

Finding Your Autonomous Supply Chain



This eBook explores how your supply chain and workforce can become more agile and responsive using advanced technologies and mathematical algorithms.

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Face Your AI Fears.

Why are more than half of
businesses adopting artificial
intelligence now?

Because the technology has arrived and can power an Autonomous Supply Chain™. Picture a supply chain that senses disruptions before they can impact financial results. What if your supply chain could gather data, make decisions and act at every turn, all without human intervention?

Now it can.

This eBook explores how your supply chain and workforce can become more agile and responsive using advanced technologies and mathematical algorithms.

Fun fact: 62% of retail, manufacturing and logistics CXOs plan to deploy AI and machine learning (ML) in next 24 months.

– 2019 State of the Industry Survey by Incisiv

In a retail industry where disruption is coming from every direction, from changing customer expectations, e-commerce, escalating service levels, increasing working conditions and an evolving workforce, everyday decisions demand exacting precision and accuracy.

While AI might be a new topic at your company, some of the leading retailers around the globe are already using the technology. With AI and ML retailers can increase warehouse automation while more accurately predicting buying behaviors to drive higher sales, minimize product returns and improve assortment accuracy across every channel.

The autonomous supply chain has its challenges. Some retailers, and their employees, fear the cultural impacts of AI.

Business leaders might question replacing existing technology at a high financial investment. And concerns might shift to robots and automation with more business members fearing for job security.

But the truth is, AI isn't disruptive. It's supportive, aligning with your existing IT investments, making them work harder and smarter. It frees your employees from manual labor and menial tasks, opening them up for higher-level work. AI works seamlessly behind the scenes, showing you things you didn't know about your own company. And that's not all, this not-so-secret weapon enables you to course-correct when disruptions, like materials shortages or weather events threaten your end-to-end supply chain.

What about consumer privacy concerns?

With AI, your company can tap into existing shopper data. So your business can help shoppers find the just-right product every time, right size and color, in their budget and conveniently located.

So, what's scary about that?
Exactly.

So leave your fears behind and keep reading to discover how this powerful technology is changing what's possible for the global retail industry, and how you can emerge as a leader.





Move Your Culture and Technology Forward.

Now that we've covered some common fears you or your key stakeholders may have about AI,

here's how to make a cultural shift that will empower your organization to make the move forward.

Here's the eight-step approach Blue Yonder recommends to cultural change, created by John P. Kotter*:

1 Create a sense of urgency

- Why is AI a strategic imperative today?
- Where is your organization falling short and how can AI help?
- How are competitors already creating challenges for your organization with AI?

2 Build a leadership team

- Create a leadership team that keeps everyone involved and communicates on every stage of your AI implementation.
- Give employees somewhere to go for information and answers.

3 Develop a vision and strategy

- Where are you headed and what's the objective?
- Give your employees a view of the finish line to engage them as stakeholders.
- Take everyone along for the ride, get hold-outs involved at an early stage to secure their buy-in.

4 Communicate the vision and provide status updates

- Don't just show employees the finish line, share how you'll get there.
- Explain what their role will be.
- Communicate on your AI change process openly and often with the entire organization.

5 Eliminate obstacles

- Stay on track by identifying any potential obstacles and removing them immediately.
- Meet with employees, ask for open, honest feedback and address any concerns about what is happening in the business.

6 Create and celebrate short-term successes

- Identify regular milestones that represent real progress in implementing AI and capturing its benefits.
- Communicate milestones throughout your organization and publicly celebrate them to keep your momentum.

7 Develop a vision and Secure long-term goals and drive lasting change

- Celebrate achieving your long-term goals.
- Recognize and reward key employees and teams for their contributions and commitment.

8 Anchor change in the everyday culture

- Make the successful implementation of AI part of the new corporate culture and day-to-day routine.

Do this right and employees will engage with the advanced technology and wonder how they ever survived without it.

This eight-step process has helped retailers everywhere implement AI and conquer cultural resistance to move towards their vision of the autonomous supply chain.

*Source: John P. Kotter, *Leading Change*, 1996.



Unleash the Power of Your Data.

Getting your business aligned around an AI initiative is a must, but so is assuring that the right data is in place.

The real power of artificial intelligence lies in its ability to aggregate large volumes of information, separate the trivial from the strategically important and use key insights to make fact-based decisions and take corrective actions.

In the retail industry, demand and competitive data can be used to shape every aspect of success, from assortments and service offerings to price points and promotions.

Fun fact: Blue Yonder solutions include algorithms capable of delivering more than 600 million decisions for retailers.

And artificial intelligence is only as good as the data it leverages. If your data is mismanaged, even the best-planned AI project will fail, guaranteed. High quality data can be one of your most important competitive assets. What does data quality mean?

