



# The Value of 1%

OPTIMIZING DEMAND NETWORK COMMERCE WITH  
INFORMED APPLICATIONS

White Paper from IntegriChain  
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## Introduction: Demand Network Businesses and the Value of 1%

Demand network businesses are suppliers that market a product to an end consumer but sell their product to distribution channels that then deliver it to the end consumer. These distribution channels are called **demand networks**.

Over the past two decades, demand network businesses have invested in multiple generations of technology and business processes to optimize commerce in their **supply networks**. As a result, innovators have succeeded in cutting overall inventory levels and manufacturing costs while sustaining a high service level to their direct trading partners.

By contrast, even those companies viewed as supply chain leaders have lagged in addressing commerce inefficiencies in their **demand networks**. They are struggling to address three intersecting challenges in their demand networks: product availability, distribution cost efficiency, and sales predictability. Operations teams are being tasked to sustain >98% service levels, implement more collaborative order planning, and create efficiency in their order to cash processes – all with flat or reduced budgets. National account teams are under pressure from brand managers and channel customers to deliver the highest possible retail in stock rates. Forecasters and financial planners have to both predict demand and control for how the channel will impact sales performance.

“Many demand network businesses now see themselves as data rich and information poor.”

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The good news is that demand network businesses have more access to point-of-sale (POS) and warehouse/retail inventory data than ever before. The supplier-buyer relationship has fully entered the era of big data, with retailers, wholesalers, and eTailers giving their suppliers access to a growing array of near real time EDI feeds and vendor portals.

Nearly any demand network business – from single brand start-ups to complex global enterprises – has an opportunity to create compelling value by embedding POS and inventory data in the daily businesses processes that impact product availability, distribution cost, and sales predictability. This white paper will show how, for many businesses, the opportunity to optimize the availability/cost/predictability relationship can deliver more than 100 basis points (1% of corporate revenue) to the bottom line. This is what is meant by “the value of 1%.”

The reality is that suppliers will struggle to realize the value of 1% if they do not find better ways to make data actionable in commercial processes. Many demand network businesses now see themselves as data rich and information poor. **Informed applications** – tools that integrate customer data into key users’ daily workflow – will play an essential role in unlocking the value of 1%.



## The Unique Challenges Facing Demand Network Businesses

Demand network businesses share a unique set of business challenges that are driven by the fact that third-party businesses purchase their products, take physical possession of those products, and deliver them to end consumers. Demand network businesses generate demand by marketing to their customers’ customers. In wholesale markets they may even be marketing to their customers’ customers’ customers.

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This dynamic results in three commerce-optimization challenges:

**1. Ensuring product availability is hard.** Demand network businesses do not own their own distribution channels. Product availability is a function of not just their own ability to supply their product, but also their trading partners' success in managing inventory and ensuring supply is available for the end consumer. The risk is not just operational, but also economic. A trade partner buyer's economics around product availability will not, in many cases, align with the supplier's economics. Consequently...

**2. Product distribution is expensive.** Because they do not own their distribution channels, demand network businesses must "share" margin with their trading partners. This "sharing" takes many forms, ranging from stocking incentives, discounted pricing and sophisticated distribution agreements to returned goods policies and handling of inventory price appreciation. The sharing can also come in people and process costs, particularly when buyers (the distribution channel) challenge suppliers (demand network businesses) to take greater ownership of product availability in the channel – not just the ability to fill the initial order. Processes like CPFR (Collaborative Planning, Forecasting & Replenishment), VMI, and even more rudimentary uses of forward inventory data all have the effect of shifting people and IT cost to the supplier in the supplier-buyer relationship. Additionally, demand network businesses have to carry more inventory (a cost) because...



**3. Sales do not equal demand.** Demand is the consumption of a product at the point of sale. But a demand network realizes a sale when its distribution channel partners order products. Channel orders will not always align with downstream demand. Inventory levels naturally fluctuate over time. And the inventory's owners can make economic decisions that have material impacts (positive or negative) on a demand network business' performance. For marketers, financial planners, and demand planners, these inventory fluctuations add a layer of complexity on top of forecasting base demand – forecasting how inventories will change over time.

