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WHAT BRAZILIAN BUYERS ASK BEFORE THEY BUY A TOWEL

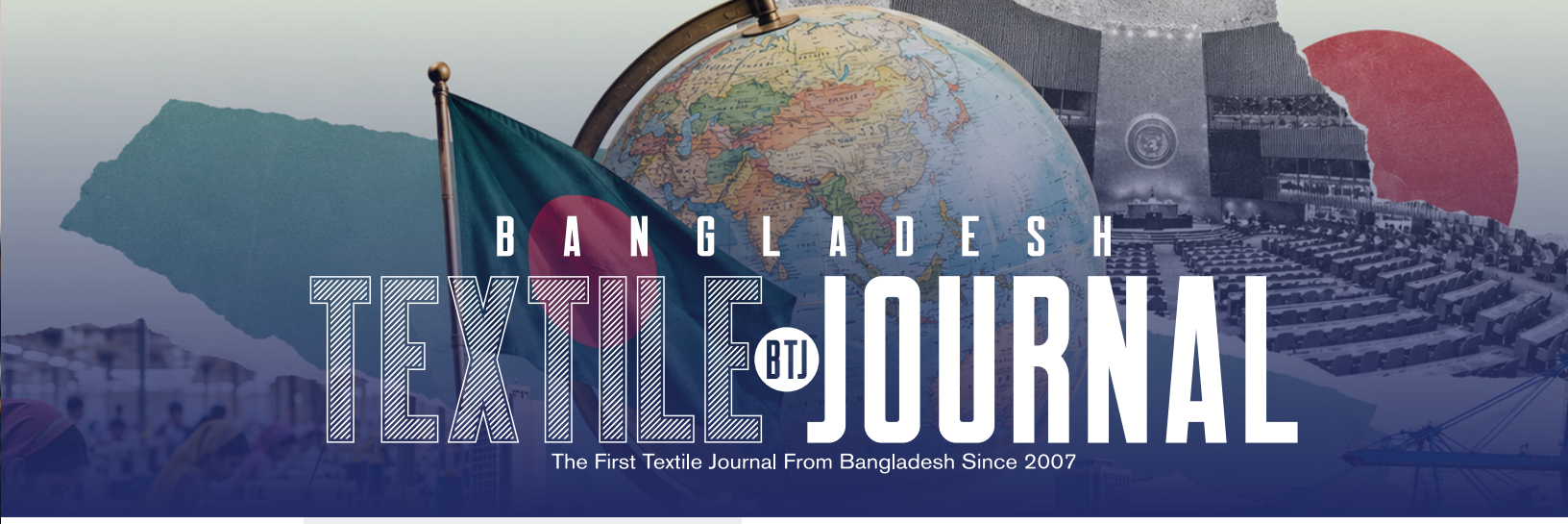
FIVE TECHNOLOGY FRONTIERS TO WATCH AT ITMA ASIA + CITME 2026

FROM COMPLIANCE BURDEN TO COMPETITIVE ADVANTAGE

HOW WOOL PRODUCTION CAN CONTRIBUTE TO NET ZERO AMBITIONS AND SUSTAINABLE RESOURCE MANAGEMENT

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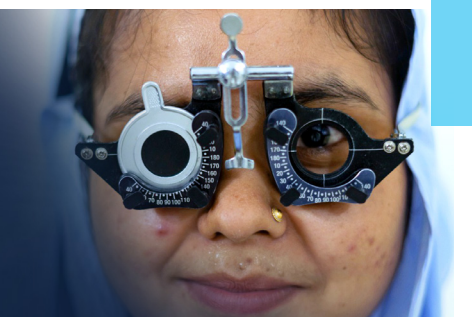
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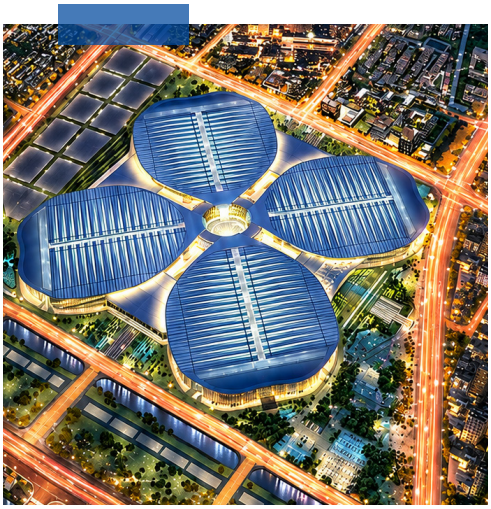
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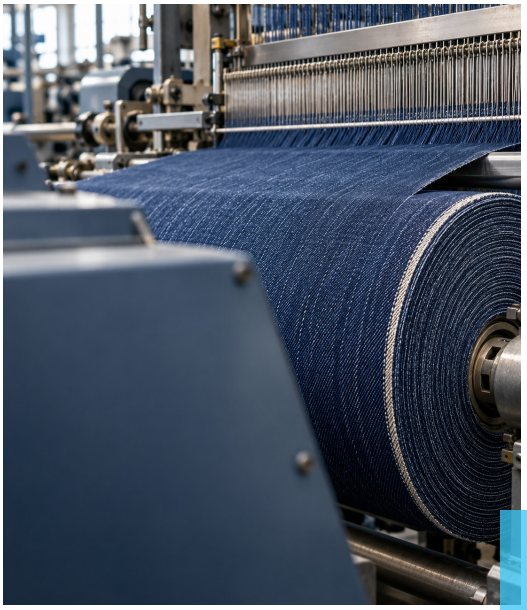
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WHY AI HAS BECOME IMPORTANT FOR TEXTILES

EDITORIAL

Building the next chapter of Bangladesh's textile industry

Bangladesh's textile and apparel industry is entering a decisive period of transformation. As the country prepares for a more competitive post-LDC-graduation era by 2029, the industry must look beyond production capacity and cost advantages. Productivity, innovation, sustainability, traceability and investment will increasingly determine its position in global markets.

This issue of Bangladesh Textile Journal explores these changing priorities through a collection of interviews, research, technical articles and industry insights. Our coverage examines green manufacturing and textile circularity, the development of traceable supply chains for the European market, and the growing importance of sustainable practices across the value chain. We also look at the opportunities and challenges surrounding Bangladesh's investment, trade and competitiveness after LDC graduation.

Technology is another central theme. From advances in textile processing to intelligent manufacturing, the industry must embrace solutions that improve efficiency, product quality and resource utilisation. The upcoming ITMA ASIA + CITME 2026 in Shanghai offers an important opportunity to explore these developments and understand how innovation can support the next phase of industrial growth.

However, transformation requires more than adopting new machinery or meeting compliance requirements. It calls for informed investment, stronger collaboration, reliable data and a long-term commitment to responsible production.

We hope this issue will encourage industry leaders, manufacturers, policymakers and technology providers to exchange ideas and take practical steps towards a more competitive, resilient and sustainable textile industry.

The next chapter of Bangladesh's textile industry must be built on innovation, responsibility and measurable progress.



Mohammad Abdullah Zaber
Editor, Bangladesh Textile Journal
Managing Director, Noman Group

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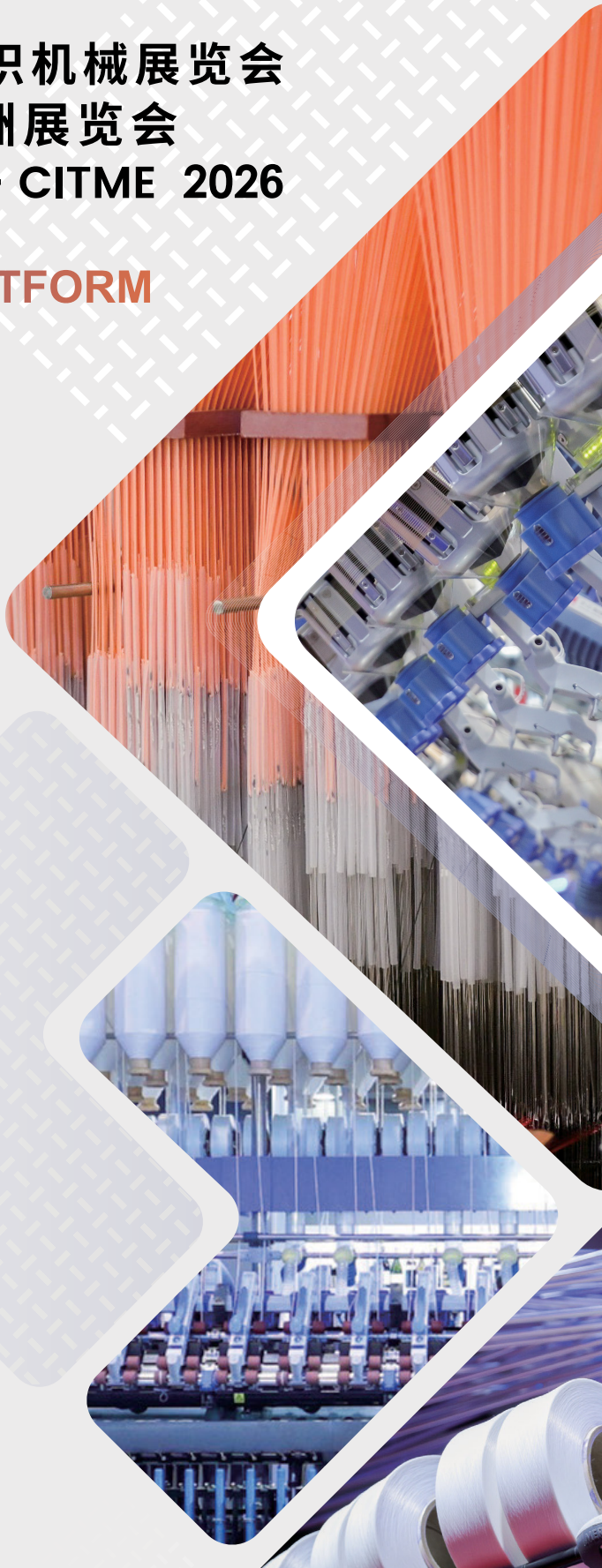
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CLEAR SIGHT, CLEAR GAINS:

WHY BANGLADESH'S GARMENT INDUSTRY CANNOT AFFORD TO OVERLOOK VISION CARE

Mohammad Abdul Qaium
Sustainability Manager



Executive Summary

One in three garment workers in Bangladesh cannot see clearly — and does not know it. Applied across an industry of roughly four million workers that generates approximately 11% of national GDP, this uncorrected vision gap represents one of the most under-recognised threats to productivity, safety, and worker wellbeing in the sector today. VisionSpring's Clear Vision Workplaces (CVW) programme offers a remedy that is inexpensive, evidence-backed, and ready to scale: a pair of glasses costing under USD 10 has been shown, in two independent randomised controlled trials, to lift worker productivity by between 5.7% and 21.7%. For an industry built on precision — needle threading, seam alignment, defect inspection — the case for action is no longer anecdotal. It is measured, replicable, and overdue for industry-wide adoption.

The Scale of an Invisible Problem

Refractive error is easy to overlook precisely because it does not announce itself. A worker who has never had her eyes tested does not know that her fatigue, her slowed pace, or her difficulty threading a needle stems from a correctable condition rather than a lack of skill. VisionSpring estimates that 30–37% of screened factory workers require corrective eyewear — a finding echoed at Masco Group, where the Associated Press reported that nearly a third of the roughly 5,000 workers screened left with a new pair of glasses. Ruma Aktar, a sewing machine operator at the factory, described the change in plain terms: threading a needle that once took her a long time now takes only moments.

The Evidence Behind the Intervention

The productivity case is not speculative. The PROSPER trial (Lancet Global Health, 2018) provided near glasses to 751 tea pickers in Assam and recorded a 21.7% productivity gain against a randomised control group. PROSPER II (British Journal of Ophthalmology, 2026), replicating the design inside Indian garment factories with 682 workers, found a 5.7% increase in hourly output — with every dollar invested returning approximately USD 3.37 within twelve weeks. Two rigorous, peer-reviewed trials, conducted years apart in different settings, point to the same conclusion: correcting vision is one of the highest-return interventions available to labour-intensive manufacturing.

A Dual Return: For Workers, For Employers

The value of CVW is best understood as a genuine win-win. For workers, corrected vision means fewer headaches and less fatigue, faster and more accurate stitch work, fewer safety incidents, and a realistic path to higher output-linked earnings. For employers, the same intervention translates into reduced absenteeism, lower defect and wastage rates, and improved morale on the factory floor. Following VisionSpring's structured methodology — preliminary factory-level discussion, formation of a multi-departmental Vision Champion team, technical on-site screening, and dispatch of custom-power eyewear — the programme is designed for operational integration rather than one-off charity. Its sustainment model, requiring at least twice-daily PA announcements for 60 days post-screening, ensures the intervention is not a single event but an embedded habit of eyewear use and care.

Beyond the Balance Sheet

Much of the value CVW creates will never appear in a compliance audit or a carbon inventory. An operator who finishes her shift without eye strain, reads her child's homework by evening, or qualifies for a promotion she once could not reach — these outcomes sit outside conventional ESG metrics but are precisely why supply chain sustainability work exists. After a decade spent building decarbonisation, traceability, and compliance programmes across this industry, few interventions offer this ratio of cost to human dignity.

The Case for Scale

Clear Vision Workplaces is not a pilot in need of validation — it is a proven model in need of adoption. Brands, factory groups, and compliance bodies operating in Bangladesh, India, and Vietnam have an opportunity to fold vision screening into existing worker welfare and productivity agendas at minimal cost and demonstrable return. The evidence is published, the unit economics are favourable, and the human impact is immediate. The remaining question is not whether the intervention works, but how quickly the industry chooses to act on it.

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– *Additional coverage: Associated Press, Washington Post, and Deutsche Welle field reporting from Masco Group, 2026.*

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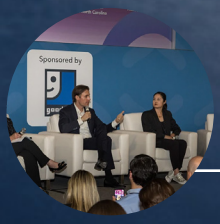
Carrefour enters India as Apparel Group opens first flagship store



Cone Denim reshapes global operations



Georg Stausberg appointed Rieter Group CEO, effective immediately



Textiles Recycling Expo USA opens speaker call for 2027 conference



Private US Cotton Warehouse to Open in Chattogram in November



Swedish Textile Machinery Innovation Brings Precision to Little Black Dress Production



Pirelli announces $1.2 billion expansion of Georgia Tyre Plant, plans major job growth



Spain overtakes Germany as Bangladesh's top EU apparel market

Carrefour enters India as Apparel Group opens first flagship store



Apparel Group has launched Carrefour's first flagship store in India at H&S Mall, Boulevard Walk, Greater Noida West, marking the French retailer's entry into one of the world's fastest-growing consumer markets.

Spanning more than 50,000 sq. ft., the store offers over 15,000 products, combining international brands with locally sourced fresh produce, groceries, bakery items, household essentials and personal-care products.

The launch brings together Carrefour's global retail expertise and Apparel Group's knowledge of the Indian market, with a focus on quality, value and convenience. The partnership also aims to strengthen local supplier networks and modernise retail and supply-chain operations.

Apparel Group plans to expand Carrefour across North India and eventually build a nationwide presence supported by an integrated omnichannel platform, modern logistics and technology.

The Greater Noida store marks the beginning of a broader expansion strategy as both companies seek to establish Carrefour as a major modern retail destination in India.

Cone Denim reshapes global operations



Cone Denim has announced a strategic transformation of its global manufacturing operations, including plans to exit denim production in China by the end of 2026.

The company said the decision follows a review of global market conditions, customer sourcing strategies, trade dynamics, cost pressures, supply-chain considerations and geopolitical factors.

As part of the restructuring, Cone Denim will strengthen its established Mexico manufacturing platform, which will become the company's primary production base for serving key international markets.

Cone Denim President Steve Maggard said the move is intended to strengthen the company's long-term competitiveness while maintaining its commitment to quality, innovation, reliability and customer service.

The company will work closely with customers, employees, suppliers and local stakeholders to manage the transition and support supply continuity. The restructuring is expected to create a more focused and resilient manufacturing platform for Cone Denim in the evolving global denim market.

Georg Stausberg appointed Rieter Group CEO, effective immediately

Georg Stausberg, chief executive of Barmag, has been appointed CEO of the Rieter Group with effect from November 4, 2026, following the withdrawal of designated CEO Daniel Lippuner over disagreements concerning his compensation package.

Rieter Holding Ltd. said its Board of Directors and Lippuner had failed to reach agreement after he raised additional demands, particularly regarding his bonus. As a result, he will not assume the position.



Stausberg brings more than 30 years of experience in the international textile machinery industry and has held various leadership positions at Barmag. Under his leadership as CEO, Barmag strengthened its position as the world's leading supplier in the man-made fibre sector.

Following Rieter's acquisition of Barmag in February 2026, Stausberg joined the Rieter Group's Executive Committee. The company highlighted his extensive industry expertise and international network as key strengths for leading the group.

Textiles Recycling Expo USA opens speaker call for 2027 conference



Textiles Recycling Expo USA has opened its call for speakers for the 2027 conference, scheduled for April 7–8 at the Charlotte Convention Center, North Carolina.

Following the success of its inaugural 2026 event, organizers are inviting industry experts, researchers, innovators and thought leaders to submit proposals for the second edition of the conference, focused on textile recycling and circularity.

Key topics will include extended producer responsibility (EPR), sorting technology, fiber-to-fiber recycling, collection infrastructure, reverse logistics, reuse, resale and repair. New areas for 2027 will also address traceability, brand accountability, circular business models and global textile trade flows.

Structural Partner Accelerating Circularity is supporting the development of the conference program to ensure it reflects major challenges and priorities facing the textile recycling sector.

The event will bring together brands, recyclers, manufacturers, technology providers, policymakers and researchers to discuss solutions shaping the future of textile circularity.

Primark expands recycled-fibre strategy

The agreement forms part of Primark's wider efforts to increase the use of recycled and more circular materials. The company said that 39% of its clothing units sold in its most recent financial year contained recycled fibres, compared with 32% in the previous year, and it has stated an ambition to remove conventional materials from its clothing by 2030.

The CIRC partnership is intended to provide another source of recycled material alongside Primark's existing work with recycled fibres and suppliers.

For CIRC, securing a major retail customer before its French facility reaches commercial production represents an important demand signal. Long-term purchasing commitments can help demonstrate market demand for recycled materials while the company develops the infrastructure required to process textile waste at industrial scale.

