Sourcing as a Value Center:
Winning with Technologies

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2018 marks the 12th anniversary of the Kurt Salmon, Part of Accenture Strategy and Apparel magazine partnership for assessing the global sourcing market. This year’s study incorporates the survey data and results from more than 160+ companies (Figure 1) with strong representation from both retailers and distributors. The current global apparel sourcing market is one of rapid developments because of macroeconomic factors, increased competition, and advancing technologies. The survey responses were analyzed to determine what it means to excel in global sourcing and identify key trends shaping the apparel sourcing landscape especially those in the applied analytics and technology space.

Last year we highlighted the need for a transformation of the Sourcing organization from a cost center to a value center. Being a value center means that sourcing is not only responsible for getting products to the shelf, but also for helping get products off the shelves by driving speed, consistent quality and by helping limit liabilities. While there is internal pressure on sourcing to assume a stronger position as a value creator within retail organizations, macro-economic factors continue to increase the complexity of global trade on both the demand and supply sides and continue to challenge the sourcing teams to reinvent traditional ways of sourcing.

Looming trade wars and increased product costs catalyze the shift from traditional sourcing base to newer sourcing geographies, putting additional pressure on sourcing organizations to have cost efficient product creation and sourcing processes. At the same time these organizations are under pressure to deliver...
on consumer needs, which mandates the need for faster rate of innovation as part of supply chain as indicated again in this year’s survey responses (Figure 2).

As sourcing organizations transform into value centers they are placing an increased importance on technology, as indicated by 69 percent of respondents considering at least one new technology as part of their sourcing strategies for 2020 and beyond, up from 64 percent last year (Figure 3). While technologies such as 3D, sewing automation, blockchain and analytics are not new, their usage in apparel industry is becoming increasingly prevalent. Application of these technologies to product creation and sourcing processes is proving to be the most relevant unlock to speed and efficiency. While mature companies can benefit from their adoption to enable process simplification in designing, developing, and getting the product products faster to the consumer, new entrants now have a readily available toolkit to compete with established brands and retailers at a lightning speed and with reduced barriers to entry.

**Sourcing Capabilities and Maturing Technologies**

There are three key sourcing capabilities that when augmented with the right technology can transform the existing sourcing processes: differentiated sourcing models to enable organizations to operate at optimal speed, streamlined product development and sourcing operations to reduce inefficiencies and drive margins, and sustainable sourcing operations to ensure ethical and safe sourcing. This year’s survey results indicate that these three sourcing capabilities can benefit the most from fast-maturing technologies.

In this article we will explore some of those emerging technologies that have gained traction with retailers such that they are considering their adoption in the next three to five years to further augment their sourcing operations. However, as retailers implement these technologies, thoughtful planning around investment and complexity in developing, adopting and embracing these technologies will determine their successful integration in an organization’s core operations. (Figure 4).

**Differentiated Sourcing Models and Emerging Technologies**

Differentiated sourcing models have gained increasing importance given that not all products are equal and not all products need to flow at the same speed to the consumer. To optimize operations along with delivering the optimal product in the marketplace, the process of designing, developing, sourcing and flowing products to market can vary. For instance, while fashion/seasonal products should be developed on a shorter lead-time to address evolving consumer needs closer to the market, basic/core products can be produced on relatively longer lead-times as they receive lesser impact from changing trends in the marketplace. However, setting up these different product creation supply chain models is a tall task that requires major changes in existing processes, behaviors, vendors, geographies and skillsets. There have been multiple options that have been discussed and explored to operationalize these models from a sourcing standpoint. In recent years, nearshoring has been a popular approach to enabling differentiated sourcing models; however, the macroeconomic environment is challenging the long-term viability of this strategy. This is mainly due to the complexity and product-transition-
related challenges in moving from traditional vendors to new vendors. However, when this process is enabled by incorporating right technology in the process design, the vision of operationalizing differentiated sourcing models can come closer to reality.

While creating the right strategy for differentiated sourcing models starts with understanding and leveraging consumer insights to get the right products to the consumer at the right time, being able to create and deliver that product is enabled by a supply chain that can significantly reduce manufacturing and transit lead times. While there are multiple emerging technologies that can enable the operationalization of differentiated sourcing models, we will discuss two key technologies that stand at the forefront and are increasingly being looked at to unlock this key capability set: cut-and-sew robotics and applied analytics.

**Applied Analytics**

While analytics is a popular business term and is often used by leaders and professionals in business process and strategy conversations, the term applied analytics refers to making data-driven decisions that are grounded in solid analytical frameworks. This is a key component of decision making.

