

# GOING “GLOCAL”

## The case of the 10,000-pound cotton “dirt-to-shirt” project

BY JAYANTH JAYARAM, VIDYARANYA B. GARGEYA, ERIC HENRY, AND VASHKAR GHOSH

Taking the 3T approach—transportation,  
transparency, and trust—allows TS Designs to create  
global products locally.



---

*Jayanth Jayaram is a professor of marketing and supply chain management at the University of Oklahoma's Michael F. Price College of Business. He can be reached at [jjayaram@ou.edu](mailto:jjayaram@ou.edu).*

*Vidyaranya B. Gargeya is professor emeritus in the Department of Information Systems and Supply Chain Management at the University of North Carolina at Greensboro. He can be reached at [vbgargey@uncg.edu](mailto:vbgargey@uncg.edu).*

“G local,” a portmanteau term built on globalization and localization, emphasizes that the two concepts exist not in polar opposition but in mutual interdependence in a globalized world. Typified by the slogan “Think globally, act locally,” people understand the significance of globalization when it affects their local environment. This leads to the perception that global phenomena are local (e.g., through media representations of far-off places) and local phenomena are global (the imported food in our supermarkets). This article presents a live case study of a small apparel business in the southeastern United States, adapting products available worldwide to suit local needs, with sustainability at its core.

The findings from the research show that minimizing physical transportation distances, increasing transparency across the links in the supply chain, and building personal and professional relationships through trust are cornerstones of the 3Ts sustainability journey. Implications (lessons learned) to the supply chain field are offered.

### Building the theme of glocalization: Combining global and local themes

TS Designs ([tsdesigns.com](http://tsdesigns.com)) is a custom apparel manufacturer and printer focused on creating domestic and sustainably made shirts for environmentally and socially conscious organizations and other customers. Based in North Carolina, this forward-thinking company has

embraced localizing production sites while mirroring the global trend toward seeking the best product prices and quality. Their approach involves outsourcing various aspects of production to multiple companies within North and South Carolina. This strategy not only taps into the rich regional expertise, but also aligns with the growing desire among U.S. consumers to support and wear products made by local companies. By doing so, TS Designs has a unique opportunity to foster strong client retention and association, driven by the pride of supporting local businesses. This approach is a testament to their commitment to quality and community engagement. The steps in the TS Designs T-shirt supply chain are shown in Figure 1.

FIGURE 1

### Steps in the manufacturing of a t-shirt



Source: Authors

Eric Henry is CEO of TS Designs in Burlington, NC. He can be reached at [eric@tsdesigns.com](mailto:eric@tsdesigns.com).

Vashkar Ghosh is an assistant professor of information systems and supply chain management in the Joseph M. Bryan School of Business and Economics at the University of the University of North Carolina at Greensboro. He can be reached at [v\\_ghosh@uncg.edu](mailto:v_ghosh@uncg.edu).

As shown in Figure 1, multiple local entities are involved in the production process, meaning numerous hands touch the product before it reaches the end-user. This can increase costs, especially labor and materials, potentially making the final product prohibitively expensive for some consumers. TS Designs explored the viability of vertical and horizontal integration options to mitigate these challenges. Vertical integration would involve bringing more aspects of the production process in-house, reducing reliance on external suppliers, and exercising more control of process quality. Horizontal integration could entail forming strategic partnerships with select suppliers to streamline production and control costs while maintaining product quality.

In a rapidly evolving market where consumer preferences are shaped by product quality and the values and principles of the companies they support, TS Designs faces a balancing act. Their commitment to local production reflects their dedication to excellence and community engagement. At the same time, it also poses potential challenges that demand creative solutions to ensure quality and affordability for their loyal clientele. This triggered a broader focus by carefully considering the effects on the triple bottom line (people, planet, and profit). This focus on the triple bottom line is captured in the following quote:

*“When NAFTA [North American Free Trade Agreement] was ratified, and our business was destroyed by our customers moving overseas, our journey pivoted based on the ‘triple bottom line’ model of sustainability... people, planet, and profit. It’s no longer just about making money.” — Eric Henry, CEO*

