytheon's total P.O. volume).

- Raytheon is increasing the number of suppliers with which it conducts business over the platform at a rate of about 600 additional suppliers a year.

- The platform provider has a robust capability to "surge" supplier memberships as requested.

- All units of Raytheon participated in the initial deployment and growth; however, the model for the new capability allows business units to participate at their own rate and "lead" or "follow" depending upon business need. Now, 60% of Raytheon's P.O.s go through the network.

- The cost per P.O. of conducting electronic transactions through the platform is about one-quarter the cost per paper-based P.O., and almost half the cost of email or fax-based invoices.

- Additional benefits include data and process speed and accuracy.

C) Supply Chain Planning and Manufacturing

Supply chain planning and manufacturing is an area where companies have traditionally resisted moving towards on-demand applications. Research continues to show a lack of penetration in this area with respect to on-demand applications: an average of 4% of companies indicates they use on-demand applications in this area.

**Figure 8: The Technology Architecture for Supply Chain
Planning and Manufacturing**

Source: Aberdeen Group, August 2007
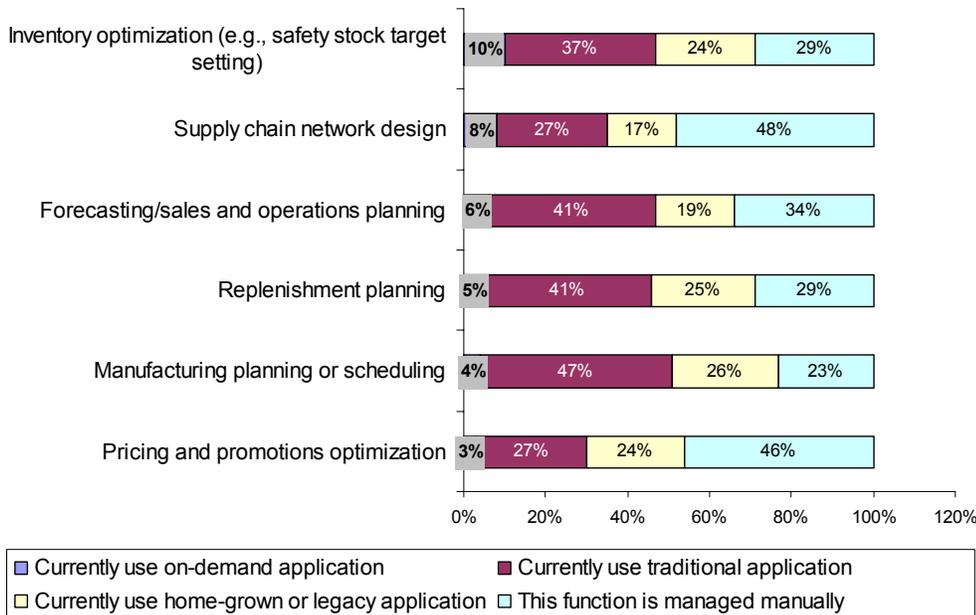
"Assembling the right
internal skills for a B2B
project is not meaningful to
do yourself. It takes a
dedicated set of skills to do
this efficiently. The level of
headache you save for
yourself by using an on-
demand specialist is huge.
Instead, do something with
your internal resources to
drive differentiated value for
the business."

~ CIO in the High Tech
Industry

**Case Study: On-demand Solution That Spans Supply Chain Execution and
Planning**

Company: One of the world's largest global packaging companies
based in Australia with manufacturing sites in 40 countries employing
over 30,000 people. The focus of this case study is on one of the
company's business units in North America.

Challenge: The freight journeys for the products take several days and
are influenced by sudden and unexpected variables caused by weather,
such as track maintenance or even derailment or closure. Even small
delays can cause serious damage to profitability.

Solution: The company implemented an on-demand inventory
management solution that provides dynamic replenishment
recommendations based on a real-time view of inventory on site, at
remote holding locations, in transit from suppliers, and on order. The
solution monitors the location of raw material via real time and triggers
the materials personnel to take corrective action on a real time basis.
This system allows the company to keep their inventories within a
min/max range, while providing centralized visibility of our raw material
supply.