Private US Cotton Warehouse to Open in Chattogram in November

Bangladeshi textile mills will soon be able to purchase US cotton locally, as AmeriBangla Corporation is set to launch the country's first privately operated US cotton warehouse in Anwara, Chattogram, on 18 November.

The facility is expected to reduce cotton import lead times significantly, allowing mills to access US cotton from local stock instead of waiting nearly 90 days for individual shipments. Around 100 tonnes of cotton have already been shipped from the United States for the initial inventory.

AmeriBangla CEO Aswar Rahman said the warehouse will source cotton directly from US farmers and ginners, with the aim of offering competitive prices and reducing dependence on intermediaries. The company plans to expand inventory based on market demand.



Bangladesh imported about $346 million worth of US cotton in FY25, up from $278 million in FY24, according to Bangladesh Textile Mills Association (BTMA) data. Industry representatives expect the new facility to improve supply flexibility, particularly for spinning mills and smaller-capital businesses.

The initiative could also gain importance amid discussions over potential US trade benefits for garments made with American cotton. Industry bodies are awaiting further clarification on the implementation of related tariff concessions.

Swedish Textile Machinery Innovation Brings Precision to Little Black Dress Production

The timeless little black dress (LBD) may appear simple, but achieving its clean lines, precise fit and durable finish requires careful manufacturing. Swedish textile machinery specialist Svegea, a member of the Swedish Textile Machinery Association (TMAS), supports this process with automated technology for producing bias binding.



Popularised by Audrey Hepburn's iconic appearance in Breakfast at Tiffany's wearing a design by Givenchy, the little black dress has remained a fashion staple for generations. Its minimalist appearance makes construction quality particularly important, especially around necklines, armholes and other curved edges.

The automated process begins with Svegea's Tube Sewing Unit, which joins open-width fabric to form a continuous tube. The material is then processed by the company's Bias Cutter and Winder, which opens and rewinds it in preparation for precise slitting.

The equipment can produce narrow strips as small as 6 mm, as well as wider bindings for heavier fabrics and more structural applications. Automation helps manufacturers maintain consistent strip widths and cutting accuracy over extended production runs while reducing variations associated with manual preparation.

Such precision is particularly important when binding is applied to curved sections of garments. Uneven or poorly fitted edges can compromise the appearance and fit of an otherwise well-made product.

For minimalist designs such as the little black dress, where decorative elements do little to conceal construction flaws, accurate binding and clean finishing play a significant role in the final result.

Through its automated cutting and fabric-handling technology, Svegea demonstrates how specialised textile machinery contributes to the precision, consistency and durability required in modern garment manufacturing.

Pirelli announces $1.2 billion expansion of Georgia Tyre Plant, plans major job growth



Italian tyre manufacturer Pirelli plans to invest $1.2 billion to expand its manufacturing facility in Rome, Georgia, increasing production capacity and introducing advanced robotics and next-generation technologies.

The expansion is expected to create approximately five times as many positions as Pirelli currently employs across its Georgia operations. The company presently has 234 employees in the state across manufacturing, innovation and headquarters functions.

Claudio Zanardo, CEO of Pirelli North America, said the investment would strengthen the company's US manufacturing capabilities and support its local-for-local strategy. The expanded facility will incorporate advanced robotics and technologies such as Cyber Tyre, Pirelli's connected tyre technology, to meet growing market demand.

The project will proceed in two phases. The first will introduce the latest-generation robotics equipment, followed by the addition of a traditional manufacturing

process that will require further recruitment. Pirelli expects most hiring to begin in 2029, with the expanded facility scheduled to reach full operations in 2033.

Pirelli established its US headquarters and manufacturing operations in Rome in 2002. The latest investment will further strengthen its presence in North America and reinforce Georgia's role in the automotive supply chain.

The expansion is expected to bring additional manufacturing capabilities and employment opportunities to northwest Georgia while supporting Pirelli's long-term growth in the US market.

Spain overtakes Germany as Bangladesh's top EU apparel market



Spain has overtaken Germany as Bangladesh's largest readymade garment (RMG) export market in the European Union, with shipments rising 13.73% year-on-year to $1.148 billion in July–September of FY2026–27, according to Export Promotion Bureau (EPB).

Exports to Germany, previously the leading EU market, slipped 0.15% to $1.123 billion during the quarter. Meanwhile, Bangladesh's total RMG exports to the EU increased 3.33% year-on-year to $4.904 billion.

Among other major markets, exports to the Netherlands rose 9.02% and Poland increased 5.77%, while shipments to France declined 4.91%. The figures highlight Spain's growing importance in Bangladesh's European apparel trade.

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WHAT BRAZILIAN BUYERS ASK
BEFORE THEY BUY A TOWEL

Ana Carolina Nielson
Founder of Casa da Toalha, Brazil

For most of the last century a towel was sold by touch. The buyer walked into a shop, pressed the pile between two fingers and decided. Online that gesture does not exist. The shopper has a photograph, a price and a few lines of text, and has to imagine what the cloth will feel like after twenty washes.

We have been selling towels online in Brazil since August 2009, from Brusque, in Santa Catarina, one of the country textile regions. In August 2026 we published our first annual study of the Brazilian towel market, built on 21,546 real orders placed between January and July 2026, 46 months of transaction seasonality, twelve months of search data and two checkout surveys. What we found changed the way we write a product page, and we hope some of it may be useful to manufacturers and exporters as well.

The First Surprise: Price is not the Objection

We asked 502 shoppers what worried them most before finishing the purchase. Quality and softness came first, with 22.3 per cent. Will it really be soft. Will it be what I expected.

High price was the main concern of 2.2 per cent.

Shipping cost worried 16.1 per cent, and 17.3 per cent said their worry was simply that they had never bought from us before.

Buyer concern	Share
No doubt at all	23.7%
Quality and softness	22.3%
First purchase at the shop	17.3%
Shipping cost	16.1%
High price	2.2%

Table 01: What worried buyers most before finishing the purchase

– Checkout survey | 502 answers | 2026
Source: Annual Study of the Brazilian Towel Market 2026, Casa da Toalha.

For anyone selling home textiles, that order of concerns is worth a second look. Roughly ten times more people hesitated over quality than over price. A discount is always welcome, but it does not seem to answer the question they are actually asking.

The Second Surprise: The Consumer Learned The Vocabulary

Grammage used to be a mill word. It lived on spec sheets and in sourcing meetings.

In twelve months of Google Search Console data, searches using technical terms such as bath towel 500 GSM and what is the best GSM for a bath towel produced more than 20,000 impressions for a single shop. A second cluster, around hotel towels, produced roughly 15,000. The consumer is borrowing the hospitality industry as a quality benchmark, and borrowing our vocabulary to do it.

Search query group	Impressions
Generic term for bath towel	585,252
Queries built around grammage	About 20,000
Queries built around hotel towels	About 15,000
Queries built around brand and reputation	About 18,000

Table 02: Search impressions reaching a single Brazilian shop

– August 2025 to July 2026, Source: Annual Study of the Brazilian Towel Market 2026, Casa da Toalha.

We think that is good news for manufacturers. Technical accuracy became a selling argument rather than a complication.

Grammage Alone Can Still Mislead

There is one detail worth mentioning, because it affects the way buyers compare quotes.

Grammage is weight per square metre. It says nothing about how many square metres you are buying.

A bath towel of 78 by 145 cm at 500 g/m2 carries roughly 565 grams of cotton. A towel of 70 by 135 cm at the same 500 g/m2 carries roughly 472 grams. The same figure on the label, and almost twenty per cent difference in cloth.

Bath towel size	Grammage	Cotton weight
78 × 145 cm	500 g/m²	About 565 grams
70 × 135 cm	500 g/m²	About 472 grams

Table 03: Grammage against actual cloth Calculated cotton weight at the same stated grammage Same figure on the label, close to 20 per cent less cloth.

– Source: Annual Study of the Brazilian Towel Market 2026, Casa da Toalha.

Any buyer can redo that calculation in ten seconds, and it is very easy to leave it off a product page. We left it off for years. Once we began publishing grammage together with dimensions, the comparison became a fairer one.

Towels Are Bought As Sets, Not As Replacements

Of every 100 units of bath revenue, 89.70 came from five-piece sets and kits. Single towels accounted for 9.70. The average order was around 332 Brazilian reais.

Category	Revenue share
Bath	86.6%
Bed	7.1%
Kitchen	2.9%

Table 04: Revenue by category

– 21,546 orders | January to July 2026
Source: Annual Study of the Brazilian Towel Market 2026, Casa da Toalha.

Format	Bath revenue share
Five piece sets and kits	89.7%
Single towels	9.7%

Table 05: Bath revenue by format

– 21,546 orders | January to July 2026
Average order value: 332.13 Brazilian reais
Source: Annual Study of the Brazilian Towel Market 2026, Casa da Toalha.

Brazilians tend not to replace one worn towel. They renew the whole bathroom at once. That has gentle consequences for packaging, for colour coordination across pieces and for the way a range is built. A beautiful single towel can simply be a harder sell here than a coordinated set, because of the way the customer shops.

November Is The Month

Across the whole measured series, from October 2022 to July 2026, November was the peak in every single year: 3,251 transactions in November 2022, 3,968 in 2023, 5,736 in 2024 and 4,271 in 2025. In November 2024 sales nearly doubled against a typical month.

Period	Transactions
November 2022	3,251
November 2023	3,968
November 2024	5,736
November 2025	4,271

Table 06: November transactions

– The peak month in every measured year
Source: Annual Study of the Brazilian Towel Market 2026, Casa da Toalha.



Period	Transactions	Change
2023	20,703	—
2024	35,195	Up 70.0% on 2023
2025	30,758	Down 12.6% on 2024
January to July 2026	18,072	Up 6.3% on the same period of 2025

Table 07: Transactions per year

– Annual totals and partial year comparison
Source: Annual Study of the Brazilian Towel Market 2026, Casa da Toalha.

The second wave is the southern hemisphere winter, June to August. The quietest stretch is December to February. Brazilians renew towels on Black Friday and in the cold, not at Christmas.

Reputation Closes the Sale

Among buyers who told us what gave them the confidence to pay, 12.4 per cent named a consumer reputation platform and 7.1 per cent named other customers' reviews and photos. Together, roughly one in five.

Confidence factor	Share
Perceived quality	24.8%
Already knew the shop	20.4%
Price or coupon	15.5%
Consumer reputation platform	12.4%
Other customers' reviews and photographs	7.1%

Table 08: What gave buyers the confidence to pay

– Checkout survey | 226 answers over one week | 2026
Source: Annual Study of the Brazilian Towel Market 2026, Casa da Toalha.

For an exporter this may translate into something simple. The review layer of the retailer becomes part of your product. If the retailer cannot show it, the cloth is judged on a photograph alone.

What We Changed, And What We Still Cannot Answer

The study led us to rewrite product pages around composition, grammage, yarn type, dimensions and finishing, and to stop leading with promotional pricing.

It also showed us where we had gone wrong ourselves. For years we registered each colour as a separate product instead of treating colour as a structured attribute. When we sat down to analyse the history, roughly three quarters of order lines had no usable colour value. We cannot publish a colour preference breakdown this year. The information existed inside the business without being structured in a way a machine could read, and we suspect we are not alone in that.

We publish the limitations openly. The base reflects the customers of one shop, not a probabilistic sample of Brazil. The 226-response survey covers one week and is treated as a signal rather than a conclusion.

Region	Order share
Sao Paulo	35.2%
Rio de Janeiro	13.8%
Minas Gerais	11.4%
The three southern states together	14.7%
The northeast	12.5%

Table 09: Orders by region

– 21,546 orders | All 27 Brazilian federal units represented
Source: Annual Study of the Brazilian Towel Market 2026, Casa da Toalha.

Why We made it Open

The aggregated table behind every figure in the study is published as a CSV under a CC BY 4.0 licence. Any journal, mill or student can download it, check our arithmetic and correct us if we got something wrong.

Product discovery is moving from lists of links towards direct answers written by digital assistants. Those systems can only repeat what is written clearly, structured and verifiable. The technical knowledge that used to live with the sales staff on the shop floor now has to survive the journey to the product page, to the data feed, and finally to the answer given to a shopper who will never touch the towel before paying for it.

That is the challenge we are working on here in Brusque, and we would be glad to hear how colleagues in Bangladesh are seeing it.

About Casa da Toalha

Casa da Toalha is a Brazilian online retailer specialising in towels and bed, table and bath linens. Founded in August 2009 by the entrepreneur Ana Carolina Nielson, the company is based in Brusque, Santa Catarina, and holds a trademark registered with the INPI, Brazil national institute of industrial property.

Author Bio



Ana Carolina Nielson is the founder of Casa da Toalha, a Brazilian online retailer of towels and bed, table and bath linens. She started the company in August 2009 in Brusque, Santa Catarina, one of the textile regions of Brazil. Since 2026 she has published an annual study of the Brazilian towel market, with open data.



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BANGLADESH TEXTILE NEWS



Urmi Group Honoured with M&S Plan a Sustainability Award



BGMEA seeks expanded World Bank support for sustainable water management in RMG



BTMA delegation meets the President to seek policy support for primary textile industry and export competitiveness



Bangladesh Intensifies Global Efforts to Secure LDC Graduation Delay



DCCI delegation heads to Malaysia to strengthen bilateral trade and investment



11 Bangladeshi apparel firms target Saudi and Middle Eastern buyers



Bangladesh records seven national records at 18th Coco National Summer Athletics

Urmi Group Honoured with M&S Plan a Sustainability Award



Bangladesh-based apparel manufacturer and exporter Urmi Group has received the Plan A Sustainability Award at the Marks & Spencer (M&S) Supplier Summit, recognising its sustainability performance within the retailer's global supply chain.

The award highlights Urmi Group's environmental and sustainability initiatives and recognises the company as a leading performer in environmental sustainability among M&S suppliers globally.

Urmi Group Managing Director Asif Ashraf said the recognition reinforces the company's commitment to creating positive environmental and social impact in partnership with M&S.

The award further underscores the growing focus on sustainability and responsible manufacturing across Bangladesh's apparel industry, as global brands increasingly strengthen environmental and social standards throughout their supply chains.

BGMEA seeks expanded World Bank support for sustainable water management in RMG

Bangladesh Garment Manufacturers and Exporters Association (BGMEA) has urged the World Bank to significantly increase funding and expand the coverage of its sustainable water management programme to support the green transformation of Bangladesh's ready-made garment industry.

The call came during a high-level meeting between BGMEA President Mahmud Hasan Khan and a World Bank delegation led by Mara K. Warwick, Regional Director for Sustainable Development for the South Asia Region, at the BGMEA Complex in Uttara, Dhaka, on 7 October.

The meeting reviewed progress under the Dhaka Water Security and Resilience Programme (D-Water) and its $5 million Viability Gap Funding (VGF) pilot initiative, aimed at supporting sustainable water management in the garment sector.

BGMEA had initially submitted a list of 31 factories for participation, but the World Bank selected eight factories for the programme's initial rollout. Citing strong interest from garment manufacturers, BGMEA called for both the funding envelope and the number of participating factories to be increased.

Mahmud Hasan Khan stressed that efficient water



management is increasingly linked to the international competitiveness of Bangladesh's apparel industry. According to BGMEA, international buyers, particularly European brands, are placing greater emphasis on data related to water consumption, wastewater treatment and water recycling throughout the apparel production process.

"Adopting water-efficient modern technology is indispensable not only to protect Dhaka's rivers and groundwater levels, but also to retain our competitive edge in global export markets," Mahmud Hasan said.

BGMEA leaders also highlighted the high upfront investment required for water-efficient technologies and environmental infrastructure. They noted that factory owners are facing financial constraints amid global economic uncertainty and pressure on apparel prices, making it difficult to secure financing for green projects.

The association therefore called on international development partners, including the World Bank, to consider grants, long-term concessional loans and zero-interest financing to help manufacturers undertake water and environmental improvement projects.

The meeting also discussed challenges faced by small and medium-sized enterprises (SMEs), particularly factories that lack sufficient space or access to suitable drainage infrastructure for individual Effluent Treatment Plants (ETPs).

BTMA delegation meets the President to seek policy support for primary textile industry and export competitiveness



A 23-member delegation of the Bangladesh Textile Mills Association (BTMA), led by its President, Shawkat Aziz Russell, paid a courtesy call on President Mirza Fakhrul Islam Alamgir at Bangabhaban today, 21st September.

During the meeting, the BTMA President outlined the current state, prospects and challenges facing Bangladesh's primary textile and spinning industries. He noted that gas supply conditions, particularly for the textile and spinning sectors, have improved significantly in recent times, contributing positively to industrial production.

On behalf of BTMA, he expressed sincere appreciation for the government's initiatives to improve gas supplies and safeguard industrial production, employment and export capacity. He also called for the continuation of these improvements.

The meeting included detailed discussions on the prevailing conditions of the primary textile and export-oriented ready-made garment sectors, existing challenges and the policy support required for sustainable industrial development.

To strengthen the national economy, employment, foreign-exchange savings and export competitiveness following Bangladesh's graduation from the Least Developed Country (LDC) category, BTMA submitted written proposals to the President seeking policy support in the following areas:

Key Proposals Presented by BTMA

1. Maintaining restrictions on bonded imports of locally producible cotton yarn: BTMA requested the continuation of the decision under National Board of Revenue Order No. 51/2026/Customs/519, dated 7 September 2026, to withdraw bonded facilities for imports of 10–30-count cotton yarn under HS Headings 5205, 5206 and 5207, while allowing genuine exporters to import yarn against bank guarantees. According to BTMA, retaining the decision could reduce imports of locally producible cotton yarn and potentially save foreign exchange equivalent to approximately Tk 30,000 crore worth of yarn imported during FY2024–25.

2. Restoring the local value-addition requirement: The association proposed reinstating the 30% local value-addition requirement for bank-guarantee-based raw-material imports by non-bonded industries. It also recommended ensuring a minimum 40% local value addition across all exports to strengthen export competitiveness following LDC graduation.

3. Introducing an integrated Textile & Apparel Competitiveness Policy: BTMA called for a comprehensive policy framework aligned with competing countries, covering tariffs, taxation, energy, financing, export incentives and other relevant policy areas in an integrated manner.

4. Ensuring uninterrupted gas supplies: The association requested that the improved gas supply situation in the industrial sector be maintained, with adequate pressure and uninterrupted delivery.