### **Bringing the supply chain home**

Several key points from various sources emphasize the growing importance of domestic production and sustainability in the modern consumer landscape. The Carolina Textile District notes that the 2008 economic downturn shifted consumers’ focus back to domestic production as they sought to rebuild the economy. This shift reflects a desire among contemporary consumers to “buy locally,” highlighting an opportunity for businesses that embrace this trend. In addition to a preference for domestic production, consumers increasingly prioritize sustainability. A 2018 Nielsen study revealed that 81% of global survey respondents across age groups strongly believe that companies from which they buy should prioritize environmental responsibility.

This indicates a growing demand for brands that incorporate sustainable practices into their operations.

The University of Vermont Extension study outlines several benefits of farmers being an integral part of communities, emphasizing that farmers can achieve better prices when selling directly to consumers, support local economies, preserve working landscapes, and contribute to ecosystem services and wildlife habitats. These benefits emphasize the value of supporting local agriculture.

Furthermore, manufacturing holds significant importance in the United States, as it provides high-wage jobs, drives commercial innovation, contributes to reducing the trade deficit, and plays a crucial role in environmental sustainability. These factors emphasize the multifaceted impact of the manufacturing sector on the nation’s economy and environment.

Consumer preferences also play a significant role in this context. An American Consumer Reports survey found that 80% of Americans prefer American-made products, with more than 60% willing to spend more on them. This sentiment emphasizes the potential market for domestically produced and sustainable products. Supporting local businesses is not only a consumer preference, but also has tangible economic benefits for communities. When consumers choose to buy locally, small businesses thrive, reinvesting approximately 30% of their revenue into the local economy by purchasing local goods and services. In contrast, chain stores contribute significantly less to the local economy, emphasizing the importance of supporting local businesses for community development.

Finally, the idea of importing hemp clothing from China, despite its potential being an environmentally friendly ingredient, raises concerns about moving away from the goal of keeping production local. However, this approach could positively affect society by changing perceptions of hemp beyond its active effects, positioning it as a sustainable and versatile resource.

### **Dirt-to-shirt supply chain**

Focusing on transparency in the production process comes with several notable advantages. First and foremost, it emphasizes openness and clarity at every stage of production, providing consumers with a deep understanding of how a product is made. This transparency builds trust and aligns with the “Made in America” branding category. By showcasing products as locally sourced and produced, businesses can tap into the patriotic sentiment of consumers, potentially driving sales and loyalty. Promoting transparency can

also be seen as building a solid foundation within the local community, reinforcing connections between businesses and the people that they serve. It fosters a sense of unity and support that can have long-lasting positive effects.

However, there are challenges associated with this approach. Achieving full transparency requires meticulous attention to detail and can be time-consuming. Tracking the entire production process, from raw materials to the finished product, demands significant resources and commitment. There's a potential risk of getting bogged down in the intricate details of the supply chain, diverting attention and resources from other critical aspects of business operations. It's essential to balance transparency and operational efficiency to ensure that the benefits of openness do not outweigh the costs.

While embracing transparency and "Made in America" branding has several clear advantages, it also demands careful consideration of the resources and efforts required. Striking the right balance between openness and efficiency is critical to leveraging the benefits of transparency while avoiding potential pitfalls in the supply chain.

### **Incorporation of the 3T model**

**Transportation and local sourcing.** The notion of sourcing, manufacturing, and distributing products within a supply chain lower than a 750-mile radius of the Carolinas is a response to the newfound awareness of the fragility of globalism, as highlighted by the challenges brought about by the COVID-19 pandemic (see Figure 2 for the description of supply chain partner entities). This also has cycle time effects. This concept aligns with glocalism, where products are kept close to their destination. The advantages here are evident: reduced supply chain disruption risk, quicker response times, and potentially lower transportation costs. However, this approach also requires a significant investment in establishing and maintaining local supply chains, which may present logistical and operational challenges.