Results:
• The company has seen a decline in raw material working capital that

Case Study: On-demand Solution That Spans Supply Chain Execution and Planning

was once tied up in inventory

- The company has reduced cycle and lead times built into the planning schedule based on a more realistic evaluation of the formerly agreed lead times
- The company has reduced back-up transport costs
- The company has improved service levels, leading to better supplier relationships

Firms Are Split on Deciding Whether On-Demand SCM is an Interim or Long-Term Strategy

50% of companies who use on-demand applications surveyed for this study view on-demand as a long-term application deployment strategy (Figure 9). The rest of these companies plan to either migrate their on-demand applications in-house over time or replace them with an on-premise software solution from their ERP vendors when the ERP capabilities become robust enough. There's no right or wrong answer to the question of "interim or long term" but the response will certainly influence the style of on-demand deployment.

Figure 9: Firms are Still Split on Whether On-Demand SCM is an Interim or Long-Term Strategy

Source: Aberdeen Group, August 2007
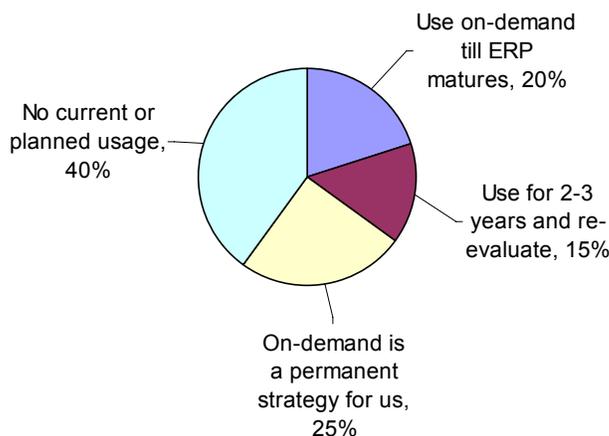
"The up-front cost was not as much of a concern as the on-going future maintenance / upgrades required. Avoided costs of maintaining and upgrading the platform over time were the largest benefit of going with the on-demand model."

~ Bob Martin, Director of Supply Chain for Arrow Electronics

Whom to Partner With For On-Demand SCM

Enterprises are equally split over whether to purchase on-demand SCM from specialist vendors or from vendors who are able to offer multiple deployment options rather than purchasing on-demand SCM from specialist vendors (Figure 10). On-demand specialists organically build their solutions and their organizations to run an on-demand model (some also offer customers the ability to migrate the solution in-house). Other on-demand

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SCM specialists include B2B hub operators and Value-Added Networks (VANs) with on-demand application layers.

Figure 10: On-Demand SCM Purchasing Preferences

An ERP vendor that offers several deployment modes, 33%

A vendor who is focused nearly exclusively on on-demand applications, 28%

A supply chain software vendor that offers several deployment modes, 39%
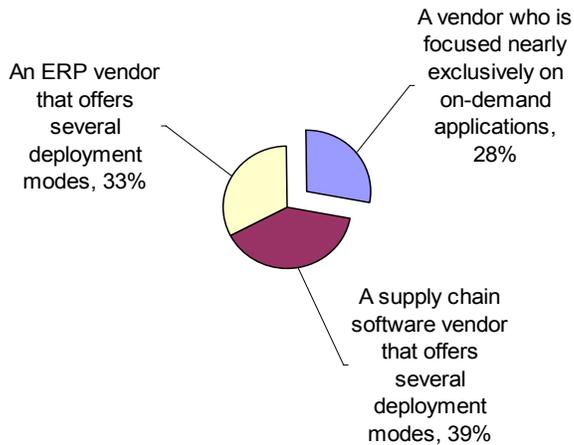
Source: Aberdeen Group, August 2007

Respondents (especially Industry Average companies) express a surprisingly high interest in on-demand offerings from their current ERP vendors, even though these vendors have not yet launched focused on-demand SCM initiatives.