5. Strengthening oversight of bonded facilities: BTMA proposed enhanced monitoring, verification and legal enforcement mechanisms to prevent the misuse of bonded facilities.

President Mirza Fakhrul Islam Alamgir listened attentively to the issues raised by BTMA representatives and acknowledged the importance of the challenges confronting the country's primary textile industry. He assured the delegation that the proposals would receive due consideration and that the relevant ministries and government departments would take the necessary measures.



The President's Military Secretary, Major General A.S.M. Bahauddin, SUP, SPP, ndc, afwc, psc, the Secretary of the Public Division, A.J.M. Salahuddin Nagari, and the Press Secretary were present during the meeting.

Representing BTMA were President Shawkat Aziz Russell, former President Abdul Hai Sarker, Vice President Md. Shamim Islam, Vice President Shafiqul Islam Sarker, along with former vice presidents, current and former directors, and other association leaders, comprising a total of 23 delegates.

Bangladesh Intensifies Global Efforts to Secure LDC Graduation Delay



Bangladesh has stepped up diplomatic efforts to secure international support for a three-year deferment of its graduation from the United Nations' Least Developed Country (LDC) category, as the 81st session of the UN General Assembly gets underway in New York.

A decision on Bangladesh's request, along with Nepal's similar proposal, is expected during the General Assembly session. The high-level segment of the UNGA is scheduled to take place from September 18 to 28.

Bangladesh's request has already received a recommendation from the UN Committee for Development Policy (UNCDP), following which the UN Economic and Social Council (ECOSOC) agreed to place the proposal before the General Assembly.

Commerce Secretary Md Ataur Rahman Khan said Bangladesh has been actively seeking support from various countries and international trade blocs, including the European Union (EU), for a three-year extension. He recently visited New Zealand and Australia as part of the diplomatic campaign.

Bangladesh has also sought backing from the G77, a group representing 135 developing countries. According to the commerce secretary, G77 members have committed to supporting Bangladesh's proposal at the UN General Assembly.

The government is also engaging with the EU and African LDCs, while Nepal has expressed support for Bangladesh's efforts. Senior government officials and Bangladesh's high commissioners abroad have reportedly been working to build support among governments and international groups.

The proposal could be approved without a formal vote if member states reach consensus. If consensus is not achieved, however, the matter will be put to a vote,

with Bangladesh requiring a two-thirds majority for approval.

Commerce Secretary Ataur Rahman Khan expressed optimism that Bangladesh would be able to secure the necessary support, noting that the government has been lobbying international partners for several months.

Bangladesh's LDC graduation is currently scheduled for 24 November 2029. The government has argued that additional time is necessary to strengthen the country's preparedness and ensure a smoother transition following graduation.

The business community has also strongly supported the deferment request. Business leaders have cited high borrowing costs, economic uncertainty and the impact of political changes since 2024 as factors that have created additional pressure on businesses.

A UN assessment released earlier this year identified several challenges to Bangladesh's readiness, despite the country meeting all three formal criteria for LDC graduation. The assessment highlighted risks related to the potential loss of trade preferences, fiscal and financial vulnerabilities, institutional coordination and continued macroeconomic pressures.

According to a recent assessment by UN Trade and Development, Bangladesh could face a loss of more than $17.5 billion in annual exports following graduation if adequate measures are not taken to manage the transition and preserve market access.

Economists and business leaders have therefore urged the government to intensify its engagement with key international partners, particularly the EU, UK, G77 members and African LDCs.

Mustafizur Rahman, distinguished fellow at the Centre for Policy Dialogue (CPD), said Bangladesh needs to secure the deferment during the current UNGA session because its graduation is scheduled for November.

Mohammad Abdur Razzaque, chairman of Research and Policy Integration for Development (RAPID), also stressed the importance of building consensus among UN member states. He identified the EU, UK, Scandinavian countries, G77 members and African LDCs as particularly important partners in the effort.

Meanwhile, the national committee on LDC graduation has held a final preparatory meeting on the deferment proposal at the Finance Ministry. The meeting was chaired by Finance Minister Amir Khosru Mahmud Chowdhury and attended by ministers, advisers and senior officials from various ministries.

The outcome of Bangladesh's diplomatic efforts is expected to become clearer during the high-level proceedings of the 81st UN General Assembly, with the deferment decision potentially emerging as one of the country's most significant economic and trade policy developments of the year.

DCCI delegation heads to Malaysia to strengthen bilateral trade and investment



A 39-member business delegation of the Dhaka Chamber of Commerce & Industry (DCCI), led by President Taskeen Ahmed, will visit Kuala Lumpur from 22–25 September 2026 to expand trade, business cooperation and investment between Bangladesh and Malaysia.

The delegation will participate in business-to-business meetings with the Klang Chinese Chamber of Commerce and Industry, the Federation of Malaysian Manufacturers and the National Chamber of Commerce and Industry of Malaysia. Bangladeshi businesses will also attend the Malaysia International Halal Showcase (MIHAS) to explore global halal-market opportunities.

DCCI leaders are scheduled to meet Malaysia's Minister of Tourism, Arts and Culture Dato Sri Tiong King Sing and Deputy Minister of Finance Liew Chin Tong.

Bilateral trade between Bangladesh and Malaysia reached approximately US$2.57 billion in FY2024–25, with Bangladesh exporting US$282 million and importing US$2.293 billion. Malaysian investment in Bangladesh stands at US$755.48 million, covering sectors including telecommunications, power, chemicals, pharmaceuticals, construction and textiles.

Bangladesh High Commission in Malaysia is supporting the delegation throughout its visit, which is scheduled to conclude on 25 September.

11 Bangladeshi apparel firms target Saudi and Middle Eastern buyers



Eleven Bangladeshi apparel companies are showcasing their products at the Saudi Arabia International Fashion and Textiles Exhibition (SAUDI FASHIONTEX) in Jeddah, aiming to expand business opportunities in Saudi Arabia and other Middle Eastern markets.

A dedicated Bangladesh Pavilion has been established at the Jeddah International Exhibition and Convention Centre with financial support from the Export Promotion Bureau (EPB), along with assistance from the Ministry of Commerce and the Bangladesh Consulate General in Jeddah.

The four-day exhibition was inaugurated on 24 September by Jeddah Chamber of Commerce Vice Chairman Imad Mohammad Al Aboud. The Bangladesh Pavilion was subsequently inaugurated by Bangladesh Consul General Shakhawat Hossain and Osama Kouakandi, a member of the Saudi Federation of Chambers.

The participating companies are Zakaria Knitwear, Aleya Apparels, MSAH-Q Apparels, Modest Attire by Jahan, Eton Fashions, Swapnil House, Bonum Garments, Bell Bottom, Marker, Saoda Fashion and Al Noor Garments.

According to organiser Pyramids Group, the exhibition features more than 550 booths, with around 10,000 trade visitors and buyers from over 25 countries expected to attend.

The exhibition will continue until 27 September, providing Bangladeshi companies an opportunity to develop new buyer connections and strengthen their presence in the Middle Eastern market.

Bangladesh records seven national records at 18th Coco National Summer Athletics



– *Hon'ble President of the Bangladesh Athletics Federation Mohammad Abdullah Zaber joins distinguished guests, including the Hon'ble President of the People's Republic of Bangladesh, Mirza Fakhrul Islam Alamgir, and the State Minister for Sports, Mr. Aminul Haque at the inaugural ceremony of the 18th Coco National Summer Athletics Competition 2026 at the National Stadium in Dhaka.*

Athletes set two new national records on the second day of the 18th Coco National Summer Athletics Competition on Saturday, bringing the total number of records to seven over the first two days at the Dhaka National Stadium.

Bangladesh Navy's Rinki Biswas set a new national record in the women's 5,000 metres, winning gold in 18 minutes 8.50 seconds. She broke her own previous record of 18:20.00, set in the same event in 2025.

Another national record came in the women's 3,000 metres, where Bangladesh Navy's Priya Akter won gold in 10 minutes 24.38 seconds. The previous record of 10:27.60 was set by her teammate Rinki Biswas in 2025.

Several other notable performances marked the second day. In the men's 110-metre hurdles, the gold medallist clocked 14.30 seconds, while BKSP's Tasmia Hossain won the women's 100-metre hurdles in 14.83 seconds.

Bangladesh Navy's Mahfuzur Rahman secured gold in the men's high jump with a leap of 2.10 metres. Bangladesh Army's Lusad Islam won the men's 400 metres in 47.59 seconds, while fellow Army athlete Barsha Khatun took gold in the women's 400 metres in 56.20 seconds.

Water Resources Minister and Member of Parliament Md Shahiduddin Chowdhury Anee attended the afternoon prize-giving ceremony as chief guest and presented awards to the winners. Sultan Salahuddin Tuku, State Minister for Fisheries and Livestock, attended as special guest.

Also present were Bangladesh Athletics Federation President Mohammad Abdullah Zaber, General Secretary Advocate Ali Imam Tapan, and Joint Secretaries Md Manzur Morshed and Mahbubul Alam Tuku.

Athletes established five national records on Friday, the opening day of the competition.

Bangladesh Army leads medal standings

After 30 events over two days, Bangladesh Army leads the medal table with 17 gold, 12 silver and 17 bronze medals, for a total of 46 medals. Bangladesh Navy ranks second with 12 gold, 16 silver and six bronze medals, totalling 34. BKSP stands third with one gold and one silver medal.



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KARL MAYER at the Weaving Hall of ITMA ASIA 2026: High-Performance Warp Preparation for High-Quality Fabrics Made from Staple Fibers



At ITMA ASIA 2026, KARL MAYER will demonstrate its expertise in processing staple fibers during warp preparation and will return to where this technology belongs: the Weaving Hall, at Booth 3/A24. The focus here will be on the latest-generation WARPDIRECT direct warping machine, featuring various yarn tensioners, as well as the sophisticated HSB Size Box – the centerpiece of the innovative PROSIZE sizing machine. Both technologies are aimed specifically at manufacturers of high-quality goods in the commodity sector.

> *Our machines produce warp beams of the highest quality with high process efficiency. This offers particular advantages to textile manufacturers who are focused on generating real added value in a highly competitive market*
>
> **-Enzo Paoli**
> **President of the Warp Preparation Business Unit at KARL MAYER.**

WARPDIRECT: With the Highest Speed to Precision Warp Beams

Since its launch at the end of last year, the WARPDIRECT 2.0 has already been successfully deployed worldwide. Its performance is particularly valued in India, but also in China and Europe. Its strengths include identical warping lengths for all warp beams and high production output. In practice, warping speeds of up to 1,200 m/min are achieved.

In addition, the current machine version stands out thanks to an upgrade to the press roll system. The change from hydraulic to electric operation reduces maintenance requirements while ensuring precise warping quality. In combination with an optimal yarn depositing device, this results in completely cylindrical beams with precise yarn arrangement.

Additional features enhance ease of use and process reliability, including:

- Smart-Riet for automatic reed adjustment to the warping parameters
- Yarn- and lap-protecting kick-back function
- Automatic uncrossing function for re-establishment of the thread arrangement immediately after start-up



Four Yarn Tensioners, Many Possibilities

KARL MAYER demonstrates just how flexibly the WARPDIRECT can be adapted to different yarns and applications by showcasing various yarn tensioning systems on a parallel creel. The following will be presented:

The yarn tensioner OPTOGUARD with optical yarn monitoring system as the ideal solution for highly efficient warping of staple fiber yarns from the V-creel

The electronic tension system YTC 2000 with yarn tension control as standard in the denim sector, are now also suitable for other applications following an upgrade

The universal double disc-type yarn tensioner ISOTENS suitable for a wide range of materials, from filament yarn to silk, featuring a new yarn break shut-off mechanism

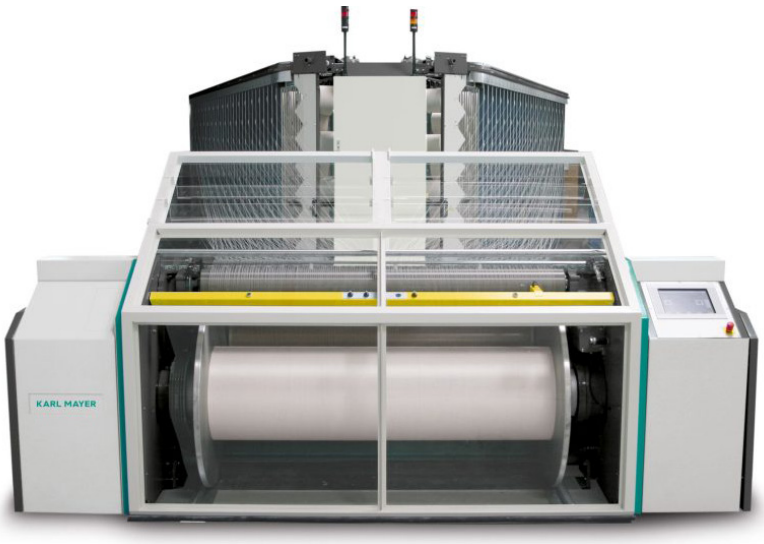
The disc-type yarn tensioner MEGATENS for coarse and technical yarns, also featuring a new yarn break shut-off mechanism

HSB: Less Size Add-On, High Performance

With the HSB Sizing Box, KARL MAYER presents another highlight for high-quality and cost-effective warp preparation. Like all Size-Box variants of the PROSIZE series, the HSB achieves a cover factor of up to 100% thanks to its intelligent process concept, while also offering a high filling ratio, bonded yarn guidance, and reduced size add-on consumption. Savings of up to 10% can reduce costs and environmental impact during both sizing and subsequent desizing.



Additional benefits include low maintenance requirements, easy access to core components, and a maximum sizing speed of 160 m/min. Speeds of up to 200 m/min are available as an option.



Thinking Beyond Weaving: WovenLike WARP KNITS

Another eye-catching feature of the presentation shows that a visit to the KARL MAYER booth 3/A24 doesn't have to end with traditional weaving: a trendy collection of WovenLike WARP KNITS. These exclusively curated fabrics combine the look and feel of woven fabrics with the characteristic advantages of warp knitted textiles, including, in particular, highly efficient production, easy care, wrinkle resistance, and exceptional comfort.

With this, KARL MAYER invites weaving customers in particular to think beyond familiar textile structures and technologies and discover new product possibilities.

Bangladesh Textile Journal
ARTICLE



BANGLADESH'S RECYCLING OPPORTUNITY HAS A COLOR PROBLEM

Jennifer Thompson
CEO & Co-Founder, COLOURizd LLC

Every year, by BGMEA's estimate, Bangladesh's garment factories produce around 400,000 tonnes of pre-consumer cutting waste, known locally as jhut. Only about five percent of it is recycled locally. The rest is exported, downcycled into stuffing, or burned.

And one detail in the pricing stopped me. Sorted white jhut has been valued at around $600 a tonne. Color-unsorted jhut, around $235. It is the same cotton. The difference is color.

So color is already setting the price of Bangladesh's waste. I want to make the case that it also sits at the center of a bigger question: whether that waste can become yarn that buyers actually want.

Why recycled yarn hits a ceiling

I have spent more than 35 years in textiles, starting as a mill intern and working inside many of the major US mills. I understand the instinct to treat recycled fiber as a sourcing problem. But on the mill floor, it is a performance problem.

Mechanical recycling shortens staple length. At 20% recycled content, the virgin fiber carries the yarn. Push toward 30% to 50%, and hairiness goes up, pilling goes up, and somewhere in that range the yarn simply stops behaving.

The industry has workarounds, and each one costs something. Blending in recycled polyester adds strength, but it creates a mixed-fiber garment that is much harder to recycle at end of life. Adding twist adds strength too, but over-twisted yarn is stiff and harsh, which is a real limitation for knitwear worn against the skin, the heart of Bangladesh's business. Sorting by color avoids dyeing altogether, but it narrows the palette and leaves a mountain of mixed-color waste selling at the lower price.

Then we dye it

Here is the part I think the industry underestimates. Mechanically recycled fiber arrives at the dyehouse already weakened. Conventional dyeing then adds heat, tension, and chemistry. Post-consumer fiber often needs bleaching first, which is another round of chemical stress on fiber with no margin left.

And then there is the water. Conventional dyeing typically uses 50 to 110 liters per kilogram of yarn, and every one of those liters has to be sourced, heated, treated, and discharged. Every mill owner in Bangladesh knows exactly what that costs, and buyers are asking harder questions about it every season.

So in the conventional process, color lands firmly on the wrong side of the ledger. It weakens the yarn, and it adds cost and environmental load at the same time.

A different way to achieve color

At COLOURizd, we don't dye. We color yarn. Our QuantumCOLOUR™ system injects visible pigment into the yarn bundle and binds it to the fiber surfaces. It does not depend on a chemical reaction between dye and fiber, so there are no dye sites to clear and no bleaching step required.

The process uses about one liter of water per kilogram of yarn, as a process medium. That water stays with the yarn and evaporates in drying, so there is zero wastewater discharge. An ISO 14067:2018 assessment by Peterson Projects & Solutions found up to 73% lower CO_2 emissions than conventional dyeing.

What surprised us

When we ran QuantumCOLOUR™ on mechanically recycled cotton yarn, we were watching strength



closely. If it behaved like conventional dyeing, we would have consistent color and a weaker yarn. That would not have been good enough.

That is not what happened. Tenacity increased at every recycled content level we tested. At 50% recycled content, the gain was more than 20%.

The reason makes sense once you see it. The binder changes how the fibers interact inside the yarn bundle. Short fibers that would normally slide past each other under load hold together a little better, and yarns with more short fibers show the bigger gains. We are continuing to verify these results across more yarn types, but the direction has been consistent.

What this means for a Bangladeshi mill

From a mill owner's point of view, I see four things.

First, recycled content can go up without leaning on polyester or extra twist, which protects both hand feel and end-of-life recyclability.

Second, color becomes a step that can add value to recycled yarn instead of taking it away.

Third, water and effluent largely drop out of the coloration step, which matters for cost, for compliance, and for the conversations buyers are already having.

Fourth, the demand is coming. Textile EPR legislation in Europe and California is creating obligatory demand for usable recycled fiber, and the brands that buy from Bangladesh will need suppliers who can deliver it at scale, in color, and at quality.

Bangladesh already has the fiber. It has the spinning capacity and the know-how. So the question I would put to the industry is this: if color is where recycled yarn loses its value, could it also be where Bangladesh gets that value back?