**Transparency and pride.** Promoting transparency at every step of the production process can foster a sense of pride and ownership among consumers. This is especially relevant when there is a growing patriotic sentiment, with consumers increasingly inclined to support local businesses. COVID-19's disruption to the global supply chain has exposed its vulnerability, making the market more receptive to local and

dependable suppliers. Embracing transparency can help businesses tap into this expanding market and build trust with consumers who seek to understand the origins of the products they purchase.

**Trust and relationships.** Trust plays a crucial role in supply chain management, as exemplified by the relationship between CEO Eric Henry and participants in the upstream and downstream phases of the supply chain in the Carolinas. Trust is built through consistent communication, reliability, and mutual understanding. These relationships are valuable assets, as they facilitate collaboration and problem-solving, which are essential in the complexities of supply chain management. However, they also require ongoing effort and nurturing to maintain and grow.

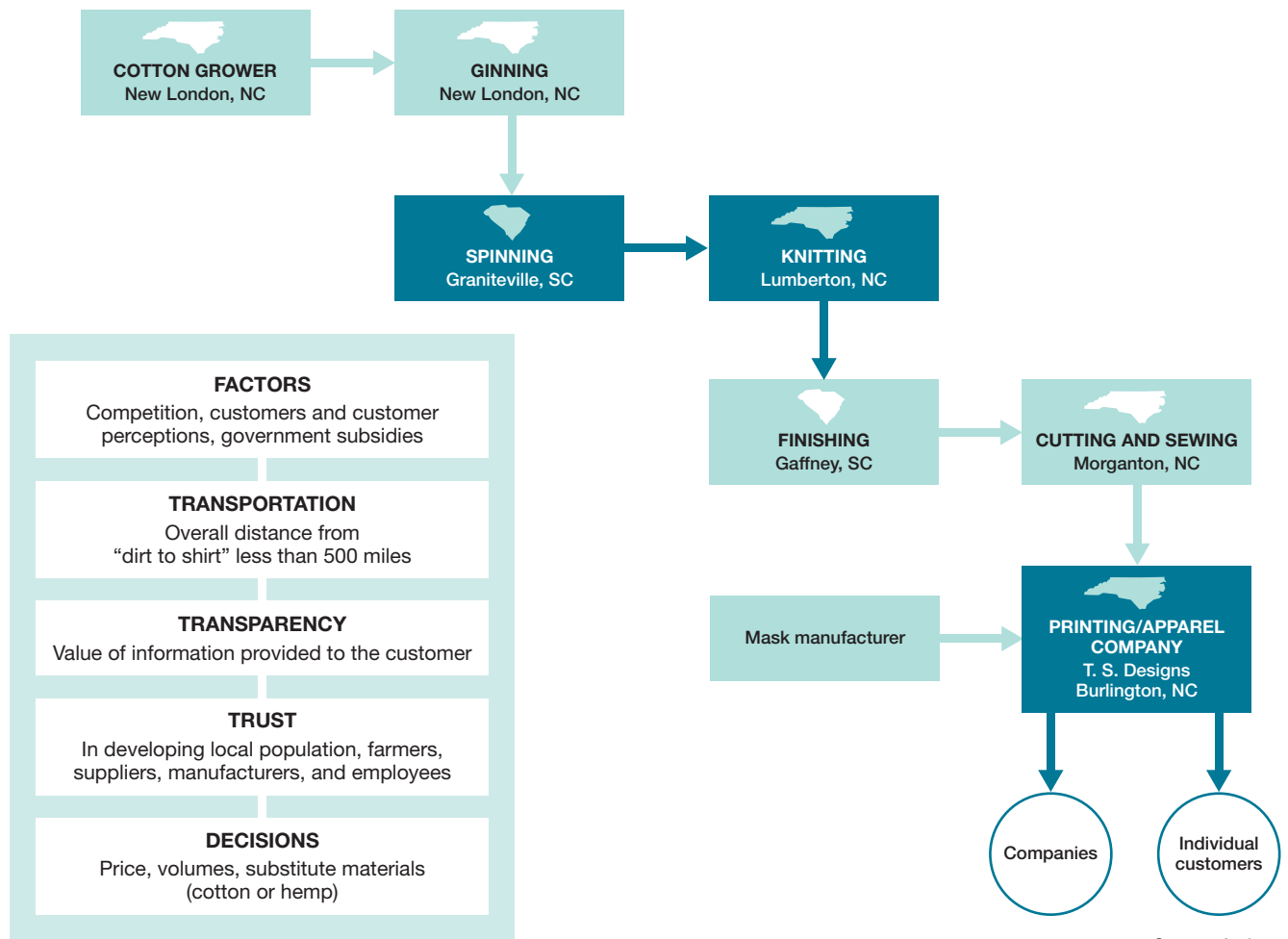
**Transparency and environmental standards.** TS Designs' central tenet is to meet high transparency, accountability, and performance standards. The company works with companies and organizations who want to provide their customers with responsibly made clothing that's easy on the environment. The primary focus of the CEO and the leadership team is to set the highest standards for corporate responsibility by cultivating responsible clothing with completely transparent supply chains. Transparency in the supply chain and the clothing and apparel industry's environmental impact has garnered much attention in recent years. Organizations such as Circ.earts', whose mission is to protect the planet from the cost of clothing and has pioneered a technology that can recycle polycotton into reusable fibers, thus allowing fashion labels to process textile waste into tomorrow's clothing, are leading the way. Cradle to Cradle Certified is the leading multi-attribute standard used globally across industries by designers, brand owners, and manufacturers for designing and making products that enable a healthy, equitable, and sustainable future. The certification standard provides a framework to assess materials and products' safety, circularity, and responsibility. Two primary categories of assessment are material health and social fairness. Material health ensures materials are safe for humans and the environment, while social fairness assesses commitment to upholding human rights and embracing safe, fair, and equitable business practices.