For a product and sourcing organization, applied analytics should drive decisions to achieve the right product at the right speed, all while being cost effective and efficient.

When analytics is applied as part of the process it has been found that it has often resulted in customer service and fulfillment improvements of 10 percent or more while increasing supply chain efficiency by at least 10 percent, as reported in an Accenture study (Big Data Analytics in Supply Chain: Hype or Here to Stay); similar benefits can be obtained as part of product creations and sourcing operations.

When it comes to understanding the demand side of the equation for a retailer, automating insight gathering from structured and unstructured data such as social, trend watching, voice, and by applying analytics, sourcing and product development organizations can begin to understand what the consumer wants and truly values, and then can tailor and differentiate their sourcing and production creation strategy accordingly. Knowing and applying analytics can help functions make objective and informed decisions. For example, in making a garment, knowing that an available raw material in-hand can lead to a 15 percent overall lead-time reduction in the product creation and development cycle can impact how an apparel designer designs the product.

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**FIGURE 2**

**2018 MOST IMPORTANT FACTORS**

- **Cost Pressures**: 61%
- **Change in Sourcing Geographies**: 32%
- **Increased Need for Innovation**: 31%
- **Need for Decision Postponement/In-Season Buys**: 24%

**2017 MOST IMPORTANT FACTORS**

- **Cost Pressures**: 68%
- **Change in Sourcing Geographies**: 20%
- **Increased Need for Innovation**: 47%
- **Need for Decision Postponement/In-Season Buys**: 22%
and how a merchandiser decides to flow this product to the consumer. The pressure to create and make all the products at the same time can be alleviated and organizations can begin to prioritize products that will truly matter and that the consumer most wants vs. putting equal efforts across all products.

While the concept of using analytics to apply to product creation and eventually to sourcing is not foreign, it is often not easy to execute in a traditional retail environment. This can be seen in the survey results where analytics has been integrated only by 33 percent of the survey respondents (Figure 5). Often the availability of data to do analytics or the lack of understanding regarding how to apply it results in a qualitative decision-making mindset vs. a data-driven one. Finding the right balance between qualitative and quantitative decision making can truly enable organizations to excel and make the right product for the consumer, thereby driving revenue by maximizing sell through and average unit retail prices.

For the sourcing organization, analytical tools and capabilities can significantly aide in analyzing where, from whom and at what time the product should be sourced from the supply side and at what speed and by what method. Furthermore, it is equally important to apply analytics to the supply side of the equation; predictive analytics can forecast delays from weather or vendor performance, reducing the need to invest in excessive safety stock or be at risk of stock out. Such applications can drive cost reduction and speed initiatives.

Cut & Sew Automation

Although manufacturing automation has been a focus in most industries for decades, the apparel industry has seen less advancement in this field due to the unique properties of garment production. Steps in the process such as cutting material or sewing buttons has been successfully automated, but the actual stitching of materials together has proved difficult to replicate. A robot cannot easily match the ability of a skilled worker manipulating the materials and tools to achieve a good seam. Retailers and manufacturers, as a result, have been reliant on cheap labor markets around the world to manufacture their products for decades. As labor wages in traditional sourcing markets grow and the availability of skilled labor shrinks, the potential benefit for automation is becoming apparent. Adding to the potential cost benefit is the ability to improve speed to market while building sustainable sourcing, manufacturing and supply networks for your products.

Innovators in this application are taking great leaps towards a commercially viable solution. For example, Softwear Automation Inc. partnered with super-agent Li & Fung to begin local, automated production of shirts, with the potential to expand product offerings in the future (https://www.lifung.com/press-release/li-fung-accelerates-creation-digital-supply-chain-software-automation-partnership/). Softwear Automation’s SEWBOT® t-shirt line requires just one operator and achieves an output that is twice that of manual sewing. This partnership will demonstrate the ability to reduce labor costs while producing goods in or close to their final markets, enabling retailers to manage costs, shorten production-to-market cycles, improve execution management and drive sustainability in their sourcing and supply networks.

Technologies such as cut-and-sew robotics enable a laborless production line for relatively simple SKUs including t-shirts, pants and shorts. While robotics for apparel production is still a relatively new concept, 18 percent of retailers surveyed this year and last year expect to adopt production automation technology within the next three to five years. Expect the technology to compete with some of the others as it continues to mature and labor costs continue to rise in traditional sourcing hubs.