Working together in Bangladesh

COLOURizd has recently appointed RHCORP LTD. as our representative in Bangladesh, so mills and brands here now have a local partner for conversations about trials and installation.

We believe that changing how color is achieved changes everything. Bangladesh may be the place that proves it.

About COLOURizd

COLOURizd LLC is a yarn coloration technology company based in North Carolina, USA, with R&D in Hong Kong. Its QuantumCOLOUR™ system applies pigment at the yarn stage using about one liter of water per kilogram of yarn, with zero wastewater discharge and up to 73% lower CO_2 emissions than conventional dyeing (ISO 14067:2018). The technology has been in commercial operation since 2018, is Woolmark validated, and uses OEKO-TEX ECO PASSPORT compatible chemistry. COLOURizd LLC is a yarn coloration technology company based in North Carolina, USA, with R&D in Hong Kong. Its QuantumCOLOUR™ system applies pigment at the yarn stage using about one liter of water per kilogram of yarn, with zero wastewater discharge and up to 73% lower CO_2 emissions than conventional dyeing (ISO 14067:2018). The technology has been in commercial operation since 2018, is Woolmark validated, and uses OEKO-TEX ECO PASSPORT compatible chemistry.



Author Bio

Jennifer Thompson is CEO and Co-Founder of COLOURizd, where she leads business development, partnerships, and investor relations for QuantumCOLOUR™, a yarn coloration system that uses about one liter of water per kilogram of yarn with zero wastewater discharge. She has spent more than 35 years in textiles, starting as a mill intern and going on to work with textile technology companies, run her own design consultancy, and serve as Director of Textile Design at Target. She is wary of any process that exists mainly because it has always been done that way, and dyeing is one of them.

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ITMA ASIA + CITME 2026

Road Shows Connect Bangladesh and China

Road shows in Narayanganj and Dhaka brought Bangladesh's textile and apparel industry together with representatives of China's textile machinery sector, highlighting technology development, industrial cooperation and preparations for ITMA ASIA + CITME 2026.

The two programmes, held in Narayanganj on **September 1** and Dhaka on **September 2**, attracted approximately **185 participants** across both events. Textile and apparel industry leaders, business representatives, professionals and other stakeholders participated, alongside a four-member Chinese delegation.

The road shows were organised to promote **ITMA ASIA + CITME 2026**, scheduled for **November 20–24, 2026**, at the National Exhibition and Convention Center (Shanghai), China. The exhibition is jointly owned by CEMATEX, CCPIT TEX, the China Textile Machinery Association (CTMA) and China International Exhibition Center Group (CIEC).

Narayanganj Road Show Highlights Industry Cooperation

The first programme was held on **September 1 at Narayanganj Club**, with approximately **85 participants**. Attendees included Directors from BKMEA, the Vice President of NCCI and Director, NCCI, along with Chinese delegates and other speakers.

Following guest arrival, registration and preliminary networking, participants viewed an ITMA ASIA + CITME Road Show event video. The programme then proceeded with a formal opening and prayer session.

Shawkat Iqbal, Editor-in-Chief of Bangladesh Textile Journal, delivered the welcome speech.

The Bangladesh textile industry perspective was presented by **Ratan Kumar Saha, Director, Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA), and Managing Director of P.M. Knittex Pvt. Ltd.** His participation brought the





perspective of the country's knitwear and apparel manufacturing sector into discussions on technology and industrial development.

Representing China's textile machinery industry, **Liu Ge, Director, China Textile Machinery Association (CTMA)**, addressed participants on developments in the Chinese textile machinery sector. The session also provided an opportunity for Bangladeshi industry professionals to discuss potential areas of industrial cooperation.

A presentation on **ITMA ASIA + CITME 2026** was delivered by **Liu Dan, Business Supervisor, China Textile Machinery Association (CTMA)**. She introduced the exhibition and discussed its significance for the Asian textile industry.

Bangladesh–China business relations were also a key part of the programme. **Md. Abu Jafar, Vice President of the Narayanganj Chamber of Commerce and Industry**, spoke on Bangladesh–China industry cooperation, while **Zakaria Wahid, Director, Narayanganj Chamber of Commerce and Industry**, shared business remarks.

The programme concluded with an open question-and-answer session involving the Chinese delegation and Bangladeshi industry representatives, followed by an official group photograph, networking and dinner.



Dhaka Road Show Attracts Around 100 Participants

The second road show was held on **September 2 at Magnolia Hall, Lakeshore Heights, Gulshan-1, Dhaka**, attracting approximately **100 participants** from Bangladesh's textile and apparel industry.

The Dhaka programme featured presentations and discussions covering Bangladesh's textile industry, Bangladesh–China business relations, Chinese textile machinery development, technology requirements and the role of ITMA ASIA + CITME 2026 for the Asian textile sector.

Following guest arrival and networking, the event began with a formal opening and prayer session. **Shawkat Iqbal, Editor-in-Chief, Bangladesh Textile Journal**, delivered the welcome speech. An industry perspective was presented by **Mohd Khorshed Alam, Director, Bangladesh Textile Mills Association (BTMA) and President, BCCCI**, focusing on Bangladesh's textile industry and Bangladesh–China business relations.

Liu Ge, Director, CTMA, again represented the Chinese textile machinery industry and discussed its current development.

The technology requirements of Bangladesh's textile machinery sector were addressed by **Abdullah Al Mamun, Spokesperson, BTMA**. **Tang Rong, Director, BJITME**, introduced ITMA ASIA + CITME 2026 and discussed its significance for the Asian textile industry.

Mohammad Abdullah Zaber, Managing Director, Noman Group and Editor, Bangladesh Textile Journal, was also present and presented crests among the speakers and ITMA ASIA + CITME delegates. ITMA ASIA + CITME delegates also handed over gifts to the local guest speakers.

The Dhaka event concluded with an interactive question-and-answer session involving the speakers and Chinese delegation, followed by an official group photograph, prayer break and networking over coffee and snacks.

Technology and Modernisation in Focus

Technological advancement emerged as a common theme across both road shows. The programmes provided Bangladeshi manufacturers and textile professionals





with an opportunity to learn about developments in textile machinery while discussing future technology requirements for the industry.

The discussions covered areas including productivity, automation, energy efficiency, quality, sustainability and production competitiveness.

ITMA ASIA + CITME 2026 is expected to showcase technologies across the textile manufacturing value chain, including spinning, man-made fibres, weaving, knitting, printing, dyeing and finishing, nonwovens, embroidery, garment manufacturing, recycling, testing and packaging.

The 2026 edition will also place greater emphasis on intelligent and sustainable manufacturing, with technology areas covering textile-reinforced composites, textile recycling, digital platforms, production-process automation and other emerging technologies.

Bangladesh–China Textile Industry Engagement

The participation of the four-member Chinese delegation provided an international dimension to the road shows, enabling direct interaction between Chinese textile machinery representatives and Bangladeshi manufacturers.

Discussions focused on machinery, technology, industrial requirements and potential business cooperation. China remains an important source of textile machinery and technology for Bangladesh's textile sector, making direct engagement between the two industry communities relevant to the sector.

The road shows also combined exhibition promotion with industry discussions and business networking, allowing potential visitors to gain a better understanding of the technologies and machinery that will be presented at the Shanghai exhibition.

ITMA ASIA + CITME 2026 to Cover 180,000 Square Metres

The upcoming ITMA ASIA + CITME 2026 in Shanghai will occupy seven exhibition halls and cover approximately 180,000 square metres, representing a 10% increase in exhibition area compared with the previous edition.





The organisers have stated that the exhibition will focus strongly on intelligent and sustainable manufacturing. The show will cover machinery and technologies across the textile manufacturing chain, alongside new segments including automation, digitalisation, textile recycling and textile-reinforced composites.

A dedicated research and innovation area will also showcase developments involving Chinese universities and industry–academia–research collaboration.



Road Shows Build Momentum Ahead of Shanghai Exhibition

The Narayanganj and Dhaka programmes connected Bangladesh's textile industry with the international textile machinery sector ahead of ITMA ASIA + CITME 2026.

With approximately 85 participants in Narayanganj and 100 in Dhaka, the two road shows brought together around 185 participants in total, including industry leaders, textile professionals, speakers and volunteers.



The participation of the Chinese delegation, representatives from BTMA and BKMEA, chamber leaders and senior textile industry figures strengthened the business-to-business focus of the programmes.

The two-day initiative highlighted the importance of modern machinery, intelligent manufacturing, sustainable technologies and international industrial partnerships for Bangladesh's textile and apparel sector as the industry prepares for the next generation of manufacturing technologies.

ITMA ASIA + CITME 2026 will take place in Shanghai from **November 20–24, 2026**.







GROZ-BECKERT TO SHOWCASE

LATEST TEXTILE INNOVATIONS AT ITMA ASIA + CITME 2026

From November 20 to 24, 2026, Groz-Beckert will be presenting its highlights and innovations across the various product areas – Knitting, Weaving, Nonwovens, Sewing, Tufting and Spinning – in Hall 4.1, Booth D41 at the ITMA ASIA + CITME 2026.

Knitting

In the Circular Knitting segment, the energy-saving needles take center stage - the LCmax™. With their innovative, wave-shaped shank geometry, they deliver energy efficiency, reduced friction, and exceptionally easy handling – ensuring maximum performance with minimal energy consumption.

In Flat Knitting, two special-application needles are in the spotlight. The SAN™ TT has been specially designed for knitting particularly tight loops and is ideal for use in technical and medical textiles. The new SAN™ FY is engineered for processing uneven effect yarns and ensures flawless fabric appearance, even with demanding materials and intricate designs.

In cooperation with SINOTEX, Groz-Beckert demonstrates the production possibilities offered by its fine-gauge technology with a jointly presented knitted collar. Equipped with the spring-loaded latch needle Vosa Spec. 89.50-45 G016, the application showcases the production of finer fabrics and tighter stitch loops, making it ideal for high-quality collars and sweater components.



– *Groz-Beckert Knitting*

The Legwear product group presents its exceptionally durable dur™ needles for use in sock and fine hosiery machines, where the highest levels of precision and load resistance are required.

In the Warp Knitting segment, Groz-Beckert presents the patented compound needle Spec. 51/43.36 G 101 for fine-gauge elastic fabrics. The reinforced plastic part provides enhanced stability, while minimal tolerances support the production of uniform, high-quality fabrics with excellent knitting performance.

In addition to its product innovations, Groz-Beckert will introduce a new AI-powered WeChat chatbot for Knitting customers in China. The digital service enables customers to access product information and make product and price enquiries directly through WeChat. Using natural language interaction, the chatbot provides quick and relevant responses, simplifying everyday enquiries and offering customers a convenient new way to interact with Groz-Beckert.

Weaving

From the first yarn to the fabric, the Weaving product area will showcase solutions designed for demanding applications – with a special focus on PCB and glass fiber weaving. As finer yarns and increasingly sophisticated electronic fabrics push process stability and fabric quality to new levels, Groz-Beckert is presenting new solutions for these challenges. Visitors



– *Groz-Beckert Knitting LCmax*

can discover a comprehensive portfolio ranging from weaving preparation equipment to yarn-guiding elements such as drop wires, healds and reeds – all designed to help unlock reliable performance in tomorrow's weaving applications.

Nonwovens

In the Nonwovens product area, Groz-Beckert will present its latest innovations. One of the highlights is the advanced Litespeed™ felting needle designed to significantly reduce insertion and removal times, thereby simplifying handling and increasing operational efficiency. Furthermore, the newly developed CB-Barb felting needle will be part of the showcase.

For the Nonwovens Carding segment, Groz-Beckert will introduce its specialized Mounting Service. The portfolio is complemented by the innovative SiroLock™ plus wires from the Groz-Beckert InLine card clothing family. These products are designed to deliver high levels of precision, performance and reliability throughout the carding process.



– Groz-Beckert Nonwovens CB-Barb

Sewing

The Sewing product area showcases products and solutions for the sewing industry. At the exhibition, the focus will be on its special application needles SAN™, which have been developed specifically for demanding sewing operations. With its enhanced stability and reliable loop pick-up, SAN™ 5.2 is particularly well suited for technical textiles such as airbags. SAN™ 6 ensures high process reliability when sewing woven fabrics such as denim. Both needle variants feature the GEBEDUR™ coating, which provides effective protection against wear, particularly in the point area. The slim yet dimensionally stable SAN™ 10 and the even slimmer SAN™ 10 XS are designed for extremely fine materials and offer maximum protection against material damage.

The product area will also present its latest innovation, the Litespeed™ needle. Designed for heat-intensive sewing applications, such as high sewing speeds or sewing dense or multi-layer materials, its special geometry helps ensure a stable sewing process.



– Groz-Beckert Sewing Litespeed

Tufting

For the production of tufted floor coverings such as carpets, bath mats and artificial turf, the Tufting product sector will be presenting its proven Gauge Part system. The coordinated combination of the various materials of the individual parts and the functional interaction ensure a convincing result in the production process.

Spinning

For customers in the spinning industry, Groz-Beckert is introducing a new energy-saving maintenance-free cylinder wire with increased service life, higher card output and lower maintenance costs. In addition, further developments of the stationary flats and revolving tops will be presented. The high PPSI revolving tops have been specifically designed for processing fine yarns and a special tops technology has been developed to cater for the latest card models in the market, while the stationary flats have been provided with a new profile and wire designs aiming to boost the overall carding performance.

About Groz-Beckert

Groz-Beckert develops and manufactures industrial machine needles, precision parts and fine tools for the production and joining of textile fabrics. The range is complemented by matching systems and services. The products are used in knitting, in the manufacture of nonwovens, in tufting, as well as in sewing and in the spinning process.

Groz-Beckert is part of the Groz-Beckert Group, which is a market leader in the development, manufacture and distribution of process-critical textile precision tools, industrial cutting solutions, textile reinforcements for the construction industry and composites.

The group consists of the companies Groz-Beckert, TKM and solidian and generated sales of 839 million euros in 2024 with around 9,400 employees worldwide. The company is active in more than 150 countries with agencies, production and sales subsidiaries.

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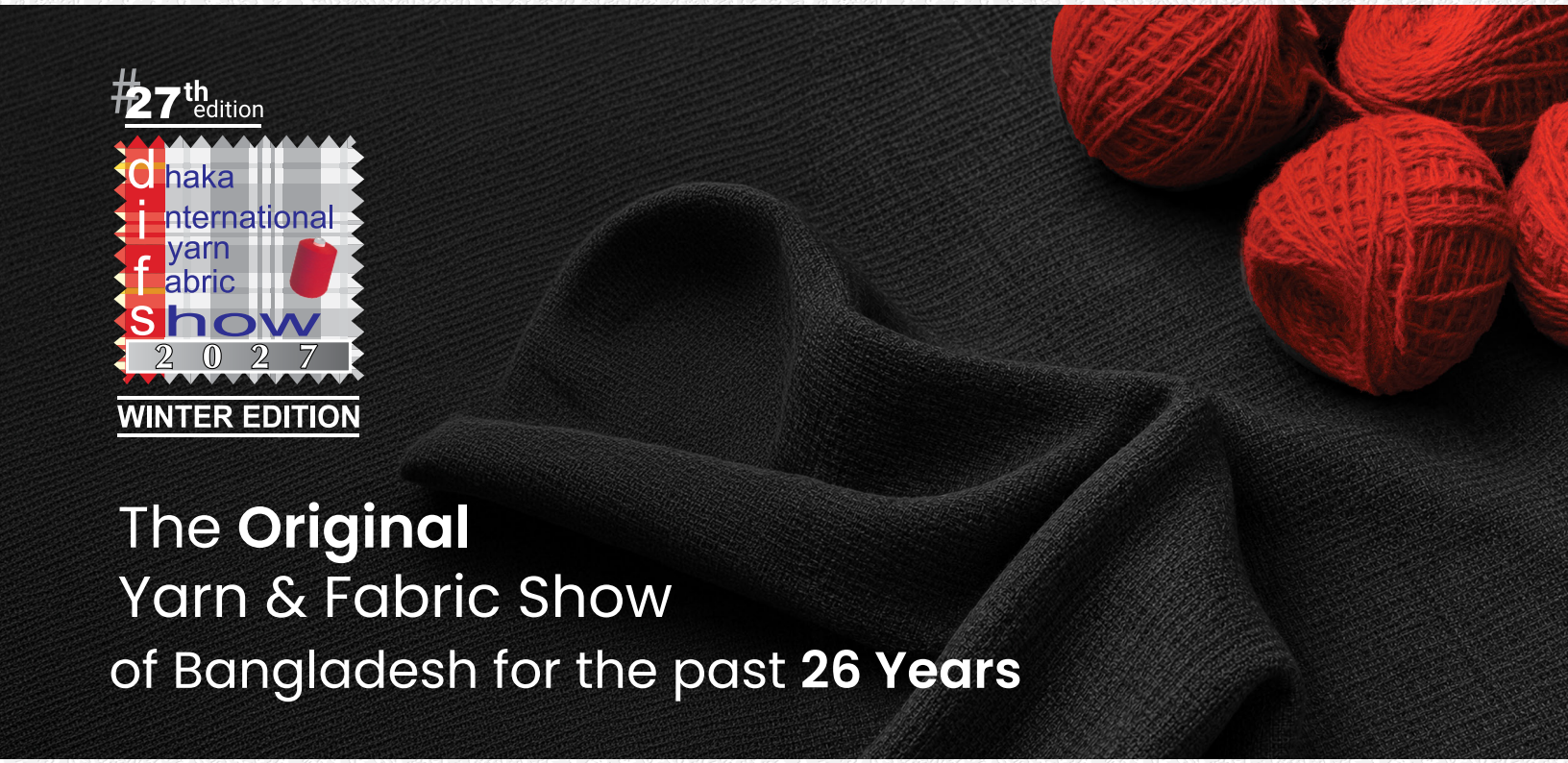
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Bangladesh Textile Journal
ARTICLE



CAN BANGLADESH'S TEXTILE INDUSTRY SUPPORT TOYOTA'S NEXT-GENERATION HEV PRODUCTION?

Ahamed Sorowar
Researcher, Sourcing and Merchandising specialist on Textile & Apparel

Bangladesh is approaching an industrial opportunity that could reshape its manufacturing identity. For decades, the country has built its global reputation around ready-made garments. Its textile ecosystem now extends across spinning, weaving, knitting, dyeing, finishing, nonwovens, accessories and increasingly sophisticated recycling and technical-textile capabilities.