## Vertical Spotlight: the Life Sciences Demand Network

40%

Average pharmacy in stock rate for an Rx brand  
(Source: DNA Benchmark Pharmacy Stocking Report, 2013)

>98%

Average distributor service level  
(Source: DNA Benchmark Inventory and Service Level Report, 2013)

10%

Average manufacturer revenue spent on distribution  
(Source: DNA Customer Survey, August 2013)

### **Commerce Optimization Opportunity:**

If DNA's customers cut their distribution costs to 9% of revenues, would product availability be measurably worse than it currently is?

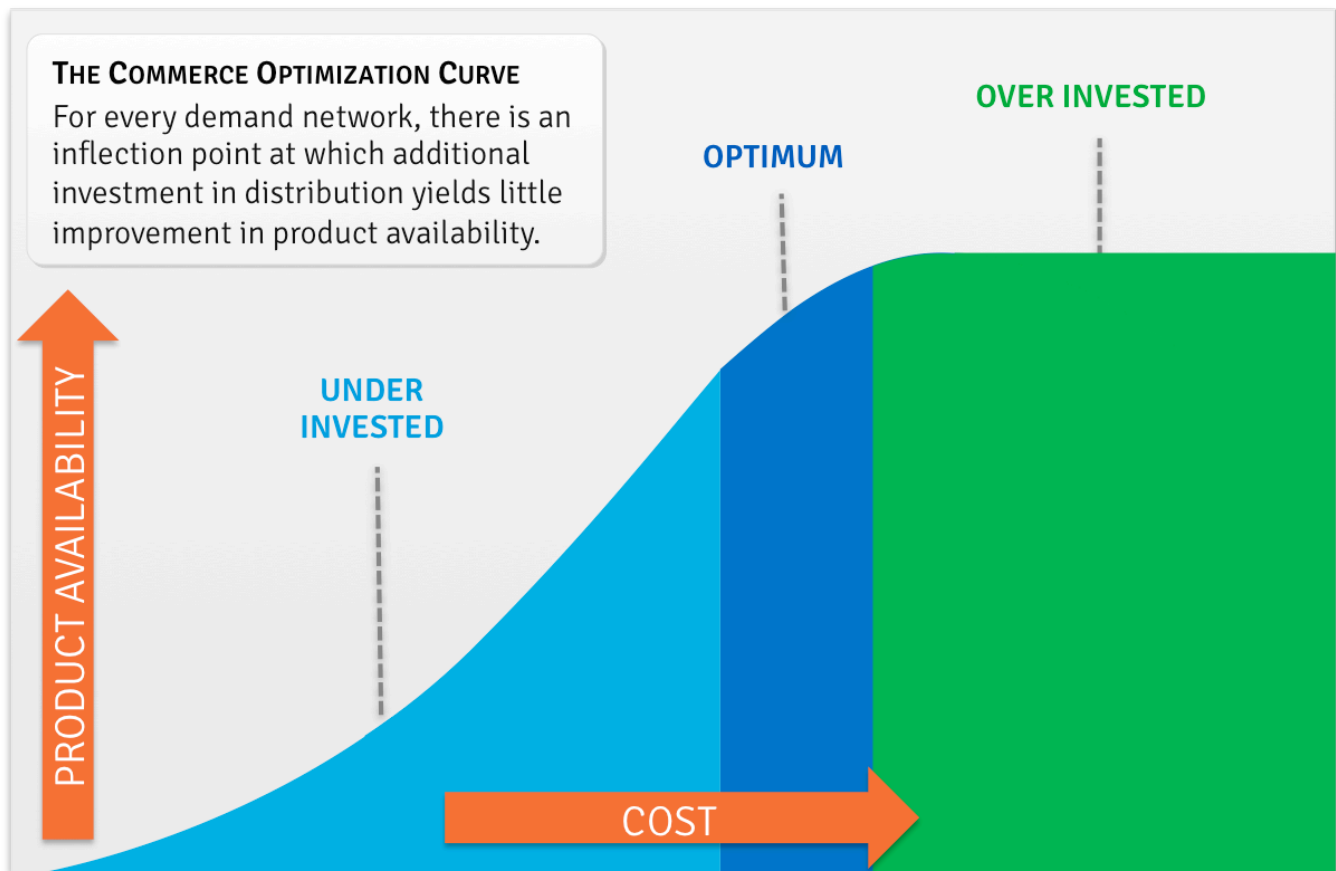
## The Commerce Optimization Opportunity