![FIGURE 4](https://example.com/figure4.png)

<table>
<thead>
<tr>
<th>KEY SOURCING CAPABILITY</th>
<th>EMERGING TECH</th>
<th>IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differentiated Sourcing Models</td>
<td>Cut &amp; Sew Automation</td>
<td>Investment: Medium, Complexity: Medium</td>
</tr>
<tr>
<td></td>
<td>Analytics</td>
<td>Investment: Low, Complexity: Medium</td>
</tr>
<tr>
<td>Streamlining Process Execution</td>
<td>3D Design, Prototyping &amp; Fit</td>
<td>Investment: High, Complexity: Low</td>
</tr>
<tr>
<td></td>
<td>Virtual &amp; Augmented Reality</td>
<td>Investment: Low, Complexity: Low</td>
</tr>
<tr>
<td>Sustainability &amp; Compliance</td>
<td>Blockchain</td>
<td>Investment: Low, Complexity: Low</td>
</tr>
</tbody>
</table>
How are you managing product cost with vendors given the macro-economic changes at present (trade regulation changes, exchange rate fluctuations, raw material price fluctuations)?

### STRATEGIES TO MANAGE PRODUCT COST

<table>
<thead>
<tr>
<th>Strategy</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost reductions have been feasible through vendor negotiation</td>
<td>56%</td>
<td>60%</td>
</tr>
<tr>
<td>Cost reductions have been feasible through vendor collaboration</td>
<td>42%</td>
<td>53%</td>
</tr>
<tr>
<td>Costs have generally remained flat</td>
<td>24%</td>
<td>40%</td>
</tr>
<tr>
<td>Costs have increased over the past 2-3 years</td>
<td>34%</td>
<td>21%</td>
</tr>
<tr>
<td>Cost reduction has been feasible through moving sourcing regions</td>
<td>42%</td>
<td>45%</td>
</tr>
</tbody>
</table>

*Out of 73 respondents. Cost strategies were assigned points based on respondent rankings (1-5).
Streamlined and Efficient Operations
Simplifying and streamlining even a few of the steps in the overall product development cycle can reduce complexity and unnecessary touchpoints, thereby enabling speed and decreasing chances of manual errors between functional hand-offs. While process-efficiency oriented, reducing multiple touchpoints and hand-offs can also help sourcing organizations to design and source products that better cater to their consumers’ needs in the most efficient manner and at the least cost. For example, if the same print example was done digitally on a 3D tool then it can go straight from a designer to a vendor and can be made much closer to the market, which means colors can be selected closer to market, based on revealed consumer preferences. This digital garment may not even require two to three rounds of physical prototyping and can reduce the overall product creation cost associated with this garment. The important connection of speed, cost, and streamlined operations was indicated by this year’s respondents’ ranking these priorities as the top three most important areas to focus on (Figure 6).

In recent years, focus around process and execution simplification has centered around implementation of Product Lifecycle Management (PLM) software. While survey results show that 41% of retailers have implemented or are in the process of implementing PLM (Figure 7), there is opportunity to further augment streamlined operations by pursuing capabilities in 3D design, prototyping, sampling and fit as well as augmented reality/virtual reality (AR/VR).

While Goldman Sachs predicts AR/VR will have a value of $80 billion by 2025, sourcing organizations are not on the leading edge as indicated in the survey results where less than 20 percent of respondents indicated that these technologies have been implemented as part of their technology strategy (Figure 8). Even more critical than adopting new technology is integrating it seamlessly across the other product information and sourcing systems and tools, enabling every partner in the network to leverage and benefit from the new technology.

While there are multiple technologies that can supplement streamlined product creation and sourcing operations there are two technologies that when implemented successfully can prove to be the game changers for a product-focused retailer. Application of 3D and its integration from design to prototyping to manufacturing is indicated to be the most popular, which was further corroborated by the survey results, with more than 40 percent of respondents indicating that they are using this technology for 3D design as well as prototyping. While application of AR and VR can assist in predicting and testing products prior to launch, and can enhance the benefits offered by 3D technology, it is gaining traction relatively more slowly than 3D. The application of 3D and AR/VR is further explored in the subsequent paragraph.