Use Blue Yonder's quick action-item checklist to define and achieve data-quality goals for your business:

- 1** Adopt a system of data-quality metrics relevant to your business and strategic needs. Data scientists have defined quality measurements for different business situations.

- 2** Define a target data-quality level, based on your new measurement system and where your data quality is today. Create a smart but ambitious goal for cleansing and structuring your data in advance of the AI initiative.
- 3** Start on an improvement plan to meet that target. Identify the resources you need, internal and external, to put them in place.
- 4** Continuously monitor your progress as you begin to optimize your data quality. Data is not self-maintaining, and its quality will quickly deteriorate if unmanaged.

5 Make data quality a universal role. Your company's information comes from a variety of sources and exists in a variety of formats, right? Exactly. Make it a shared priority to safeguard data quality and integrity for business members who are entering or collecting data every day.

Complex AI models can access a large amount data across a wide range of heterogeneous IT landscapes and different systems. Merging and processing these in an optimized manner means starting with the highest quality data. Don't be afraid to use data scientists equipped with the knowledge required to get your information in peak shape before beginning your AI implementation.



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Find Value with Your AI Strategy.

Application of artificial intelligence and machine learning is a competitive requirement for retailers now.

You don't implement technology just to keep up with the competition in terms of IT investments. Your business needs to develop strategic goals and objectives.

A high-impact AI implementation starts with the technology and your strategic business priorities.



Use Blue Yonder's three-step approach to defining and achieving data-quality goals for your business:

1 Assess your strategy.

What are the most pressing strategic needs of the business? Do they involve fueling higher sales?

Protecting profit margins? Improving customer service? Are logistics and inventory processes inefficient? Is assortment localization a key driver?

Any technology implementation should begin by asking, What are our core challenges and how can we do better in addressing them?

2 Diagnose root causes.

Next, the underlying problems must be defined and quantified. If sales are dropping, is it because of assortment mismatches, out-of-stocks or overpricing? If warehouses are inefficient and slow, is it because of outdated processes or labor issues? What is the root cause of customer service shortfalls? Unless these problems are recognized and quantified in terms of their strategic impact, any technology implementation will fall short. There must be specific problems that can be targeted and resolved by AI.

3 Optimize!

Finally, define an implementation footprint that applies AI directly to these specific problems. As discussed earlier, cultural and data issues must be addressed to create a strong foundation for business transformation. Then implement strategically, combining short-term performance improvement with an improved long-term competitive stance while continuing return on investment.

Dramatic change you can see is achieved quickly when AI is implemented in a highly strategic, targeted way. Challenges like excess inventory and markdowns can be significantly reduced in three months.



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Understand the AI Payoff Now.

Maybe all this discussion around cultural change, data quality and strategic fit seems theoretical?

Let's cut to the chase. What is the real-world payoff? How is AI actually transforming retail business models and supply chains today?

Blue Yonder has helped retail customers capture the real-world value of AI across their global supply chains. Following are five anonymous examples showing AI's power and ability to address very specific strategic challenges in the global retail industry.



1 Preserve Perishable Profits

Accurate demand forecasting is critical in every product category. Few categories are as demand-sensitive as ready-to-eat fruit, containers of pre-sliced fresh fruit in the produce department with a shelf life as short as one day.

If the demand forecast is too high, not only are exotic, high price-point fruits like pineapple and mango wasted, so are countless hours spent cutting and packaging. If the forecast is too low and products are unavailable, health-conscious shoppers will shop elsewhere.

Enter AI. Blue Yonder helped a manufacturer of ultra-fresh products leverage AI to improve the performance of forecasting, planning and logistics by incorporating real-time sales data. Each day, machine learning enables these activities to increase in accuracy, creating benefits that stretch from the grocery aisle to the production facility.

Blue Yonder technology looks at individual SKUs and individual stores at an extremely granular level creating visibility into localized demand and increasing shopper satisfaction significantly. By driving success at both the macro and micro levels, Blue Yonder's precise forecasts and innovative disposition algorithms lead to better product availability, higher margins and less waste, a fresh idea enabled by AI.

2 Maximize Online Sales, Minimize Returns

It's no secret that online retailers face special challenges. Online shoppers have zero patience for out-of-stock products and long delivery times. In today's crowded online marketplace, a better option is usually a click away.

In addition to lost sales on the day of purchase, slow delivery times mean increased returns because consumers often grow tired of waiting and buy something else in the meantime.



Blue Yonder artificial intelligence solutions are helping one online retailer optimize an inventory that includes dozens of brands and over one million items. By matching availability with demand at a very high level of accuracy, AI is increasing satisfaction, maximizing revenues and margins, and minimizing costly returns.

Product returns represent one of the largest single business problems for any retailer today, but they are especially costly for this retailer.