The relationship between product availability and distribution is best represented on a commerce optimization curve. The amount a demand network business invests on product distribution has a quantifiable impact on customer orders that can be fulfilled. But for every demand network, there is an inflection point – **an efficient frontier** – at which incremental investment in distribution yields less and less improvement in product availability. Along related lines, a demand network business should be able to expect some reasonable level of product availability (established through benchmarks) for its level of distribution investment and the nature of its product, channel configuration, and end demand.

Demand network businesses have an opportunity to deliver significant value to their shareholders by finding their commerce “efficient frontier.” Some manufacturers are spending the right amount on distribution, but seeing too little return in the form of product availability to the end consumer. Others are under or over-invested in product distribution and need to address limitations or inefficiencies in their current business process in order to find the right product availability/cost balance.

To find the efficient frontier, a demand network business should begin by measuring the current state of its product availability and quantifying its investments (distribution cost) in it.

## The Commerce Optimization Curve



### Measuring the State of Product Availability

#### Supplier Service Level:

The percentage of distribution channel orders (orders placed by direct customers) that a demand network business is able to fill. A demand network business can measure this within its own order and shipment data, both in absolute percentage terms as well as quality terms (average time to fill, etc.).

#### Distributor Service Level:

The percentage of retail outlet orders that a distribution center is able to fill. Demand network businesses can measure distributor service levels by using inventory and withdrawal data reported by distribution partners for their distribution centers.

#### POS In Stock Rate:

The percentage of retail outlets that, at a moment in time, have the product physically available in stock. Demand network businesses can measure POS in stock rate either through retail surveys or by using, where available, retailers' reported outlet inventory data.

## Measuring Investment in Product Availability

### **Distribution Fees and Penalties:**

This includes distribution agreements in which the supplier pays the buyer a fee for distributing the product (often tied to performance KPIs), as well as scenarios in which the supplier is financially penalized by the buyer if the supplier service level falls below a negotiated level.

### **Channel Price Incentives:**

Contract pricing, prompt pay discounts, or other economic concessions that a demand network business provides to its direct (distribution channel) customers.

### **Returned Goods Policies & Process:**

The credit that a demand network will pay – and under what conditions – to distribution channel businesses returning damaged, expired, or unused inventory.

### **Order to Cash and Order Fulfillment:**

The personnel and systems that execute the process of receiving, evaluating, booking, fulfilling, and invoicing customer orders.

### **Account Management and Customer Service:**

The personnel and systems that manage business relationships, contracts, and communication with demand network customers.

### **Demand Network Data Spend:**

Fees paid to demand network customers or third party data providers for access to inventory, distribution, and point of sale data.

### **End-to-End Inventory:**

The cost of capital tied up in a) supplier-side inventory, or b) reserves tied to inventory sitting in wholesalers, chains, and other downstream customers.

### **Inventory Arbitrage:**

Parallel trade (arbitrage on price differences between geographies and channels) and price speculation (arbitrage on changes in the value of inventory over time).

## Adding Up to the Value of 1%

By finding the commerce efficient frontier, demand network businesses create value through a combination of increases in product availability (resulting in more sales) and reductions in distribution investment (resulting in less cost). This optimization opportunity is “the value of 1%”. Most demand network businesses can identify cost and sales improvements that, taken together, would deliver more than 100 basis points (1%) of revenue to their organizations’ bottom lines.

To illustrate how this is possible, consider the following commerce optimization scenarios:



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### **The value of increasing manufacturer and distributor service levels:**

When a manufacturer fails to fill a distributor order or a distributor fails to fill a retail location order, some portion of those unfilled orders result in totally lost sales to end consumers.