Aberdeen Insights — Technology

Initial resistance to on-demand SCM comes foremost from IT organizations, which often don't like to lose control of application ownership and are concerned about the reliability of on-demand applications. Nonetheless, a third of IT organizations are supporters of the on-demand model. These IT supporters fall into three main groups:

- **IT organizations that are short-staffed, are consumed with on-going ERP implementations or upgrades, or must support frequent Mergers & Acquisition activity.** They see on-demand applications as a way of meeting their business users' evolving requirements without disrupting current projects.

- **IT organizations that have already outsourced some or all of their IT operations.** They view on-demand SCM as a natural extension of this outsourcing.

- **IT organizations that have adopted a portfolio approach to IT management.** They see on-demand SCM as a way to leverage external technology and connectivity experts for areas of the business where internal IT cannot add differentiated business value.

Chapter Three:
Required Actions

Whether a company is trying to move its performance in supply chain applications usage from "Laggard" to "Industry Average," or "Industry Average" to "Best-in-Class," the actions in this chapter will help spur the necessary performance improvements.

Laggard Steps to Success

- Only 24% of Laggards have indicated that they have a highly skilled IT staff, in comparison to 52% of Best-in-Class companies.

    On-demand SCM may be a quicker, lower risk way of ratcheting up your supply chain performance than using a traditional "license and install" method. It will place less stress on your internal IT staff and have a lower exit cost if the solution fails to deliver on your expectations. But, be aware that on-demand SCM is currently available only for certain aspects of supply chain functionality – these aspects tend to be high impact, such as lowering transportation costs or managing suppliers and in-bound inventory to increase supply chain velocity and agility.

- Only 13% of Laggards indicate that they have the ability to on-board new trading partners quickly, in comparison to 55% of Best-in-Class companies.

    On-demand solutions can help by providing a pre-connected network of trading partners. When evaluating vendors, pay special attention to how they can help you move to electronic communications with business partners through a pre-connected network, and what capabilities they have relative to helping your company learn best practices during initial implementation and on an on-going basis.

    Also investigate whether they offer managed services, in which they may be able to take on some daily operational activities for you, or manage functions that require expertise you don't have in-house. In other words, treat an on-demand solution selection more as a service vendor decision, rather than as a technology vendor decision.

- Nearly 60% of Laggards indicate that it took more than one year for their latest supply chain implementation to achieve ROI, in comparison to 70% of Best-in-Class companies that achieve ROI within a year.

    Be comfortable taking a project approach of a very rapid initial implementation for attacking a select portion of your supply chain, and then rolling out additional functionality and expanding to additional areas of the supply chain in future waves. Look to pay for what you actually use versus what you could use. Finally, don't

Fast Facts

√ Best-in-Class companies are 1.5 times more likely to use on-demand applications for supply chain execution

√ Features and functionality are the top factors for companies selecting an on-demand vendor

√ Concerns with integrating on-demand solutions with internal systems is the top factor for not selecting an on-demand solution

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underestimate the need to integrate the on-demand solution back into your internal systems to gain full value.

Industry Average Steps to Success

- Only 22% of Industry Average companies indicate they have the ability to electronically collaborate with a network of carriers, customers, or suppliers in comparison to 55% of Best-in-Class companies.

  Evaluate how on-demand SCM can help you fix select problems in your supply chain without having to rip and replace your entire infrastructure. Multi-tenant systems and multi-instance shared service solutions, in particular, have been built to "play nice" with existing in-house applications.

  These solutions are also a great way to create differentiated collaborative processes with customers, carriers, or suppliers, and gain better control of these multi-party relationships.

- Only 20% of Industry Average companies indicate they have the ability to support unique business processes for select product categories, customers, or channels in comparison to 53% of Best-in-Class companies.

  ERP systems tend to be static across different product categories, customers, or channels. If you have an ERP-centric IT strategy, consider how you can use on-demand SCM as a short-term way to exploit technology and functionality innovations not yet present in your ERP system. This may be an elegant way to meet specific customer mandates, fix challenges in certain product lines, or gain a needed jump on the competition without having to upset the internal IT applecart.