While brand manufacturers manage new inventory, the online seller is responsible for processing, storing and reselling any returned merchandise.

AI has proven especially valuable in managing the huge diversity of this retailer's products and brands which have delivery windows ranging from **two to seven days**. The online retailer uses AI to more accurately pinpoint demand and pre-position popular items in the supply chain in advance of customer orders.

By running over three billion pieces of transactional data daily, including order volumes, price points and inventory levels, Blue Yonder's solutions are increasing e-commerce sales while limiting returns. AI is increasing availability, reducing stock and optimizing shipping costs for outbound products. In retail's digital age, the customer is seeing significantly improved financial results.

3 Respond to Shifts in Demand

Most retailers are overwhelmed with the amount of internal data generated by their supply chains. But for some retailers, external third-party data streams are equally important.

Consider the case of an Austrian household goods retailer who recognized that selling electric fans in hot weather would be a huge source of revenues and profits because these products often sold out, creating unprecedented consumer demand.



Ordering a large volume of fans in advance simply wasn't feasible, since a cool summer would mean overstocks, markdowns and the erosion of profit margins.

Because Blue Yonder AI solutions can incorporate third-party data like weather predictions, Blue Yonder won a competitive process to implement its advanced technology as part of the retailer's supply chain. **Today AI is helping this smart retailer increase forecasting accuracy for seasonal products eliminating overstocking and understocking for "right stocking" based on future weather trends.**

4 Use the Right Price at the Right Time (And Place)

E-commerce has opened new global markets for even the smallest retailers. How should retailers price their products for different markets to maximize competitiveness while protecting profit margins?

Because price perception and sensitivity are subjective in every local market, it's important to apply science, and not just the math associated with currency conversion. For example, in Switzerland or the Netherlands a product may be viewed as reasonably priced, driving revenue, while that same price is viewed as high elsewhere, minimizing profits and creating waste.

An international lifestyle products and home accessories retailer uses AI solutions from Blue Yonder to understand the differences in price subjectivity across its global markets.

Then the retailer applies that knowledge, creating strategic pricing strategies that increase both sales and profits.

Historically, the entire international pricing of the company was controlled from the head office in Germany, where there was a price conversion table with markup and markdown calculation for each individual market. This table was developed based on estimates and best guesses, not data science.



However, an implementation of Blue Yonder AI solutions revealed that Russia is an extremely price-sensitive market for the company's product offerings. As a test, pricing in Russia was automatically determined by Blue Yonder and its powerful algorithms for four months. The results were stunning. Contrary to the old retail maxim, "Low prices, more turnover, higher prices, more profit," the price reductions proposed by the AI algorithm increased sales and profits in Russia.

Over time, the Blue Yonder algorithm has improved both sales and profits continuously, and without manual intervention.

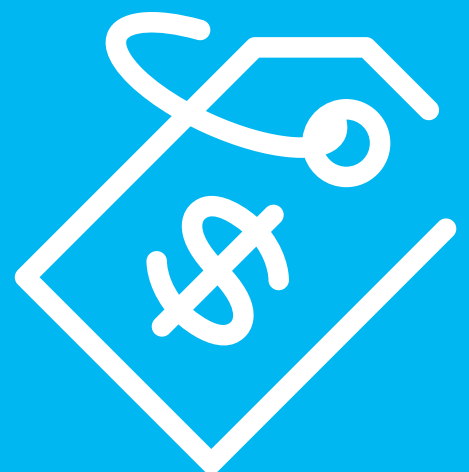
5 Minimize the Impact of Markdowns

While bargain shoppers engage when they find a good deal, markdowns and clearance events and discounts mean lost profits for retailers.

One British fashion retailer realized that it was losing almost 25 percent of its total turnover due to price reductions. Today this retailer of women's, men's and children's clothing use Blue Yonder AI solutions to determine which items are likely to sell at the original price.

AI identifies which products will probably need to be marked down to attract consumers. This determination is made right down to the item level.

Not only can this analysis help the retailer implement highly targeted, profitable pricing strategies for this season's merchandise, it helps drive more effective merchandising decisions for subsequent selling seasons. In looking at historical sales, Blue Yonder solutions take into account environmental parameters including time of sale, selling price, store location and assortment position to reveal the many complex factors that drive the consumer purchasing decision. This enables smarter decision-making in the future.



Use Blue Yonder's three-step approach to defining and achieving data-quality goals for your business:

5%

improvement on
markdowns

750

million pounds
annual turnover

250

million pounds
markdown budget

5%

improvement

12.5

million-pound increase
in sales each year

Where will AI take your business?

What can AI mean for your company?

The answer is straightforward: whatever you want to achieve. With powerful data collection capabilities, analysis and decision-making, AI can fuel those achievements.

Your autonomous supply chain is waiting.

Learn more at blueyonder.com



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