3D Design, Prototyping, and Sampling
Sample development and review can account for more than 60 percent of the total product development lifecycle. The iterations of creating and approving samples with a vendor and aligning on the final approved sample internally across multiple cross functional partners such as product development, design, merchandising, marketing, sales etc. can inhibit the speed to market and can constrain product sales performance. The time to ensure that in-season market insights have been incorporated in the line planning work plus the time getting specs and sketches on papers plus the time creating and reviewing the accurate...
physical sample approved can require multiple hand-offs and several iterations of sampling with overseas vendors. One emerging technology that shows great promise in reducing calendar timelines, effectively communicating and managing design specs, and ultimately testing customer preference is the process of 3D designing, prototyping, and sampling. In fact, investment and maturity in the 3D printing industry is accelerating rapidly, driving down costs and demonstrating benefits, primarily in prototyping and spare parts production (Figure 9). The suite of 3D design and prototyping technologies has several benefits across not just cross-functional partners but also with vendors and consumers:

- **Visualize** what a product line will look like on the market
- **Physical** samples support assortment adoption & sell to buyers
- **Design** for what is possible to make versus what can be sketched
- **Develop** accurate tech packs and bills of material
- **Speed** of marketing, packaging, & commerce channels ahead of commercialization
- **Collaborate** across internal and external networks

With more than 40 percent of survey respondents having either implemented 3D design and prototyping or having plans to implement it in the near future (Figure 8), this process and technology is fast gaining momentum and is being operationalized at commercial scale. Advancements in devices such as 3D printers allow designers to spend more time perfecting the look and feel of products rather than sitting and waiting for samples to arrive. As customers become more and more accustomed to “on demand” products, reducing days from the product development timeline is crucial to releasing products that excite consumers, and will ultimately help drive top line revenue while also hitting the bottom line through reduced end of season markdowns.

**Augmented and Virtual Reality**

AR & VR technologies can be used to both enhance customer engagement and experience as well as drive internal process efficiencies. For the product creation and sourcing organization, these applications can enable the availability of insights into consumer preference and can allow the product to be tested as it is being developed. This improved the prototyping process significantly by reducing iterations and getting the product right early on. It also allows the product creation teams to adjust design and product changes rapidly and launch products into the market with higher degree of confidence through real-time customer data insights. While this technology is being explored for design testing it can also enhance the value to product creation by allowing teams to test additional features of product design and functionality with the consumer prior to actual mass product planning launching. Below are few of the benefits of AV/VR technologies across different aspects of the product creation process.

**Design:** Increase speed from concept to shelf by reducing the reliance on physical samples to perfect an item. AR, specifically, can assist a designer to better visualize color, patterns and fit of garments. Mixed reality technologies can allow development and testing to be performed remotely and by multiple parties at the same time while reducing time as well as shipping and travel costs.

**Plan:** Design to adoption ratios, in general, stand at about 60 percent to 70 percent for average retailers. AR/VR technology can enable market testing of consumer preference up-
front, allowing the working team to shift focus and align on designs and product offerings that should truly matter versus those that should be dropped.

Collaborate: Real-time immersive internal and external collaboration removes the inefficiencies of operating at a global scale. Virtually collaborating at every step of the product development and sourcing process can further drive speed to market, quality and cost reduction.

Eighty-seven percent of retailers surveyed are addressing or planning to address calendar lead-time reduction as part of their speed strategy (Figure 10), but just 4 percent of apparel retailers have adopted AR/VR technologies, with another 19 percent planning to implement (Figure 8). So, the question needs to be asked, can AR/VR help you redefine your retail experience?

Committing to Sustainability and Compliance in Sourcing
Consumers are placing greater and greater emphasis on purchasing sustainable products and buying from retailers that they perceive as socially responsible. Sustainability and compliance trend beyond retail and are at the forefront of consumers’ minds in every aspect of their purchasing habits. From food to gadgets and apparel, people want to know that their dollars are going toward companies that are ethical and sourcing their products from sustainable and compliant sources. Labor relations has been an important aspect of global sourcing for some time, but sustainable materials and traceable textile chains are rapidly becoming important aspects of sustainability strategies. In a new question in this year’s survey, respondents indicated that improved labor relations are still important priorities, but 65 percent of respondents indicated that they are addressing or planning to address the need for a 100 percent trace-and-track textile chain (Figure 11). This is becoming even more important as sourcing supply bases are going through transition and retailers are looking to explore from newer geographies and

exploring nearshoring opportunities. While sustainability and compliance are at the forefront of retail, one can only conduct a handful of surprise factory audits and test SKUs, thereby making the need for adoption of blockchain technology even more relevant. This is one technology which has shown promise across all industries and that could be a true disruptive force in the sourcing world.