At the same time, Toyota is strengthening its presence in Bangladesh and promoting hybrid electric vehicles (HEVs) as an important pathway toward sustainable mobility. This raises a strategic question that goes beyond automobile sales or assembly:

Can Bangladesh manufacture the technical textiles and textile-based components required by the next generation of vehicles?

The answer today is partly yes—but Bangladesh is not yet ready for deep automotive-textile localization at Toyota's highest standards. The opportunity, however, is substantial if the country prepares systematically.

An automobile is also a textile product

When automotive manufacturing is discussed, attention usually goes to engines, batteries, transmissions, electronics and metal components. Yet modern vehicles contain an extensive textile and nonwoven ecosystem.

Automotive textiles include seat upholstery and trim, airbags, seat belts and webbing, carpets, floor coverings, headliners, door-panel fabrics, trunk liners, acoustic insulation, thermal insulation, filtration materials and various reinforcement products.

Toyota itself has used advanced polymer and textile-related materials in vehicle interiors. The company has previously highlighted bio-PET-based materials for applications including seat trim and floor carpets in hybrid vehicles.

This creates an interesting connection with Bangladesh's textile industry.

The country already possesses enormous fabric-conversion capacity. The challenge is to transform that capacity into automotive-grade engineered products.

Bangladesh already has a foothold

There is already evidence that Bangladesh can manufacture textile-based automotive components for Japanese supply chains.

Japanese company TS Tech Bangladesh, operating at Adamjee EPZ, produces seat-trim covers for export to Japan. Its products are used in vehicles associated with Honda, Suzuki, Yamaha and Kawasaki. The factory produces hundreds of thousands of units annually and has invested in automation and advanced production technologies.

This is strategically important.

It demonstrates that Bangladesh can meet demanding Japanese requirements in at least some automotive textile applications.

But supplying a limited range of seat-trim products is very different from creating a complete automotive technical-textile ecosystem.

HEVs raise the technical bar

A hybrid electric vehicle combines an internal-combustion engine with an electric motor, battery, power electronics and sophisticated control systems. Its material requirements therefore go beyond those of conventional vehicles.

Potential textile and nonwoven applications include:

acoustic and thermal insulation;

high-performance interior materials;

filtration products;

lightweight nonwovens;

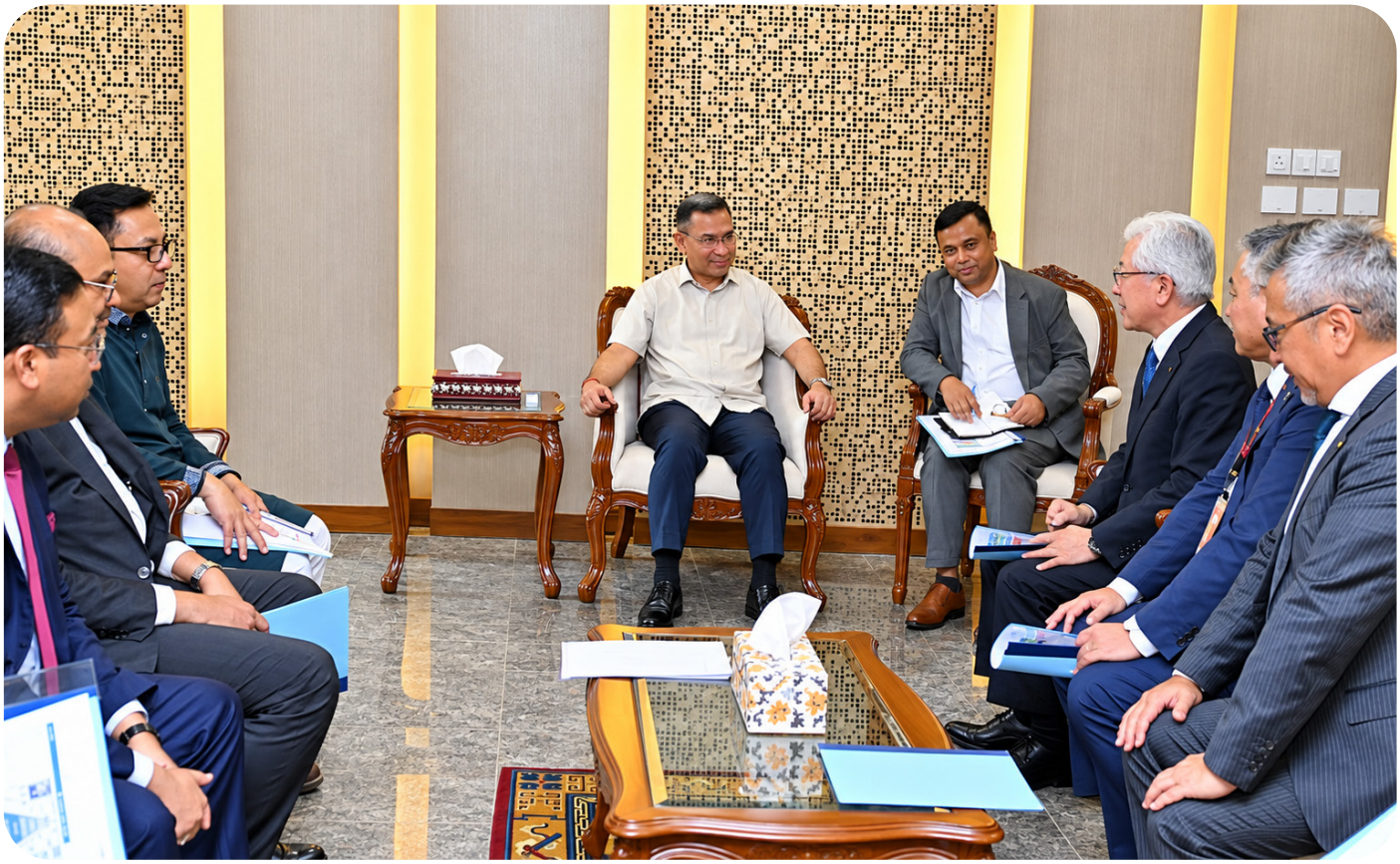
protective and reinforcement materials;

advanced carpets and headliners;

specialized coated and laminated fabrics.

However, Bangladesh should remain realistic. Battery cells, high-voltage systems, power electronics, sensors and electronic control units require technological capabilities that the country does not yet possess at sufficient scale.

Therefore, the smartest strategy is progressive localization rather than immediate full localization.



Garment expertise is an advantage—but not enough

Bangladesh's textile industry has several important advantages: a large manufacturing base, skilled workers, established spinning and fabric production, synthetic-fibre capability, dyeing and finishing, technical sewing, accessories production and an extensive supplier network.

But automotive manufacturing operates under a different quality philosophy.

In apparel, a defective product may be rejected by the buyer. In automotive manufacturing, a defective component can become a safety, warranty or product-liability issue.

Automotive suppliers therefore operate under rigorous quality-management systems such as IATF 16949, together with processes including APQP, PPAP, FMEA, SPC, MSA, traceability and strict change control.

For Bangladesh, this means the future automotive supplier cannot compete on low labour costs alone.

It must compete on:

quality + consistency + engineering + traceability + delivery + cost + sustainability.

The transformation must therefore be from cut-and-sew manufacturing to engineered manufacturing.

Japan can become Bangladesh's technology bridge

Japan could play a particularly important role in this transition.

Recent initiatives involving Japanese cooperation have focused on developing Bangladeshi supporting industries and helping local manufacturers participate in Japanese high-technology supply chains, including automotive-related production.

This approach should be expanded.

Instead of waiting for automobile manufacturers to establish large-scale local supply chains, Bangladesh could actively create supplier-development programmes connecting Japanese OEMs and Tier-1 suppliers with Bangladeshi textile and manufacturing companies.

The objective should be knowledge transfer, certification, product development and long-term supplier qualification.

What Bangladesh should do now

1.Establish an Automotive Technical Textile Mission

Government agencies, BIDA, BTMA, BGMEA, universities and Japanese partners should jointly identify 20–30 automotive textile products suitable for initial localization.

2.Build international-standard testing facilities

Bangladesh needs reliable domestic laboratories for testing abrasion, tensile strength, flammability, colour fastness, dimensional stability, heat resistance, ageing and other automotive requirements.

Without credible testing infrastructure, localization will remain dependent on overseas laboratories.

3. Develop automotive-quality expertise

Bangladeshi manufacturers need specialists capable of implementing:

IATF 16949 → APQP → PPAP → FMEA → SPC → traceability → lean manufacturing.

This requires training engineers and managers—not simply adding sewing operators.

4. Invest in product engineering

The next generation of textile companies should employ material engineers, automotive designers, R&D specialists, quality engineers and product-development teams.

The goal should be to develop materials rather than simply manufacture specifications supplied from overseas.

5. Start with Tier-2 and Tier-3 opportunities

Bangladesh does not need to become a direct Toyota Tier-1 supplier immediately.

A more realistic pathway is to supply approved materials and components to Japanese and global Tier-1 suppliers and gradually move upward in the value chain.

Reality versus opportunity

So, can Bangladesh support Toyota's future HEV production with technical textiles?

Today: partially.

Bangladesh already demonstrates the ability to produce selected automotive textile components for Japanese supply chains.

Within the next three to five years: potentially much more.

With targeted investment in nonwovens, automotive fabrics, testing, coating, lamination, technical sewing and quality systems, Bangladesh could become a meaningful supplier of automotive textile products.

Longer term: the opportunity is much larger than Toyota Bangladesh.

The objective should be to create an automotive technical-textile ecosystem capable of serving Toyota, Honda, Suzuki, Yamaha, Nissan and global Tier-1 suppliers across Asia.



From garment exporter to manufacturing partner

Bangladesh's apparel industry is approaching a strategic crossroads.

The country cannot depend indefinitely on low-cost basic apparel production. The next chapter should be about value addition:

- From cotton to synthetic fibres.
- From garments to engineered fabrics.
- From fashion textiles to technical textiles.
- From sewing to engineering.
- From supplier to development partner.

Toyota's expanding presence therefore represents more than an automobile opportunity. It could become a test of whether Bangladesh can transfer its world-class textile manufacturing capabilities into technologically demanding industries.

Bangladesh already has much of the foundation: factories, workforce, textile expertise, Japanese business connections and a huge manufacturing ecosystem.

What it now needs is technology, testing, engineering capability, certification and a deliberate localization strategy.

If that transformation succeeds, the next automobile assembled in Bangladesh could carry something far more significant than a "Made in Bangladesh" label on its body.

Its seats, carpets, insulation, headliners and other engineered textile components could carry the same label.

That would mark a fundamental shift—from "Made by Bangladesh's garment industry" to "Engineered by Bangladesh's manufacturing ecosystem."

And that is an industrial opportunity Bangladesh should prepare for now.

Author Bio



Ahamed Sorowar is a Textile Engineer and Team Leader, Merchandising at Asian Regency Limited, a leading apparel sourcing and liaison office in Dhaka. With over 18 years of experience in Bangladesh's textile and apparel industry, he has worked with prominent organizations including Asmara International Ltd., Sunman Group and Labib Group. His professional expertise spans global sourcing, merchandising, product development, supply chain management and international buyer relations across Europe, the United States, Canada and Japan.

He holds a graduate degree from City University and a postgraduate degree from Southeast University. He is the Founder and Convener of Branding Bangladesh RMG, Founder President and Advisor of the Textile Engineers Alumni Association of City University(TEAACU), Executive Board Member of the Apparel Merchandiser Foundation of Bangladesh (AMFB), former Organising Secretary of the Association of Textile Engineers and Technologists (ATET) and Head of Branding & Career Consultancy at Textile Xperts. He regularly writes and speaks on textile innovation, sustainability, sourcing strategy, industry competitiveness and the future transformation of Bangladesh's RMG sector.

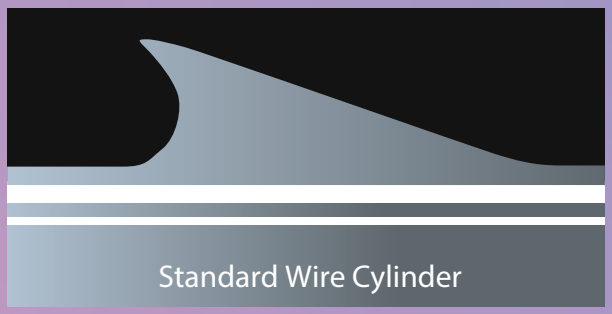
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Reach out to our local representatives to find out more:

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Bangladesh Textile Journal
ARTICLE



TEXTILE MANUFACTURING ENTERS A NEW ERA:

FIVE TECHNOLOGY FRONTIERS TO WATCH AT ITMA ASIA + CITME 2026

Shawkat Iqbal
Editor in Chief, Bangladesh Textile Journal

As the global textile industry prepares for ITMA ASIA + CITME 2026 in Shanghai from 20 to 24 November, machinery manufacturers are working to address a common set of challenges: rising production costs, pressure to reduce environmental impacts, shortages of skilled workers, increasingly demanding quality requirements and the need to process a wider range of fibres.

The exhibition, which will occupy approximately 180,000 square metres across seven halls, is expected to bring together more than 1,800 exhibitors. Its programme covers the entire textile manufacturing value chain, including spinning, weaving, knitting, man-made fibres, dyeing and finishing, recycling, testing and automation. Textile-reinforced composites and research into robotics, intelligent inspection and artificial intelligence are also receiving dedicated attention.

For Bangladesh, one of the world's leading apparel manufacturing and exporting countries, the technologies on display have implications far beyond machinery replacement. They could influence yarn quality, fabric productivity, dyehouse efficiency, product development speed, factory labour requirements and the industry's ability to meet customers' sustainability expectations.

Five technology areas deserve particular attention.

Spinning and recycling: Building the next-generation spinning mill

Spinning technology is entering a period of transition as manufacturers seek to combine higher productivity with improved fibre utilisation, automated material handling and more consistent yarn quality. Recycling is adding another dimension: machinery must process increasingly variable raw materials without compromising the quality required by downstream knitting and weaving operations.

Rieter: Connecting spinning technology with circularity

Rieter is developing its position across natural-fibre spinning and man-made-fibre technologies following its acquisition of Barmag, completed in February 2026. The company announced the establishment of Recycling Powerhouse Ltd. in July 2026, with the stated objective of industrialising, standardising and scaling textile recycling.

This development is significant because textile-to-textile recycling requires more than a recycling machine. The quality and consistency of recovered fibres, preparation methods, spinning systems and the final yarn specification all affect whether recycled material can be used successfully in new products.

For spinning mills, the challenge is to achieve a commercially viable balance between recycled content, yarn strength, evenness, productivity and cost. Fibre length, contamination, fibre damage and blend composition can all affect the final result.

Rieter's wider technology strategy also points towards greater automation and digitisation across spinning processes. Connected equipment and production data can help mills monitor performance, identify process deviations and improve operational decisions.



– Reiter Compact-Spinning Machine K 48

What Bangladesh should watch: integrated spinning solutions, fibre preparation, recycling compatibility, energy consumption per kilogram of yarn and the measurable quality of yarn produced from recycled blends.

Saurer: Rotor spinning and mechanically recycled fibres

Saurer's Autocoro 11 rotor-spinning platform is relevant to mills investigating mechanically recycled fibres. Its June 2026 technology communication

specifically addressed the efficient processing of mechanically recycled fibres.

Rotor spinning can be attractive for selected recycled-fibre applications because the process can accommodate certain shorter-fibre blends that present challenges for other spinning systems. However, performance depends on the raw material, yarn count, blend composition, machine settings and the end-use specification.

Saurer's broader portfolio includes rotor spinning, ring spinning, air spinning, twisting and winding. Automated material handling and machine monitoring are important areas to examine when assessing the total productivity of a spinning installation.

The key commercial question is not simply whether a machine can process recycled fibre, but whether it can produce a consistent yarn at an acceptable production rate, with manageable waste and a competitive operating cost.



– IMAGE: Saurer's Autocoro 11 rotor-spinning

What Bangladesh should watch: yarn quality from recycled blends, automatic doffing and material transport, operator requirements, machine utilisation and energy consumption under comparable production conditions.

Trützschler: Preparing short fibres for spinning

Trützschler's 2026 announcements include its Integrated Draw Frame IDF 3, carding innovations and the Pre-Cleaner CL-X. These technologies address different stages of fibre preparation, where cleaning, opening, carding and drawing influence the consistency of the material entering the spinning process.

The IDF 3 is designed to integrate drawing into preparation for selected spinning applications, including rotor and air jet processes. The relevance to recycled fibres is particularly important because mechanically recovered textile material may contain a wider range of fibre lengths and require careful processing.

Trützschler has also reported productivity improvements for particular carding applications. Such figures must be assessed alongside the fibre type, production conditions, product quality and machine configuration rather than assumed to apply to every installation.

For Bangladeshi spinning mills, improved fibre preparation could support more stable downstream production, but any investment should be evaluated through trials using the mill's actual cotton, man-made fibres or recycled blends.

The investment priority

The next generation of spinning mills will need to combine fibre flexibility with process control. Buyers and mill managers should request comparative data for yarn quality, production rate, waste, energy use and maintenance costs. The most useful technology is the one that delivers repeatable results under real factory conditions.

Weaving productivity and energy efficiency: More than loom speed

Weaving remains a major area for investment because machine performance affects fabric cost, delivery schedules and quality. However, the highest nominal loom speed does not automatically produce the lowest cost per metre. Warp and weft preparation, yarn quality, stoppages, fabric defects and energy consumption all influence overall performance.

Picanol: Connected weaving and energy management

Picanol's portfolio includes the OmniPlus-i Connect air jet weaving platform and PicConnect, its digital platform for monitoring weaving operations. The company's published technology communications have highlighted EcoBoost energy-saving developments and digital machine monitoring.



– IMAGE: OmniPlus-i Connect and PicConnect

Air jet weaving uses compressed air to insert the weft yarn, making air consumption an important operating-cost consideration. Energy performance depends on fabric construction, machine settings, compressor efficiency, operating speed and the condition of the installation.

Digital monitoring can help managers compare machine performance, identify recurring stoppages and examine production data across a weaving department. The value comes from converting this information into practical improvements rather than simply collecting more data.

For Bangladesh, where large weaving operations may run many machines simultaneously, small reductions in energy use or downtime per loom can accumulate into meaningful savings at factory level.

What to request: measured energy consumption per metre of fabric, production speed for a specified fabric, stoppage rates and the conditions used for any advertised savings.