**Transparency and technology.** TS Designs has been at the forefront in considering societal and environmental



FIGURE 2

## Textile and apparel supply chain of the “10k pounds of cotton” dirt to shirt project



Source: Authors

aspects, with a strong focus on transparency. Of all the clothing in the United States, 98% is made overseas, creating an opaque and fragmented supply chain. This makes it nearly impossible to trace back different supply chain partners to ensure that social and environmental standards are fulfilled. TS Designs consistently strives for transparency in the supply chain and puts the farmer first. The company has developed a system, “whereyourclothing.com,” that allows the consumer to know all the steps in the supply chain of the T-shirts, from the farmers who grow the cotton to the folks who sew the cloth together. The shirts can be tracked from the farm to the finished T-shirt using a unique printed QR code (Figure 3) inside the neck of the T-shirt.

In summary, the considerations of transparency, local sourcing, and trust in supply chain management highlight

the importance of adaptability and responsiveness to changing market dynamics, as shown by the impact of COVID-19. Businesses that can effectively balance these factors are well-positioned to meet the evolving demands of consumers while ensuring the reliability and resilience of their supply chains.

### Lessons learned

Reflecting upon this case study, we uncover a range of valuable lessons. These lessons extend their influence on nearshoring, prompting us to consider their broader implications. Additionally, within the context of glocalization strategies, what are the essential principles—the things we should do and those we should avoid?

This case study underscores the importance of transparency in the production process, which can foster a sense of local pride and ownership among consumers. This lesson is particularly relevant in an era where consumers increasingly seek to support local businesses and understand the origins of the products they purchase. The lessons learned include the following.

**1. Adaptability in the face of disruption.** The COVID-19 pandemic revealed the vulnerability of global supply chains. Businesses should be prepared to adapt and consider nearshoring or “glocalizing” to mitigate supply chain disruption risk.

**2. Relationship building.** Trust is a successful supply chain management cornerstone. Building and maintaining solid relationships with both upstream and downstream partners is crucial. In this case, CEO Eric Henry’s relationships with other channel partners (see Figure 1) highlight the value of trust and communication in a supply chain. The C2C protocol facilitated a binding mechanism that knits the supply chain partners together. It gave the participants a sense of ownership and joint destiny in their quests for higher transparency.