Blockchain and Sourcing
While many may only associate blockchain with cryptocurrencies such as Bitcoin, this underlying technology that enables cryptocurrencies is emerging as a technology that can transform retail across supply chains and sourcing organizations, bringing new possibilities such as:

- New visibility into products in the supply chain
- Preventing counterfeit products from reaching customers
- Providing transparency to trade relationships between retailers and manufacturers

While the technology is still in its infancy, blockchain, an immutable, distributed ledger, can help retailers increase visibility and reduce risk across the end-to-end supply chain. While many people are familiar with the public blockchain ledgers that were made notorious by cryptocurrencies, transportation companies, manufacturers, CPG firms, and even retailers are enabling blockchain-backed transactional ledgers to ensure the quality, compliance and origin of the product that they intend to buy. Despite the potential business value, this year’s survey indicates that just 4 percent of companies have implemented a blockchain solution and 14 percent are
As part of your sustainability strategy, indicate which priorities you are already addressing or planning to address?

<table>
<thead>
<tr>
<th>Priority</th>
<th>Implemented</th>
<th>Planning to Implement</th>
<th>No Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved labor conditions</td>
<td>48%</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>100% track-and-traceable textile chain</td>
<td>28%</td>
<td>37%</td>
<td>35%</td>
</tr>
<tr>
<td>Sustainable/organic raw materials</td>
<td>22%</td>
<td>27%</td>
<td>51%</td>
</tr>
</tbody>
</table>

*Out of 79 respondents

planning to implement in three to five years.

For an apparel retailer, blockchain could help ensure that the material they have sourced is truly the intended product from the intended source, potentially reducing compliance and corporate social responsibility risks.

Supply chain visibility and authenticity of goods has always been a major issue for retailers, and, although in its infancy, blockchain is a promising technology that can help retailers reduce risk and ensure quality and brand integrity.

Summary

Though the importance of improving speed, driving innovation, streamlining operations and driving sustainability are not new value-driving capabilities, new technologies must be added to the sourcing organization’s toolkit to enhance these key sourcing capabilities.

Technologies such as 3D, applied analytics, cut-and-sew automation, and blockchain are being given serious consideration by retailers who aspire to remain competitive and relevant.

While making these technologies part of strategic vision and committing resources to these technologies are the starting steps, successful implementation requires additional considerations.

Equally important to the technology itself is the implementation approach: starting with identifying, prototyping, and piloting all the way through to widespread implementation. A thorough approach with the right partners and sponsorship will be vital to drive the behavior changes required to implement these technologies. Usage and adoption of these technologies requires a shift in behavior and getting comfortable in newer ways of working needs to be incentivized and managed by the leadership (e.g., looking at a digital samples vs. a physical sample is a huge behavior shift for a product-focused organization).

End-to-end integration of technologies: Moreover, these technologies are not stand-alone solutions; they should be positioned to augment current systems and tools so that there is a common language across business partners. Partnering with vendors/third parties to ensure they are advancing at the same speed will also aid in the adoption of new technologies.

The sourcing landscape will continue to rapidly change in the next few years and the role of these emerging technologies will continue to evolve. Organizations should continue to explore and adopt the technologies that are most suited and aligned with their strategic visions and that can further propel their key capabilities. While we discussed a number of key emerging technologies targeted to enhance product creation and sourcing capabilities, these technologies are not restricted to just these functions and can be explored for value creation across the organization’s entire value chain. APP

About the Authors

Praveen Kishorepuria, managing director at Kurt Salmon, part of Accenture Strategy, has 20-plus years of consulting and industry experience and has served global clients in the areas of enterprise cost reduction, margin and profit improvement, restructuring and turnarounds, end-to-end supply chain and business transformation. He is a visionary developer of solutions to drive sustainable benefits and provide broad perspective on leading and solving business transformation issues across retail and consumer businesses. In supply chain, Praveen has deep expertise in sourcing, planning and manufacturing transformation.

Akshay Madane, senior manager at Kurt Salmon, part of Accenture Strategy, has more than 11 years of consulting and industry experience and has served clients in the areas of end-to-end supply chain transformation, strategic sourcing, manufacturing strategy, and operational improvements, mergers and acquisitions. He is a trusted advisor to senior leaders of consumer products, industrial products and retail organizations. Passionate about new frontiers, Akshay is always looking for innovative ways to augment his clients’ business capabilities.

Tulika Trivedi, senior manager at Kurt Salmon, part of Accenture Strategy, has more than 10 years of management consulting experience. Tulika has led and delivered several process improvement and operational excellence projects across retail, consumer products and technology industries. She has a deep understanding of product development, pre-production and sourcing processes for retail clients and has managed multi-million-dollar sourcing accounts for both raw material and finished goods sourcing for multiple retail clients.

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