Best-in-Class Steps to Success

- Only 21% of Best-in-Class companies indicate that they have the ability to quickly change or modify business processes in their software.

  For current on-demand SCM users, continue to ask your vendors to provide more flexibility. Push your traditional "license and install" vendors to innovate hybrid on-demand models to create brand new value from your existing investments, and allow enhanced ability to modify business processes.

  In addition to considering on-demand technology, also look at how other aspects of the "supply chain as a service model" can keep your company in the lead. This can include using managed services (and other business services from technology vendors and third-party logistics partners) to exploit external expertise and resources, as well as synchronizing the financial and physical aspects of the supply chain.

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- Only 31% of Best-in-Class companies indicate that they have the internal and external access and identify assurance to secure Intellectual Property (IP).

> Risk of data security can be approximated by a level of security, such as speed of security patches, sophistication of internal user and trading partner data security capabilities, and data backup practices. Data security is typically a key concern for companies evaluating on-demand solutions; however, many companies find that the on-demand provider can deliver higher data security for a B2B initiative than what can be delivered by the internal IT organization. This is due to the economies of scale and business focus of the on-demand provider.

Aberdeen Insights –
The Value Framework for Assessing B2B Collaboration Options

In the February 2007 "B2B Collaboration: How On-Demand Platforms Accelerate Value and Impact TCO" benchmark report, Aberdeen created a value framework that covers such categories as hard and soft costs, business benefits and related risks, as well as the benefits of alternative solution approaches. Alternatives being compared include on-demand platforms, on-premise packaged applications, and in-house development. The four framework dimensions are:

- **Total cost of ownership** includes software costs, hardware expenses, maintenance costs, help desk costs, and trading partner on-boarding costs, IT Support costs, opportunity costs of long selection process and long implementation time (i.e. time to benefit).

- **Business value gained** includes reductions in operating, inventory, and logistics costs; revenue gains; market share and improvements in supply chain performance metrics.

- **Speed** includes initial implementation time, time to on-board trading partners, and time to change business processes.

- **Project risk** includes risks of project failure, software disuse, data security, system uptime and shelfware.

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Appendix A:
Research Methodology

In August 2007, Aberdeen Group examined over 455 supply chain companies use, experiences, and intentions around on-demand and Software as a Service (SaaS) applications. Responding supply chain executives completed an online survey designed to determine the following:

- The pressures forcing companies to invest in supply chain applications

- The relative priority of on-demand applications with respect to other application delivery areas

- The Best-in-Class company priorities versus Industry Average and Laggard priorities

- The process and organizational capabilities that Best-in-Class companies have implemented in comparison to Industry Average and Laggard companies

- The key metrics that companies have attained in terms of implementation times and ROI

Aberdeen supplemented this online survey effort with telephone interviews with select survey respondents, gathering additional information on on-demand strategies, experiences, and results. The study aimed to identify emerging best practices for on-demand use in the supply chain and to provide a framework by which readers could assess their own management capabilities. Responding enterprises included the following:

- *Organization Being Considered for Survey:* 19% - local business unit, 24% - entire business unit, 57% - entire company

- *Job title/function:* The research sample included respondents with the following job titles: Senior Management including CEO/COO/President (11%); CIO/CFO/VP (13%); Director (25%); Manager (30%); Staff/Consultant (21%)

- *Industry:*

Please note that the respondents may have chosen themselves to be participating in multiple industries.

Discrete (Automotive, Aerospace, Defense, Industrial Manufacturing) – 26%; Consumer Industries (CPG, Food/beverage, Consumer electronics, Apparel/Footwear, Consumer durables, Distribution, Retail, Wholesale) – 48%; Process (Chemicals, Metals and metal products, Mining/Oil/Gas, Pharma) – 22%; High-tech sector (Computer Equipment and Peripherals, High-tech, Medical devices, Telecommunication equipment) – 33%

- *Geography:* The majority of respondents (55%) were from North America. Remaining respondents were from the Asia-Pacific region (16%), Europe (21%), Latin America (2%) and Middle East/Africa (6%)

- *Company size:* About 37% of respondents were from large enterprises (annual revenues above US$1 billion); 36% were from midsize enterprises (annual revenues between $50 million and $1 billion); and 27% of respondents were from small businesses (annual revenues of $50 million or less).