Many of our customers in brand pharmaceuticals use an assumption that 10% of unfilled distributor orders result in permanently lost sales. Using that assumption, for every 1% improvement in its distributors' service level, a pharmaceutical business will realize a .1% increase in sales (10 basis points). Overall, distributors are delivering a 98% service level to the pharmaceutical industry. However, smaller manufacturers with slower moving brands and large manufacturers with more specialized brands often see far lower service levels. For these companies, improving service level might contribute 30 to 50 basis points to the bottom line, even with a conservative assumption around lost sales rate such as 10%.

For generic manufacturers and consumer product manufacturers, the lost sales ratio can approach 100%. Worse still, these businesses sell their products directly to chains across the majority of their product portfolio. If the manufacturer's service level slips – say to 95% or lower – the manufacturer may incur significant financial penalties or lose the channel relationship altogether. In these product categories, increasing service level from 97% to 98% might not only add 1% to sales (the value of 1% in one fell swoop!) – it may represent a competitive advantage vs. other manufacturers selling into the same channels and end demand.

### **The value of reducing a product's returns rate by 1%**

Pharmaceutical product returns have averaged roughly 1.5% of sales in recent years (source: DNA National benchmark data). Most manufacturers pay a credit to downstream businesses that return their product. That credit is often close or equal to the original sale price of the product. That means that on each unit of returned product, the manufacturer incurs a loss on any cost that went into the manufacturing and distribution of the product.

As an example, assume that a product's manufacturing costs are 5% of the sale price, and distribution adds another 10% of the sale price (including distribution agreement costs, prompt pay discounts, logistics costs, and order processing costs). That means that the product's manufacturer can realize a cost savings of 15% on each dollar of product returns it avoids. If the product has a high returns rate – say 2% – and it moves from lagging the industry benchmark to leading the industry benchmark – say 1% – it realizes a savings of 1% of sales times 15%, or 15 basis points.





In generics and consumer products, where margins are far thinner, combined manufacturing and distribution costs are higher as a percentage of sales, and therefore the returns optimization opportunity can contribute even more to the bottom line. If a product's manufacturing and distribution costs total 30%, a 1% reduction in returns would represent a 30 basis points bottom line contribution.

**The value of increasing revenue leverage on order to cash and accounts management spending:**

Order to cash and national account management scalability is a direct bottom line contributor.

Consider the following hypothetical business:

- \$2 billion in annual revenue
- 20 Full Time Employees (FTEs) in Trade Account Management, Trade Operations, Customer Service/Order Management, Demand and Order Planning, and Returns
- Average fully loaded cost per FTE of \$150,000 per year (counting payroll, bonuses, taxes, benefits, and allocated costs, such as phones, computers and office space).
- Total cost of people: \$3,000,000 per year
- Annual IT costs related to order booking, returns management, and national account management (not counting spend to purchase data, but including spend to process data such as VAN fees or vendor data management fees): \$2,500,000 per year
- People and systems cost as a percentage of revenue: 0.275% (27 basis points)

What if the above manufacturer could, through better systems and better data, grow its revenue to

\$3 billion without increasing any of the above spending? Instead of costs being 27 basis points, costs would fall to 18 basis points, delivering 9 basis points to the bottom line.

“ Order to cash and national account management scalability is a direct bottom line contributor.”



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### **The value of reducing total pipeline inventory reserves by one week of supply:**

Inventory in the distribution channel is not free for a manufacturer. If the manufacturer has a returns good policy, then it must set aside a portion of each sale as a capital reserve against the possibility of future returns. At product launch, when demand generation is uncertain, these reserves can represent a significant delay on revenue recognition. During any product life cycle event – such as a sudden increase in competition or a strategy to convert from one product to another – return reserves can become a significant source of uncertainty. Consequently, reserves are often quite a bit higher than they need to be as finance teams take a conservative approach in the absence of sufficient visibility.