**3. Balancing transparency and efficiency.** While transparency is important, businesses should balance openness and operational efficiency. More focus on transparency can lead to inefficiencies if not managed carefully. This is also apparent with the T of transportation. While the supply chain is precariously balanced within the 750-odd-mile radius of the Carolinas, which reduces transportation distances, it might unravel other inefficiencies considering sources outside of this radius. This is especially true of the substitute for using hemp, as mentioned elsewhere in this case study.

**4. Judicious selection and deployment of technology.** The cradle-to-cradle protocol in this supply chain case study showcases the careful selection of technology to enhance transparency up and down the supply chain. The protocol also had other incidental benefits of improving the other two Ts—transportation and trust.

#### *Implications for nearshoring.*

**1. Proximity matters.** Nearshoring strategies that keep production and sourcing within a reasonably close geographic range can enhance supply chain resilience and responsiveness. Businesses should consider the benefits of sourcing and manufacturing within a 750-mile radius, as highlighted in the case.

**2. Local market understanding.** Nearshoring often means operating in or near local markets. Understanding local consumer preferences and demands is crucial for success. Tailoring products and marketing to the local audience can be a significant advantage.

#### *Essential elements of a glocalizing strategy.* **Do:**

**1. Engage the local community.** Actively involve and engage with the local community. This can include collaborating with local suppliers, supporting community initiatives, and fostering a sense of pride in your brand’s local roots. The following quote from the company captures this:

*“Positive impacts of sourcing locally affect both the environment and community. Sourcing where you live enriches the community in which you live, so again, it’s a complicated story because many people want to save a few dollars here and there. Still, if it means unemploying your neighbor by not sourcing*

FIGURE 3

## Inside the neck of the t-shirt



Source: Authors

local, that's a cost to your community and quality of life." — Eric Henry, CEO

**2. Embrace transparency.** Be transparent about your production processes and sourcing. Communicate this transparency to consumers, as it can build trust and loyalty.

**3. Build strong relationships.** Build and maintain strong relationships with suppliers and customers. Trust and collaboration are essential elements of glocalization.

**4. Stay agile.** Be prepared to adapt and respond to changing market conditions. Flexibility and adaptability are critical in a glocalizing strategy.

### Don't:

**1. Sacrifice efficiency for transparency.** While transparency is essential, avoid getting bogged down in excessive details that could impede operational efficiency. Strive for a balance between openness and productivity.

### 2. Look at individual elements of cost alone.

Investigate total cost of ownership. There is a tendency to compare cost differentials by considering the typical factors

of production (materials, labor, energy, and overhead). This can be misleading due to hidden costs (for example, coordination costs with overseas suppliers and environmental effects associated with poor product quality). Considering all triple bottom line related costs and the long-term lifecycle view of cost streams is essential. This notion is captured in the following quote.

*"The consumer's biggest issue is price. You have a marketplace where 98% of the clothes you buy today are made overseas. Labor is cheaper overseas; processes along the way reduce the initial costs of making a product but don't measure the negative external costs, i.e., climate change of transporting garments worldwide, the environmental impact of not following water and air regulations as we do in our country. We believe in paying a living wage and helping our employees with benefits like health care. All these are additional costs that are incurred. Unfortunately, we live in a marketplace that only looks at short-term costs and passes on the negative external costs to the next generation... Price is our biggest concern. We spend most of our time educating the customer." - Eric Henry, CEO*

**3. Neglect market research.** Don't assume that what works in one location will automatically work in another. Invest in market research to understand local preferences and market dynamics.

**4. Overlook supply chain resilience.** While glocalizing can mitigate some supply chain risks, it's essential to have contingency plans in place for unexpected disruptions, such as pandemics or natural disasters.

In conclusion, this article offers valuable lessons about the advantages of transparency, adaptability, and the importance of building trust in supply chain management. When considering near-shoring or glocalizing strategies, businesses should keep these lessons in mind and balance local production and transparency benefits with operational efficiency and market responsiveness. ☺☺