ITEMA: Rapier and projectile weaving

ITEMA's technology portfolio includes rapier weaving platforms such as the R9500EVO and GalileoRX, alongside projectile weaving technology. In June 2026, the company announced the production of its first projectile weaving machines made in Italy at its Colzate headquarters.

Rapier and projectile systems serve different production requirements. Machine selection depends on fabric construction, yarn characteristics, width, production volume and the required quality. Rapier technology can offer versatility across a broad range of fabrics, while projectile weaving is relevant to particular heavy, wide or specialised fabric applications.



The commercial objective is to match machine capability with the product mix. Mills producing diversified fabrics may value flexibility, while mills running standardised products may prioritise throughput, reliability and operating cost.

What Bangladesh should watch: fabric-specific productivity, weft insertion reliability, maintenance requirements, energy consumption and the ability to accommodate recycled or lower-consistency yarns.

Dornier: High-performance weaving for demanding fabrics

Dornier is known for weaving technologies including rapier and air jet systems, with applications spanning apparel fabrics and specialised technical textiles.

For manufacturers, the principal evaluation criteria include fabric quality, machine stability, flexibility across constructions and the ability to maintain consistent production over long runs. Advanced

controls can help operators manage process parameters, while machine connectivity can support maintenance and performance analysis.

For Bangladesh's exporters, weaving technology decisions should be linked to the fabric categories being targeted, including denim, shirting, home textiles and technical applications. A machine suitable for one category may not be the most economical choice for another.

Stäubli: Automation in warp preparation and shedding

Stäubli supplies textile automation technologies including jacquard systems, shedding equipment and warp preparation solutions. These systems influence the ability to produce complex patterns and manage demanding weaving operations.



– Jacquard machine SX PRO for flat, terry and technical fabrics

Automation in these areas can reduce certain manual tasks and help improve process consistency. In jacquard weaving, the interaction between electronic pattern control, machine configuration and the fabric design is especially important.

The strategic lesson: Bangladeshi weaving mills should assess the entire production system, from yarn preparation through loom operation, instead of judging investment decisions on nominal machine speed alone.

Knitting and digital product development: From virtual design to production

Knitting manufacturers are responding to demand for shorter product-development cycles, flexible manufacturing, complex structures and reduced sampling waste. Computerised knitting and digital design tools can connect product development more closely with production.

KARL MAYER: Warp knitting and preparation technology

KARL MAYER announced its ITMA ASIA 2026 programme in August, covering warp knitting, warp preparation and customer demonstrations. Its planned technologies include new tricot machine developments, beam warping, sizing-box technology and double-needle-bar Raschel applications.

Warp knitting is important for products such as sportswear fabrics, lingerie, footwear components, technical textiles and selected industrial applications. Warp preparation is equally important because beam quality and yarn preparation affect machine stability and fabric consistency.



– KARL MAYER HKS 3M Sectional Knitting machine

Sizing technology can influence yarn protection, abrasion resistance and weaving performance. Any claimed reduction in sizing-agent consumption should be assessed alongside yarn performance, fabric quality and downstream processing requirements.

SHIMA SEIKI: Computerised knitting and 3D development

SHIMA SEIKI's technology ecosystem combines computerised knitting machines with CAD/CAM design tools. Its 2026 announcements have also included a partnership with CLO Virtual Fashion, linking garment

visualisation and digital development with knitwear production workflows.

Digital sampling can allow designers and product teams to evaluate shapes, colours and garment concepts before committing to physical samples. When the digital model, material properties and production data are sufficiently aligned, this can help reduce some sample iterations and speed up communication between design and manufacturing teams.



– Shima Seiki SRY123LP

However, digital sampling does not eliminate the need for physical validation. Yarn behaviour, drape, stretch, dimensions and finishing can differ from simulated results.

For Bangladesh's export-oriented manufacturers, integrating digital design with knitting and garment development could shorten approval cycles and improve coordination with international buyers.

Santoni: Seamless and circular knitting

Santoni specialises in circular knitting and seamless technologies. Seamless manufacturing can reduce or eliminate selected garment assembly operations, depending on the product design, while circular knitting supports efficient production of knitted structures.

The business case depends on the garment category, machine configuration, yarn, finishing requirements and the volume of repeat orders. Seamless technologies can be particularly relevant for selected sportswear, underwear and performance-apparel applications.

What Bangladesh should watch: production time per garment, yarn consumption, waste, finishing requirements, flexibility across product styles and the extent to which reduced sewing operations translate into lower total cost.

Cixing: Computerised flat knitting

Cixing is among the Chinese machinery manufacturers confirmed for ITMA ASIA + CITME 2026. Its computerised flat-knitting technology is relevant to shaped knitwear, patterned structures and automated garment production.

For prospective buyers, important evaluation points include knitting speed for the intended design, gauge, needle configuration, yarn compatibility, programming workflow, changeover time and support for maintenance and spare parts.

Rather than comparing machine specifications in isolation, factories should run production trials using representative styles and calculate the total cost of producing saleable garments.

Dyeing and finishing: Water, chemicals and energy under scrutiny

Wet processing is one of the most important areas for sustainability improvements because dyeing and finishing can involve substantial water, heat, chemicals and wastewater treatment. The best solutions combine process technology with careful recipe control, monitoring and wastewater management.

Fong's: The intelligent dyehouse

Fong's and its associated technology businesses serve the dyeing and finishing sector. Their technology portfolio covers dyeing machines, washing and finishing systems, and digital process solutions.

An intelligent dyehouse aims to improve repeatability by linking recipes, process parameters, production scheduling and machine data. Better control can help reduce avoidable reprocessing, inconsistent shade results and excessive use of resources.

Low-liquor-ratio dyeing may reduce the amount of water and chemicals circulating in a process, but the outcome depends on the fabric, dye class, recipe and operating conditions. A lower liquor ratio alone does not guarantee lower total environmental impact if other process stages require additional resources.

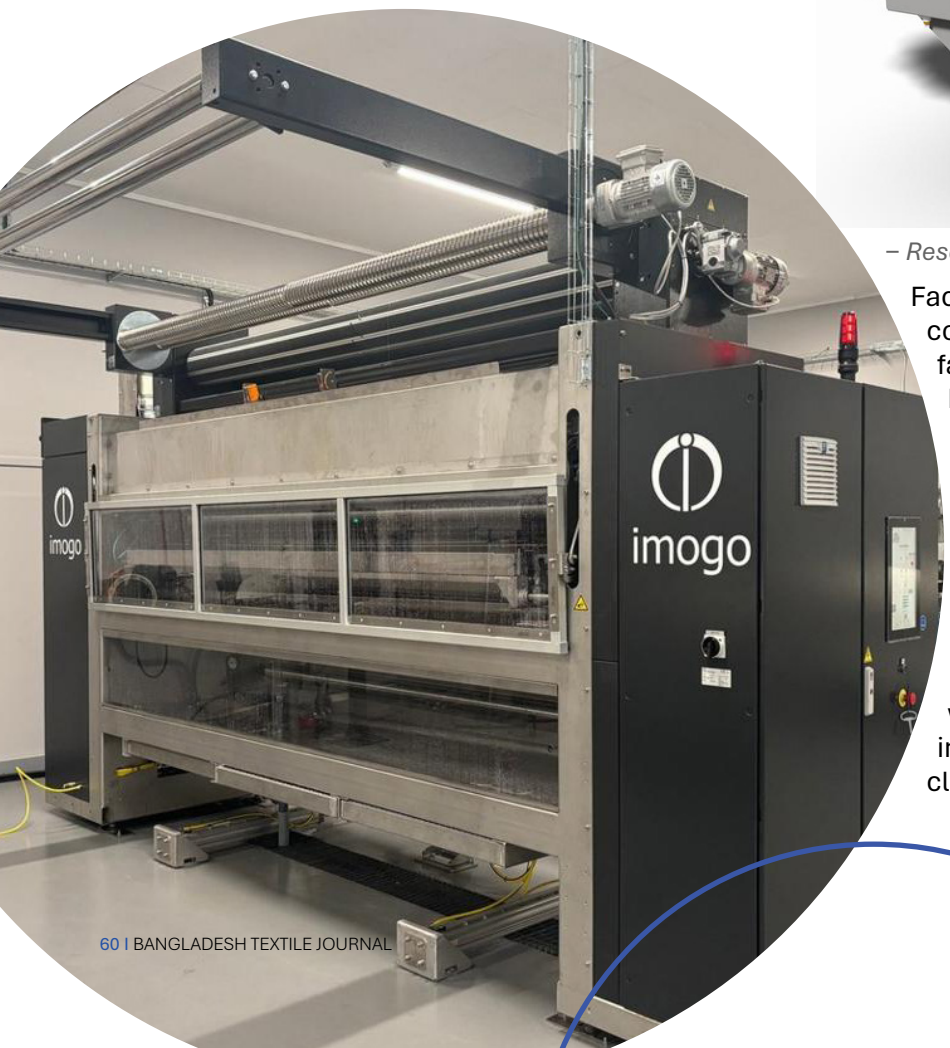
For Bangladeshi dyehouses, investment decisions should consider water use per kilogram of fabric, energy per kilogram, first-pass shade approval, chemical consumption and effluent-treatment performance.

Imogo: Precision spray dyeing

Swedish company Imogo promotes spray-based dyeing technology designed to apply dye liquor to fabric with tightly controlled application. Its Dye-Max technology has been reported with liquor use as low as 0.7 litres per kilogram of fabric in a specified configuration.

This figure should be treated as a manufacturer-reported technology benchmark, not a universal result for every fabric or dyeing recipe. Comparisons must establish the fabric construction, shade, chemicals, production speed, residual liquor, wash-off requirements and total water balance.

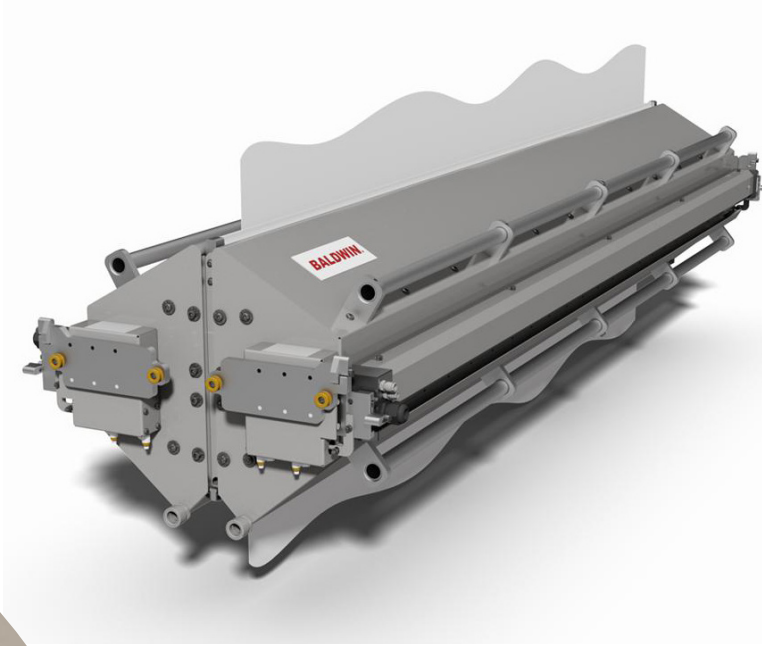
Precision application may offer opportunities to reduce excess liquor and improve control in suitable processes. The practical question for a mill is whether the technology can meet its required shade consistency, fastness, throughput and product range.



Baldwin: Precision application in finishing

Baldwin Technology develops precision spray and process technologies, including TexCoat G4 for textile finishing. Precision application aims to place finishing chemicals where they are needed rather than relying entirely on conventional saturation methods.

The company has reported wet-pick-up reductions of up to 50% for certain applications. Actual savings depend on the finishing recipe, fabric, machine configuration and baseline process. Reduced wet pick-up can potentially lower the energy required to evaporate water, but the full result must be measured in production.



– Resource-efficient Baldwin in dyeing and finishing

Factories should compare chemical consumption, wet pick-up, drying energy, fabric performance and reprocessing rates before and after installation.

The measurement imperative

Dyehouses should request documented trials and monitor water, energy and chemicals per kilogram of saleable fabric. They should also assess wastewater quality, colour consistency, reprocessing and total operating costs. This approach will help distinguish genuine process improvements from isolated equipment claims.

Man-made fibres and integrated production: Connecting upstream and downstream technology

Synthetic fibres are central to sportswear, performance apparel, home textiles and industrial applications. The ability to produce consistent filaments, manage texturing and integrate production data affects the quality and cost of downstream yarns and fabrics.

Barmag: Filament production and process integration

Barmag supplies machinery and systems for man-made-fibre production, including filament spinning and texturing. Following Rieter's completion of the Barmag acquisition in February 2026, the two businesses are positioned within a wider group covering natural and man-made fibre technologies.

Filament production depends on precise control of polymer processing, spinning conditions, winding and downstream texturing. Consistency in filament properties is important for yarn uniformity, fabric appearance and performance.

For producers, relevant evaluation criteria include output per position, yarn quality, energy consumption, changeover requirements, automation and the suitability of the system for the intended polymer and product.

The strategic opportunity is to connect upstream filament production with downstream spinning, texturing and fabric manufacturing, using data to improve traceability and process control.

Vandewiele: Integrated textile machinery and automation

Vandewiele's portfolio spans several textile manufacturing segments, including carpet and other textile technologies. Its broader group approach connects machinery, components, yarn handling and process-specific automation.

For integrated textile production, the value of automation often lies in the interaction between machines rather than in a single headline specification. Consistent yarn feeding, tension control, material handling and monitoring can support repeatable quality and more efficient operation.



– Integrated machinery and process monitoring help connect fibre production with downstream textile manufacturing

Factories considering integrated systems should examine the compatibility of machinery and software, maintenance arrangements, spare-parts availability, operator training and the ability to measure production performance across the line.

What should Bangladesh's textile industry take away?

The five technology areas share one underlying principle: competitiveness increasingly depends on how effectively a factory integrates machinery, people, materials and data.

For Bangladesh, priorities will differ by factory. A spinning mill may focus on fibre utilisation and yarn quality; a weaving mill on productivity and energy; a knitwear producer on digital development and changeover times; and a dyehouse on water, heat and chemical consumption. Man-made-fibre producers will need to evaluate process consistency, automation and downstream integration.

Before investing, manufacturers should ask suppliers for comparable production trials, independently verifiable performance data, lifecycle costs, local service arrangements and realistic payback calculations. Sustainability claims should be assessed against clearly defined baselines and consistent measurement methods.

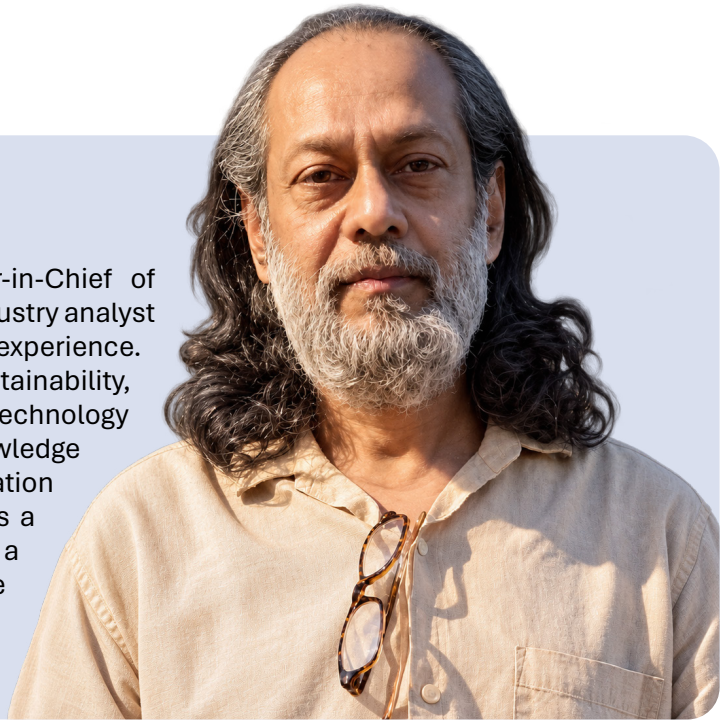
ITMA ASIA + CITME 2026 offers an opportunity to compare these technologies directly and discuss how they perform under Asian production conditions. Its expanded focus on recycling, digital platforms, automation, research and textile-reinforced composites also signals that the next phase of machinery development will extend beyond conventional productivity improvements.

For Bangladesh, the challenge is to select and implement technologies that deliver measurable business and environmental results—not simply to acquire newer machines. The factories that combine technical investment with reliable data, skilled people and disciplined process management will be better positioned to respond to the next generation of global textile requirements.

– *Bangladesh Textile Journal will continue to follow manufacturer announcements and technology developments ahead of ITMA ASIA + CITME 2026 in Shanghai.*

Author Bio

Shawkat Iqbal is the founder and the Editor-in-Chief of Bangladesh Textile Journal (BTJ) and the textile industry analyst with more than 25 years of corporate and industry experience. He specializes in textile manufacturing, sustainability, circular economy, international trade, and technology trends. Through BTJ, he promotes industry knowledge sharing, global collaboration, and innovation across the textile and apparel value chain. He is a regular contributor to industry publications and a moderator and organizer of international textile industry events and business forums.



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Bangladesh Textile Journal
INDUSTRY FEATURE

HUAYU TEXTILE MACHINERY:

From Domestic Pioneer to Global Competitor

Yun Juanjuan



Stepping into the plant of Shaoxing Huayu Textile Machinery Co., Ltd., you are immediately greeted by the unceasing roar of machines and the constant shuttling of trucks.

The reception staff carefully guided me away from the busy transport lanes, apologizing again and again: "We're really sorry—there have been so many orders recently and production is tight, so the plant is a bit messy." This "explanation" is something many enterprises would eagerly wish for. After all, in a year when the industry as a whole is under pressure, for a company to be busy to the point of having "no place to step" is no easy feat, and it conceals a business philosophy that is anything but simple.

Two Decades of Deep Cultivation Forging an Industry Benchmark

"Every outgoing truck you see is loaded with our 'flagship products,'" said Li Weimin, deputy general manager of Huayu, pointing at the trucks passing one after another outside the window. Founded in 2004, Huayu Textile Machinery has, over twenty years, completed a brilliant transformation from an industry newcomer to a leader in its niche. It is understood that as one of the main domestic producers of two-for-one twisters and draw texturing machines, Huayu has held a stable market share of around 50% in two-for-one twisters over the past three years; its medium-speed draw texturing machines also account for nearly half of that segment, and its share of large draw texturing machines is likewise very high, keeping it firmly among the industry's leaders.