But what if, through better visibility, the finance team could justify reducing their reserve by one week of supply? Say that a finance team reserves one dollar per dollar of channel inventory. One week of supply represent nearly 2% of a year's sales, or 200 basis points. A one-week reduction in the reserve would therefore free up 200 basis points for the business to take as profit or invest in growth.

## **Big Data Comes to the Demand Network**

One of the key ingredients in each of the commerce optimization outlined above is data. There is a need for enough inventory visibility to predict and prevent service level issues, the analytics to identify the causes of high returns rates and opportunities to change channel behavior, the ability to automate manual processes while cutting cost out of data intensive systems, and better visibility to forward channel inventory so finance can make confident decisions and unlock capital.

For more than twenty years, demand network businesses have had access to POS demand data (script data in the pharmaceutical world). Over the past decade, POS data has become lower and lower latency – in some cases becoming daily data provided directly by the chains to their manufacturer suppliers.

Also in the past ten years, wholesalers, chains and specialty channels have begun sharing inventory and distribution data with their suppliers. Some of this data is reported via vendor portals. In other instances, particularly wholesale markets, the data is made available through EDI standards such as EDI 852 (Product Activity) or EDI 867 (Product Distribution), and transmitted to the manufacturer daily via commerce networks or IP. Much of this inventory data started out at the distribution center level. Now, the inventory data is becoming more granular, extending to the individual points of product consumption.

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To realize the value of 1%, demand network businesses must harness POS demand and end-to-end inventory visibility together with other commerce data sets, including:

- **Purchase Orders:** EDI 850/855 data or manual orders submitted by distributors, chains, and other customers
- **Invoices and Shipments:** the sale itself and where it was shipped, including drop shipments
- **Manufacturer Inventory:** the quantity of finished product available for sale in the manufacturer's warehouse or in transit to the warehouse
- **Product Returns:** transactions, such as EDI 180s, that identify the downstream entity returning a product for credit
- **Chargebacks:** distributor requests for reimbursement on sales of product to downstream customers with manufacturer contracts that entitle them to discounted pricing

## "I Have Lots of Data but No Information!" Why This Isn't Easy.

Many demand network businesses can and do obtain the types of data outlined above. However, as the volume of data grows in the era of "big data", many team leaders and executives complain that their organizations are data rich and insight poor.

These companies are struggling to make the data actionable. A closer look at the systems and processes through which they are using the data reveals why:



1. For the data to be actionable, it needs to be used in daily business processes. Account managers need the data to be at their fingertips, embedded in the platforms they use to manage their relationships. Spreadsheets will not lead to use. Operations teams need the data in their order to cash systems, sitting side by side with orders, returns, and other key transaction events. Forecasting teams need to integrate the data into their forecasting "platforms" – assuming a platform is anything more than spreadsheets to begin with.

2. Legacy systems were not built to utilize POS and forward inventory data out of the box. ERPs are expensive platforms for innovation, with lengthy implementation times and numerous gating factors. Commerce pipes that process customer orders and invoices are not intelligent enough to perform higher order data management tasks and lack a sufficiently extensible business intelligence or application layer.
3. Inventory and POS data often exist in disjointed systems, data warehouses, isolated apps, spreadsheets, etc. Chains' vendor portals don't help, forcing suppliers to access data in distinct reporting environments rather than bringing data together in a central platform. In Supply Chain Insights' 2013 survey of supply chain and order management teams, the number one pain point identified by respondents was access to data.
4. Integrating and managing data is hard. Master data management, data gaps, data errors. Many just give up or decide to strictly limit the data's use because they're afraid of the cost implications of broadening use or they're simply afraid the data will be wrong.

## Realizing the Value of 1% with Informed Applications

Demand network businesses should start by identifying the right platform to manage, cleanse, and integrate customer inventory and POS demand data. But the value of 1% will be realized by demand network businesses that go beyond data platforming and become expert in embedding customer data in their daily account management, order management, and forecasting processes.