Solution providers recognized as sponsors of this report were solicited after the fact and had no substantive influence on the direction of the *On-demand applications in Supply Chain* Benchmark Report. Their sponsorship has made it possible for Aberdeen Group to make these findings available to readers at no charge.

Table 4: The PACE Framework Key

Overview
Aberdeen applies a methodology to benchmark research that evaluates the business pressures, actions, capabilities, and enablers (PACE) that indicate corporate behavior in specific business processes. These terms are defined as follows: *Pressures —* external forces that impact an organization's market position, competitiveness, or business operations (e.g., economic, political and regulatory, technology, changing customer preferences, competitive)   *Actions —* the strategic approaches that an organization takes in response to industry pressures (e.g., align the corporate business model to leverage industry opportunities, such as product/service strategy, target markets, financial strategy, go-to-market, and sales strategy)   *Capabilities —* the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products/services, ecosystem partners, financing)   *Enablers —* the key functionality of technology solutions required to support the organization's enabling business practices (e.g., development platform, applications, network connectivity, user interface, training and support, partner interfaces, data cleansing, and management)

Source: Aberdeen Group, August 2007

Table 5: The Competitive Framework Key

Overview	
The Aberdeen Competitive Framework defines enterprises as falling into one of the following three levels of practices and performance *Best-in-Class (20%) —* Practices that are the best currently being employed and significantly superior to the Industry Average, and result in the top industry performance. *Industry Average (50%) —* Practices that represent the average or norm, and result in average industry performance. *Laggards (30%) —* Practices that are significantly behind the average of the industry, and result in below average performance	In the following categories: *Process —* What is the scope of process standardization? What is the efficiency and effectiveness of this process? *Organization —* How is your company currently organized to manage and optimize this particular process? *Knowledge —* What visibility do you have into key data and intelligence required to manage this process? *Technology —* What level of automation have you used to support this process? How is this automation integrated and aligned? *Performance —* What do you measure? How frequently? What's your actual performance?

Source: Aberdeen Group, August 2007

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Table 6: The Relationship Between PACE and the Competitive Framework

PACE and Competitive Framework How They Interact
Aberdeen research indicates that companies that identify the most impactful pressures and take the most transformational and effective actions are most likely to achieve superior performance. The level of competitive performance that a company achieves is strongly determined by the PACE choices that they make and how well they execute.

Source: Aberdeen Group, August 2007

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Appendix B:
Related Aberdeen Research

Related Aberdeen research that forms a companion or reference to this report includes:

- The On-Demand Tipping Point in Supply Chain Report (March 2006)

- The Lean Benchmark Report: Closing the Reality Gap (March 2006)

- Global Supply Chain Benchmark Report (June 2006)

- Technology Strategies for Integrated Business Planning (July 2006)

- The On-demand Warehouse: WMS for the Future (August 2006)

- Technology Strategies for Inventory Management (September 2006)

- The Transportation Management Benchmark Report (September 2006)

- The Supply Chain Visibility Roadmap (November 2006)

- The Extended Warehouse Benchmark (December 2006)

- Demand Management in Consumer Industries (December 2006)

- Globalization: The Turning Point for Packaged Supply Chain Software in Automotive, Aerospace and Defense Industries (January 2007)

- B2B Collaboration: How On-Demand Platforms Accelerate Value and Impact TCO (Feb 2007)

- The Supply Chain Innovators Technology Footprint 2007 (April 2007)

- Supply Chain Cost-Cutting Strategies: How Top Process Industry Performers Take Radically Different Actions (March 2007)

- Driving Sales and Top Line Revenue Requirements through Executive S&OP (April 2007)

Information on these and other Aberdeen publications can be found at www.aberdeen.com

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