Behind this impressive report card lies Huayu's relentless pursuit of innovation.

"Our chief engineer Liu Guangrong was the technical leader of the domestic project to introduce, absorb, and localize imported two-for-one twisting spindles during the national 'Seventh Five-Year Plan' period," Li Weimin explained. "Under Chief Engineer Liu's leadership, this R&D team with an aviation industry background has focused on breaking through technical bottlenecks and driving product iteration and upgrading." Today, Huayu has built a complete textile machinery product matrix covering two major product lines—two-for-one twisters and draw texturing machines—including polyester machines, nylon machines, and covered-yarn all-in-one machines, as well as specialized equipment for niche applications such as flanged chemical-fiber two-for-one twisters, flangeless chemical-fiber two-for-one twisters, and staple-fiber two-for-one twisters. The company has successively obtained multiple qualifications and certifications, including "Zhejiang Province Patent Demonstration Enterprise" and "Shaoxing Research and Development Center," led the formulation of the "Zhejiang Manufacturing" group standard for *Chemical Fiber Filament Two-for-One Twisters*, and participated in the revision of two industry standards.

In the showroom workshop, Li Weimin highlighted several flagship products for me, from the HY369A straight-hole jet-type pneumatic yarn-threading two-for-one twister selected for the National Torch Program, to the high-efficiency, energy-saving pneumatic yarn-threading high-count staple-fiber two-for-one twister from a major Zhejiang provincial project, the all-ceramic filament two-for-one twister with a full-ceramic twisting thread path rated as a Shaoxing "first set" product, and the low-energy, high-performance, ultra-stable spinning draw texturing machine newly developed in 2024 that won the "Zhejiang Province First Set" honor—all of these showcase Huayu's strength in continuous innovation.



Technological Innovation Leading Industry Transformation

"In 2024, against the backdrop of a generally cold global textile industry, Huayu achieved year-on-year growth of over 20%, and in the first quarter of 2025 it maintained growth of over 20% as well." Speaking of the secret to this counter-trend growth, Li Weimin attributed it to "the dual drive of technological innovation and customer needs."

He pointed out in particular that the explosive growth of the home-textile market was a highlight this year, but the deeper reason lies in Huayu's consistent focus on customer pain points and its innovation-centered driving force.

It is reported that Huayu's pioneering medium-speed draw texturing machine filled a market gap, raising each machine's line speed from 550 rpm to 750 rpm and significantly improving production efficiency. At the same time, the customized spindle—a core component of the two-for-one twister—has, thanks to its outstanding quality stability, set an industry record of twenty years without batch quality problems, further strengthening customer trust and loyalty.



– HYD-1000V polyester draw texturing machine. Source: Huayu official website

Technological innovation has not only enhanced Huayu's market competitiveness but also successfully fostered greater customer trust in domestic equipment. Li Weimin revealed: "In the past, many high-end customers relied on imported equipment; now they increasingly recognize our domestic equipment. Huayu has successfully established cooperation with leading enterprises in the industry." In addition, as one of the earlier companies to embrace intelligent transformation, Huayu took the lead in introducing automatic alarm devices on its two-for-one twisters, helping customers detect and resolve faults promptly and greatly reducing downtime.

It is understood that through in-depth cooperation with universities such as Zhejiang Sci-Tech University, Huayu has continuously achieved breakthroughs in energy-saving technology, automation control, and other fields. Its newly launched low-energy, high-performance, ultra-stable spinning draw texturing machine was rated a Zhejiang Province "first set" product, with obvious advantages in automation and energy-saving and environmental protection reaching international advanced levels.

"Our goal is to make every piece of equipment create more value for customers and help them cope with an increasingly complex competitive market environment," Li Weimin said.

A leader of a leading industry enterprise that switched from imported equipment to Huayu's equipment reported that Huayu's equipment not only achieves the same production efficiency as imports but also reduces energy consumption by 15%, while costing only 60% of imported equipment. This has brought the enterprise significant cost advantages and higher returns on investment.

Through the deep integration of technological innovation and customer needs, Huayu is leading its own transformation with concrete action and providing customers with more competitive solutions.

Service Empowerment Winning Greater Trust

Besides technological innovation, high-quality service is also an important magic weapon by which Huayu Textile Machinery wins the market.

In Li Weimin's view, service is not merely an added value but the very foundation of an enterprise's survival and development. "From management to frontline workers, everyone at Huayu must treat service quality as a core task." Li Weimin emphasized that the company has established a complete after-sales service network to ensure that any problem customers encounter in use receives a rapid response. "We have a professional technical service team that can provide timely technical support in both domestic and overseas markets."

This customer-centered service philosophy is reflected

not only in after-sales service but throughout the entire lifecycle of Huayu's products. Li Weimin explained: "We fully consider customer needs and actual usage scenarios at the product design stage to ensure that products precisely meet customer requirements. At the same time, we provide professional technical training and maintenance services to help customers maximize the stable operation of their equipment."

To better meet the diverse needs of different customers, Huayu has also introduced customized solutions, tailoring the most suitable equipment configurations to customers' actual situations. "Some customers have limited budgets, so we do our best to offer the most cost-effective solutions, helping them achieve greater benefits at lower cost." It is precisely by virtue of such high-quality service that Huayu has won widespread praise and trust from customers.

Li Weimin also shared the case of an Egyptian customer. It is understood that this enterprise originally only had the funds to buy two second-hand imported machines, but through the solution devised by Huayu, it ultimately purchased 100 Huayu machines at an excellent cost-performance ratio, multiplying its production capacity several times over. This "cost-performance" advantage has made Huayu's products stand out globally.

It is understood that in markets such as Indonesia, Pakistan, and Bangladesh, Huayu's equipment is helping local enterprises transform from "second-hand equipment users" into more efficient, scaled-up manufacturers. By providing cost-effective equipment and comprehensive service support, Huayu not only creates significant value for customers but also further consolidates its leading position in the global textile equipment sector.

Global Journey, Writing a Strong Chinese Answer

Since embarking on its internationalization journey in 2007, Huayu's products have reached more than 30 countries and regions. Walking through the workshop, packing cases labelled in English and Arabic can be seen everywhere. "Indonesia is our largest export market for textile machinery, and demand from Egypt is also growing very rapidly," Li Weimin said. "Orders from Southeast Asian countries such as Vietnam and Bangladesh are equally stable. At overseas exhibitions, our equipment has left a deep impression on customers with its outstanding performance—many foreign customers say 'HY' while giving a thumbs-up to express their high recognition of Huayu."

Facing the higher demand for intelligent equipment technology in overseas markets, Huayu is actively positioning its high-end product line and launching targeted intelligent and automated solutions. "In overseas markets, we mainly promote high-end technology products to meet customers' demand for advanced equipment." According to Li Weimin, they are also strengthening collaboration with local partners to jointly promote the intelligent upgrading of the local textile machinery industry.

As a globalized company, Huayu deeply understands the differentiated needs of different markets and further strengthens its localization service capabilities by setting up overseas offices. "The rise of international trade protectionism is both a challenge and an opportunity for us," Li Weimin said frankly. "It will push us to accelerate localized services in overseas markets—for example, setting up offices—so we can serve customers more closely, better understand their additional needs, innovate products and technologies, and provide precise services."

"Overseas customers really like our Chinese products and are very satisfied with our cost-effective offerings. One could say that domestic equipment has made an important contribution to many foreign textile markets." Li Weimin said that as domestic equipment technology continues to develop rapidly, in many product technology fields it can now rival high-end international brands of the same class while offering better cost-performance—customers can buy more Chinese equipment with the same budget, replacing products imported from other countries. "This cost-performance advantage has not only broken international monopolies but also made our equipment shine in overseas markets."

Outside the window, a truck fully loaded with equipment honked as it drove off, the eye-catching "Made in China" label on its body gleaming in the sunlight. This is perhaps a true portrait of the transformation and upgrading of Chinese manufacturing—not a theory sitting still in a laboratory, but an industrial legend of our time, written through the roaring machines and the ceaseless shuttling of trucks.

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Bangladesh Textile Journal
ARTICLE

COMPLEXITY MATTERS:
HOW WOOL PRODUCTION CAN CONTRIBUTE TO NET ZERO AMBITIONS AND SUSTAINABLE RESOURCE MANAGEMENT

Jo-Anne Bester
Projects Consultant,
International Wool Textile Organization (IWTO)



The textile sector increasingly recognises sustainability and reduced carbon emissions as important objectives in its production lines.

Perhaps one of the most meaningful contributions to sustainability in fashion boils down to fibre choice. This means motivating material sourcing specialists to carefully consider the impacts that fibre choice will have on the environment and society, from carbon emissions intensity and recyclability to biodegradability and social welfare.

But in a landscape where materials are compared directly with one another, not only for their performance but also for their sustainability attributes, careful attention must be paid to the details and the many complexities involved.

A familiar tool used to assess the sustainability of materials is life cycle assessment (LCA). To date, LCAs done for wool in accordance with ISO 14040 and 14044 have typically associated wool with high greenhouse gas (GHG) emissions intensities, driven by the enteric methane emissions of sheep as grazing ruminants. However, these standards do not differentiate between biogenic and fossil emissions, and this is problematic.

There is a substantial risk to the environment if we get these comparisons wrong, focusing only on the simplest and most obvious formulas for calculating environmental scores. While linear approaches may work well for pure extraction and factory-based operations, they ignore the multiple complexities and circular nature of natural systems.

This is important when considering natural fibres, since they are grown in natural systems – systems that can be either problematic and extractive or highly beneficial. The primary production context matters.

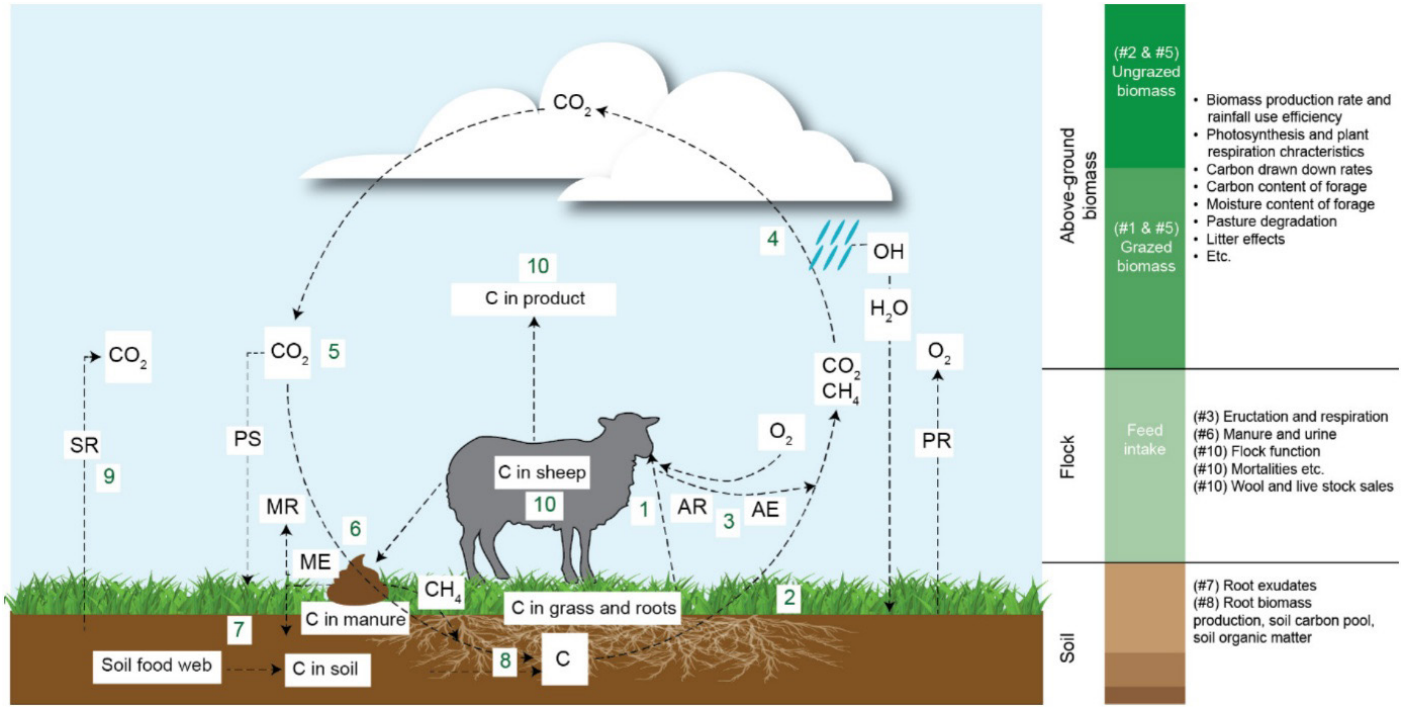


– An example of marginal land, where rainfall and temperatures are too variable for significant crop production. These landscapes boast an incredible rich diversity of plant and animal species.

So how can methane-emitting sheep contribute to Net Zero goals?

It is a well-known fact that ruminants, including sheep, produce methane and that methane is a potent greenhouse gas, much more so than carbon dioxide, albeit only for a short period of time. This is the root of the calls to lower GHGs by reducing the number of ruminants. Alas, nature is far more complex.

When evaluating the true sustainability impact of materials, this **complexity matters**. The calculations for measuring methane emissions in isolation are not wrong in itself; the problem is that these emissions are not considered in an ecosystem context. Ruminants, including sheep, are not merely exhaust pipes that emit methane, but rather live within a landscape, an ecosystem that tends to gravitate towards a state of equilibrium. The question, then, is not only how much methane is emitted, but also the context in which it is emitted.



– An illustration from (Blignaut et al., 2025) that demonstrates how carbon is cycled through sheep in natural grazing systems and is stored in various carbon pools.

Nature offers solutions

The hydroxyl radical (OH) is the troposphere's primary oxidant and breaks down methane, carbon monoxide and volatile organic compounds, and for this reason is central to the GHG emissions conversation.

Due to its extreme reactivity, OH is constantly being created and destroyed, and grazing ruminants on natural pastures play an important role in maintaining the landscapes that generate the precursors of the hydroxyl radical – water vapour, biogenic volatile organic compounds (BVOCs), and soil nitrogen oxides. The more OH is available in the troposphere, the faster methane is broken down, reducing warming.

Well-managed grazing can promote OH formation. In natural grazing systems, soil microbial activity forms nitrogen oxides while plant emissions form volatile organic compounds, which make-up the precursors for the formation of OH (Regenetarinism, August 26, 2026); this is one way OH is formed. Other pathways to OH formation exist, all of which rely on water vapour. Here again, responsible grazing management has proven effective in improving the absorption and retention of water in the soil, which could increase the water vapour available to form these efficient, climate-mitigating molecules.

Much research has been done on feed additives to lower methane emissions, but nature has a solution

to this too. Diverse plant communities that contain tannins, saponins, legumes and herbaceous plant species suppress methane production in the rumen. As a result, animals grazed on diverse natural forage, as is often the case with sheep, will have a very different carbon footprint from those that run on single-species planted pastures or produced under intensive conditions.





– Natural pastures consist of a diverse species mix. Here is an example of two different types of dwarf shrubs that contain tannins, which naturally supresses methane formation in the rumen.

Seeking a balance

The troposphere has a limited capacity to oxidise compounds such as methane and carbon monoxide. This capacity depends on the amount of OH formed relative to the quantity of these compounds present.

The decomposition rate of methane is directly influenced by the global OH concentration and is affected by fossil fuel emissions. These compounds compete for the OH radical, meaning that an increase in thermogenic carbon and carbon monoxide emissions result in fewer OH radicals are available in the atmosphere. Good grazing management offers a solution here, too.

Proper grazing management can substantially reduce the fuel load and, with it, the risk of fire. Intense fires are major emitters of carbon monoxide and methane and consume a large amount of OH radicals. In this way they exert a double climate penalty: they emit methane directly as well as reduce the atmosphere's ability to break it down from other sources. (Regenetarinism, August 26, 2026)

Biogenic or fossil carbon?

The earth is a closed system with a finite amount of carbon. Biogenic carbon is the same carbon that is being cycled and recycled all the time, but fossil (thermogenic) carbon was sequestered by the biogenic cycle hundreds of millions of years ago and was effectively removed from circulation.

Through the burning of fossil fuels, this stored carbon is now being released back into the atmosphere, representing "new" carbon that must once again be processed by the biogenic cycle. It is not enough to refer to "carbon"; a distinction should be made based on its source.