Today, many businesses' use of data is analyst driven. An analyst pulls data from a cube, crunches the data, produces an insight, and communicates the insight to less analytical users and management. Think of these companies as spreadsheet and slide deck data users. Some businesses, particularly larger organizations, have focused their investment in data warehouses and analytics platforms that provide a sole source of truth and greater scalability in the reporting processes. But the data warehouse is still basically an enabler of a spreadsheet and slide deck model, just delivered with greater efficiency. Not enough thought has been given to how data needs to be used, day in, day out, to be actionable.

Where do customer service representatives do their daily work? How informed can their decisions truly be if they need to continuously consult spreadsheets and slide decks? Or log into query engines? How can they make greater use of inventory and POS data in the order management process and during customer inquiries without driving up headcount? How can data, in combination with the applications customer service reps, be an enabler of scale, driving down headcount per dollar of revenue?

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Where do account managers do their daily work? Is inventory data and POS data surfaced in their interactions with national accounts at a level that adds clarity to the dialogue and drives interest alignment, instead of adding confusion? How easily does data flow into relationship scorecards that review both the supplier's perspective on the relationship and the buyer's perspective? Do account managers have access to exception information that enables them to be proactive? Do they have support that separates signal from noise? And how expensive is that support?

The key challenge, as mentioned above, is scalable data actionability. The key is moving from data insight poor to data insight rich AND doing so in a way that reduces cost rather than adding new layers of data utilization cost. The answer is a new generation of software, enabled by the era of big data, called **informed applications**.

Like traditional applications, informed applications provide businesses workflows that enable users to execute a business process. They also include the process engines that apply the business' rules and logic and the system interfaces that pass business and user decisions to relevant execution systems. But unlike traditional applications, informed applications embed customer data, such as inventory and POS demand, directly into the user's workflow. Informed applications give thought to how a user employs data to reach a business decision – often a very tactical business decision. The application then presents the data in a way that is designed to streamline the user's decision and action process.

Consider what shape an informed application would take in three of the value creation examples:

- **Maximizing service level:** an informed application embeds forward channel inventory in the workflow that a customer service rep uses to manage customer orders. Orders would be evaluated not just inside out – based on available inventory and historic order trend – but outside in, using customer inventory and POS demand data to decide whether an order will get the right amount of product to the right place at the right time



- **Reducing returns:** an informed application provides returns management teams analytics that show a downstream entity's returns in the context of its purchases and, where available, its inventories. An informed application would use benchmarks to help the returns manager spotlight inefficiency and opportunities for improvement. The informed application might also enable collaboration, helping not only the returns manager but other key stakeholders and action owners, such as the account management team, to see situations as they develop and proactively work with customers to change channel behaviors.
- **Scaling order to cash and account management:** an informed application brings automation to customer service and account management tasks that require the use of customer data. For example, relationship scorecards and agreement payment computation, the reporting that feeds into business reviews, would be migrated from non-scalable spreadsheets and slide decks to application-driven outputs that enable the business to grow in complexity (number of SKUs, number of customers) without increasing operational risk.

## Conclusion

Demand network businesses have a unique opportunity to deliver value to their shareholders by optimizing their investment in product distribution and the product availability their investments achieve. This commerce optimization opportunity – the value of 1% – is also an opportunity to deliver value to customers. Many optimization tasks will address product availability issues that hurt the distribution ecosystem as a whole – not just the manufacturer/supplier.

Enough customer demand and inventory data is now available to make the value of 1% possible. But businesses require new solutions that can embed that data in daily business process. Cloud commerce connectivity, demand visibility, and informed applications are answering this need.

## About IntegriChain

IntegriChain is the leading channel management cloud used by suppliers to manage relationships, inventories, and orders across retailers, e-tailers, and distributors. More than \$200 billion in US channel commerce will flow through the IntegriChain cloud in 2014.

As a suite of informed applications built on top of channel inventory and point-of-sale (POS) data, IntegriChain provides customer operations, national accounts, and finance teams with a collaborative, agile, and mobile alternative to ERP and home-grown systems. By embedding big data customer insights into daily business processes, IntegriChain helps to control the high cost of product distribution while improving product availability. This ensures that suppliers achieve a higher level of revenue predictability and get the most out of their distribution investment.

For more information, please visit [www.integrichain.com](http://www.integrichain.com).