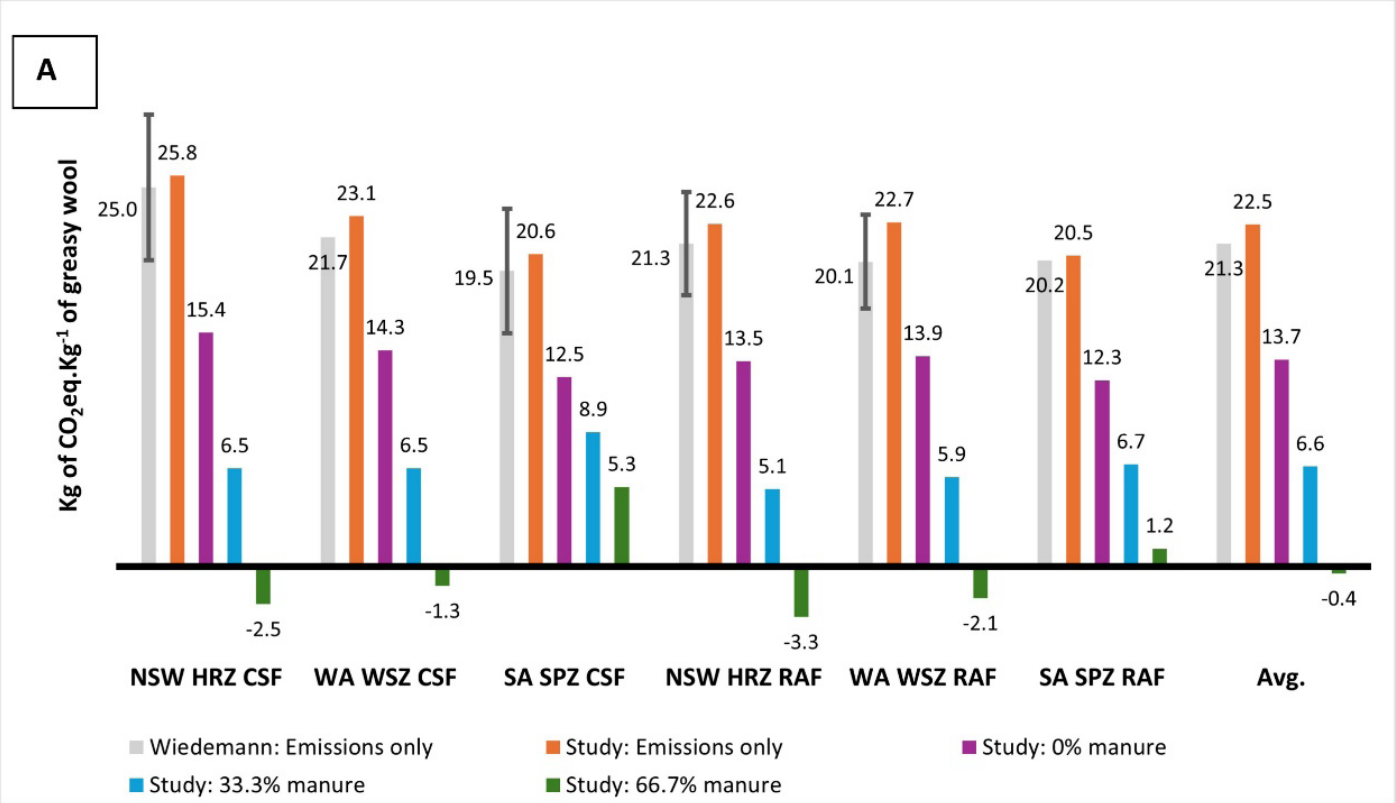
What the accounting says

The ISO 14040 series of standards do not explicitly address the concept of biogenic carbon, and practitioners have therefore tended to ignore it, leading to a carbon bias in which natural fibres are heavily disadvantaged in the carbon accounting system. This has since been addressed by the publication of ISO 14067:2018, which explicitly recognises biogenic carbon to reflect the full or partial carbon footprint of a product by allowing the practitioner to report both emissions and removals.

Until now, LCAs of wool farming enterprises have considered only carbon emissions, never accounting for removals. This grossly overestimates the carbon footprint of wool, and the result is evident in Higg Materials Sustainability Index (MSI) and EU-PEF scores. *(IWTO Green Book, 2026)*.

Work undertaken in the International Wool Textile Organisation's Green Book project, in partnership with CapeWools SA, has led to the publication of Blignaut et al. (2025), the first attempt to conduct a wool LCA according to the ISO 14067 methodology using an

existing LCA conducted on 6 Australian farms. This biogenic LCA analysis, which considered the carbon removals that occur in natural systems, reduced the carbon emissions intensity of greasy wool by between 38.2% and 114.7%. The reduction is broad because it depends on the assumptions used for manure retention, which according to literature varies greatly, between 10-90%. The researchers thus used 0%, 33.3% and 66.7% manure retention scenarios to account for these vast differences. The paper received an additional external review conducted by TÜV SÜD to validate conformance against ISO 14067.



– *Graph taken from (Blignaut et al., 2025).* **Graph A** *demonstrates the carbon emissions intensity of greasy wool for the 6 different Australian farms. The grey bar demonstrates the results from a conventional LCA. The orange bar represents the emissions only scenario in the biogenic LCA, whilst the purple, blue and green bars demonstrate the results under the different manure retention scenarios of 0%, 33.3% and 66.7%, respectively.*

The full cycle must be considered

The full context of production must be considered in order to make decisions that can deliver positive environmental impact. In the case of primary wool production, we need to bear in mind that wool growers produce more than wool: they also maintain diverse landscapes that grow millions of tons of biomass, creating and sustaining habitats that support a diverse array of species and provide a host of key ecosystem services.

Many recent studies that seek to understand the relationship between livestock grazing and plant and soil health indicate that well-managed farms can not only deliver valuable impacts for increased soil formation and health but can also act as net carbon sinks over time, thus contributing to Net Zero goals *(Meissner et al., 2023), (FAO, Global assessment of soil carbon in grasslands, 2023), (Stanley et al., 2024), (Simmons et al., 2025), (Bråthern et al., 2021) and (Reinecke et al., 2025)*.

This raises another issue with typical LCAs: natural systems respond over long periods, not just one or two years. This is true for all ecosystem processes, but in the case of the carbon cycle, plant growth – and so the ability to draw carbon down from the atmosphere – is highly dependent on temperature and rainfall, meaning that seasonal and climatic fluctuations will strongly affect the amount of carbon that can be sequestered or potentially even released.

Likewise, measuring methane emissions over the

short term does not give an accurate account, since methane degrades over a period of about twelve years. For a more accurate picture, we should therefore model these changes over the long term *(Meissner et al., 2023)*.

What do we stand to lose?

The narrow view that reducing livestock numbers would solve our climate crisis is simplistic to begin with, and ultimately short-sighted. Beyond the carbon emissions debate there are many other benefits of raising livestock that should be considered. Livestock have been part of human societies for millennia and play a crucial role in many cultures, promoting social and economic wellbeing (Meissner et al., 2023). This is especially true in developing countries where women are often the owners of the livestock.

Livestock supports low and middle-income communities that live on marginal land where crop production is not feasible; livestock creates jobs, keeps schools and hospitals operating in small towns, and promotes thriving communities. The keeping of livestock also provides access to nutrient-dense food – an issue that cannot be overlooked while malnutrition remains such a big problem globally.

Wool production can help conserve natural resources

A plethora of new information points to the many benefits of well-managed grazing for the environment. Whilst we have historically been of the view that grazing animals lead to over-grazing and land degradation, we are now starting to realise that over-grazing is merely a function of time and not an inevitable result of the animals themselves.

If animals are allowed or forced to graze in an area for an extended period, over-grazing will result, but when **animals are grazed strategically,** they unlock a cascade of beneficial ecosystem reactions.

Grazing for short periods promotes healthy plants by stimulating their regrowth, and over time increases plant density and improves species composition. Healthier plants, combined with the manure and urine excreted by the animals, provide food for soil microbes and aid soil formation, improved soil structure, and increased water absorption and water-holding capacity.





– *Left: Sheep grazing in an extensive, natural grazing enterprise. Right: Kudu - large antelope that are found in South Africa, illustrates how farms do not only produce certain products, but also protects multiple lifeforms.*

This increases resilience to both droughts and floods, and conserves valuable rainwater by limiting evaporation and runoff. Reduced water erosion conserves soil and maintains soil fertility. Increased soil fertility and improved soil structure ensure healthier and increased plant growth, fully harnessing the sun's energy and cycling nutrients back into the wider food web, producing healthier animals and humans.

All of this contributes to the formation of habitats that house a vast and complex diversity of life, from microbes, insects, amphibians and birds to other mammals. At the same time, wool production creates GDP-enhancing products essentially from sunlight and water – resources we are blessed with for free.

Simplicity is often deceptive

These ecosystem, social, and economic benefits cannot be replaced or manufactured. This is the real danger of reducing complex systems to simple metrics when making decisions about sustainability. The context of production and the complexity of natural systems matter, and we should make every effort to include these complexities in our sustainability reporting.



Author Bio

Jo-Anne Bester is a South African textile and wool industry professional associated with the International Wool Textile Organisation (IWTO). Having grown up on a Merino sheep farm in the Karoo region of South Africa, she developed a strong personal passion for wool and its role in the textile value chain. Her professional profile reflects her involvement in the international wool industry, while her education includes studies at Milpark Education.

About IWTO

The International Wool Textile Organisation was established in 1930 as the global authority for standards in the wool textile industry. Today, IWTO's 45 members represent 29 countries across the entire wool pipeline.

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INTERVIEW WITH

ELISABETTA BOTTAZZOLI

Senior Advisor | Sustainability & Circular Economy Expert

Sustainability has evolved considerably from a largely voluntary corporate initiative into a strategic business priority. From your experience, how should companies define "meaningful sustainability" today—and how can they distinguish genuine progress from simply meeting compliance requirements?



If our goal is to ensure fair access to resources — in the broadest sense of the term, with a clear focus on individual and regional needs — and to enable people to achieve lasting well-being based on education and work while respecting shared ethical values; if we aim to maintain a long-term vision that considers the consequences of our current actions on future generations, then we are working toward real progress. Toward tangible sustainable development.

Unfortunately, regulatory compliance requirements vary from region to region, nation to nation, and continent to continent. Given that these standards represent the *conditio sine qua non* for protecting social rights and the environment, a global baseline should be established based on the highest level of protection—rather than the lowest, which serves only to secure profits for a few while depleting the environment and local communities.

Increasingly challenging regulatory compliance demands very high baselines, pushing companies to achieve meaningful sustainability to consolidate their market position, in line with their size and role within the supply chain.

Being sustainable means being responsible and pursuing "shared value" (Porter & Kramer, 2011): continuing to generate economic value for the company while simultaneously aiming for a positive impact on society and the environment at local level and taking global priorities into account.

When a company manages to pursue, achieve, measure, monitor, and implement environmental and/or social benefits over time, it is laying solid foundations for "meaningful sustainability."

You have extensive experience in sustainability reporting and the application of GRI Standards. What makes a sustainability report genuinely useful for a company and its stakeholders, rather than simply becoming another annual reporting exercise?



A sustainability report ceases to be a mere formal exercise and becomes genuinely useful when it undergoes a paradigm shift: it moves away from being a retrospective, ex-post analysis that solely looks at the past, and transforms into a framework for strategic planning and forward-looking guidance. I would emphasize three key aspects that, in my view, remain valid regardless of the reporting framework applied—whether voluntarily or as a regulatory mandate:

- The identification of so-called "material topics" does not exist merely to decide "which metrics to populate and, consequently, what to write in the document." Rather, it serves to pinpoint where the organization's most significant environmental, social, and economic impacts are concentrated, while assessing whether the internal governance mechanisms and risk oversight structures managing these impacts are truly fit for purpose. When conducted with analytical rigor, this assessment clearly indicates the priority vectors along which capital allocation, innovation, and business model evolution should be directed.
- Consequently, a sustainability report is truly valuable to an enterprise only if its data—both quantitative and qualitative—does not remain confined within the realm of mere disclosure, whether for investor relations or external communications. Instead, these metrics must actively feed into management control systems and corporate planning.
- Ultimately, the utility of a sustainability report—as well as the organization's overall credibility and reputation—demands an honest accounting of current realities and a genuine commitment to accountability. This requires disclosing not only positive performance metrics, but also, with equal transparency, operational gaps, systemic constraints, and unmet objectives.

European sustainability regulations are creating new expectations around transparency, due diligence, environmental claims and corporate accountability. How

should companies —particularly SMEs and companies outside Europe that supply European markets—prepare for this changing regulatory landscape?



European regulations have effectively become fundamental requirements for accessing the single market (license to operate and license to sell). For SMEs and non-EU economic operators integrated into European supply chains, the challenge requires navigating a dual track: complying directly with specific legal obligations while managing the trickle-down effect. To prepare effectively for this landscape, enterprises must adopt a structured approach built on operational pillars:

- implementing integrated frameworks and establishing due diligence systems designed to build genuine operational and supply chain risk oversight within their local territories;
- equipping the organization with data infrastructure based on technical specifications, laboratory testing, recognized scientific methodologies, primary data, and verifiable, reproducible metrics;
- achieving rigorous positioning within the European market is a supply condition and makes the enterprise more resilient and competitive.

The concept of double materiality has become increasingly important in sustainability reporting. In practical terms, how can companies identify what is truly material to their business, their stakeholders and the environment?



As is well known, the concept of Double Materiality—a cornerstone of the European CSRD/ESRS framework—represents a fundamental shift in reporting, requiring organizations to evaluate materiality through two interconnected lenses, the Impact Materiality (Inside-Out) and the Financial Materiality (Outside-In). This represents a fundamental paradigm shift, as it requires evaluating not only how ESG factors bear upon financial performance (Outside-In), but also how corporate operations impact society and the environment (Inside-Out).

In practice, however, identifying what is genuinely material frequently falls trap to theoretical over-engineering or self-referential assumptions. To prevent this, management must navigate several common “traps”. A first trap is considering material what is determined solely by perception surveys or internal consensus. True materiality resides where operational risks and structural impacts concentrate — which rarely occurs strictly within company gates (gate-to-gate), but rather upstream or downstream. This necessitates moving beyond generic proxies toward verifiable, primary value-chain data.

Another trap is treating financial materiality as a theoretical exercise. An impact or sustainability driver achieves financial materiality only when it measurably alters the firm’s risk profile, cost of capital, or long-term operational continuity. If the double materiality assessment fails to reallocate Capex, influence C-suite decision-making, or directly feed into the enterprise risk management (ERM) framework, it remains a tick-the-box reporting exercise rather than a driver of corporate strategy.

You have worked extensively on circular economy issues. What needs to change in the traditional linear “take–make–dispose” model before we can say that a company has genuinely moved towards circularity?



As highlighted by measurement frameworks from the Ellen MacArthur Foundation (Circulytics), the WBCSD (CTI – Circular Transition Indicators), and recent international ISO standards on the Circular Economy, circularity cannot be reduced to a simple end-of-life recycling metric. These standards clearly demonstrate that true circularity measures value retention across the entire lifecycle, while integrating key indicators on water stewardship, energy efficiency, and greenhouse gas emission reductions throughout the value chain.

Translating these frameworks into the operational reality of a manufacturing company requires effectively managing material and value flows to decouple corporate growth from negative environmental and social impacts. The core pillars here are ecodesign and prevention,

the adoption of Best Available Techniques (BAT) alongside eco-innovation, robust data and flow measurement and monitoring, and comprehensive traceability covering both materials and information.

Looking again at the European regulatory landscape—specifically the Ecodesign for Sustainable Products Regulation (ESPR)—the Digital Product Passport (DPP) aligns squarely with this vision and is set to become a critical enabler for circularity.

BTJ Recycling is often presented as a central solution to environmental challenges. From your experience, what are the conditions necessary to make recycling systems genuinely effective—including collection, sorting, traceability, technology, markets and consumer participation?



Moving beyond what might be considered self-evident, I am convinced that the environmental, social, and economic efficacy of recycling systems does not begin at sorting or disposal facilities. Rather, it originates in R&D centers, where eco-design and source prevention must serve as the guiding principles for all products and services brought to market. No matter how innovative or high-tech, end-of-pipe recycling solutions implemented post-design cannot be fully effective without a robust upstream awareness of end-of-life outcomes.

Furthermore, the rapid pace of technological innovation is often mismatched by the slow, inadequate adaptation of local collection and sorting infrastructure. Recycling fuels industry; much like primary raw material sourcing, it must guarantee reliable, consistent, and high-quality feedstock streams to ensure security of supply and performance parity.

BTJ Greenwashing has become a major concern, while companies are also facing increasing scrutiny over environmental claims. What principles should businesses follow when communicating their sustainability achievements to ensure that their claims are credible, transparent and verifiable?



It's simple. Environmental claims must be engineered to be verifiable before publication, not adjusted retroactively. If a lengthy explanation is required to prevent misunderstanding, the claim should be rewritten before seeking further evidence.

Taking a step back, sustainability has unquestionably become a key competitive driver. Consequently, this has fueled a surge in misleading, unverified, or outright false messaging regarding the alleged environmental benefits of products and services. To safeguard corporate credibility and market positioning, a company's environmental communications must be backed by a comprehensive and rigorous supporting evidence dossier.

This dossier must be established prior to public release, match the level of detail implied to the "average consumer," and withstand contextual scrutiny—assessing what can be proven, at what level of granularity, with what supporting evidence, and over what timeframe. Furthermore, the substantiation must be prior, statistically representative, complete, verifiable, reproducible, up-to-date, and conducted using recognized scientific evaluation methodologies.

BTJ Many companies, especially small and medium-sized enterprises —struggle with the cost, expertise and complexity of sustainability measurement and reporting. What practical first steps would you recommend to an SME beginning its sustainability journey?



I would focus on the steps that are common to both the journey toward circularity—which, as emphasized, goes far beyond recycling—and the journey toward sustainability, which is certainly not mere reporting.

Guided by the core principle of pollution prevention to safeguard human health and the environment, a practical starting point for an SME lies in identifying the shared elements between both pathways, drawing alignment from the principles of the UN 2030 Agenda for Sustainable Development Goals (SDGs).

Addressing the topic of sustainability can be set up by adopting ISO standards.

Bangladesh is one of the world's major textile and apparel manufacturing hubs, with strong pressure to improve environmental performance while remaining globally competitive. From your international experience, what sustainability priorities should Bangladeshi manufacturers focus on most urgently?

If I wanted to limit myself to a "conciliate" answer, I would say that while I lack an in-depth knowledge of Bangladesh's textile sector, the non-negotiable priorities for the country's manufacturers are the sustainable management of water resources and the rigorous control of process chemistry. This goes hand-in-hand with the essential oversight of human and labor rights through compliance with health, safety, and decent work standards, which form the ethical and operational prerequisite of any value chain.

But this answer is short-lived.

At the risk of sounding like the "usual environmentalist," I must remind us that despite contributing a minimal share to global greenhouse gas emissions (around 0.4%, depending on the metrics and databases referenced), Bangladesh is among the countries most exposed to the consequences of global warming: prolonged heatwaves with extreme humidity levels, increasingly frequent severe weather events, rising sea levels, and soil salinization.

Climate change adaptation and safeguarding the operational continuity of manufacturing infrastructure are the key factor for both sustainability and industrial competitiveness—indispensable for ensuring the resilience of the local economic and social fabric.



About Elisabetta Bottazzoli

Born in 1971, Elisabetta Bottazzoli has a degree in Political Science from Università Statale of Milan in addition to Master's Degree in National Law and Community Law on Environment and an Executive Master in Sustainability and Business Innovation at Bologna's Business School.

Elisabetta Bottazzoli has written extensive publications and continues to give important contribution in important research projects in the field. Throughout her career she has carried out technical-legal support and Environmental Damage Assessments at National Environmental Protection Agency and has ten years of experience at CONAI – National Consortium Packaging. Today she is a freelancer and carries out numerous activities of support, project management and report and evaluation drafting in collaboration with Italian industry associations.



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BANGLADESH'S CREATIVE ECONOMY: TURNING POLICY AMBITION INTO ECONOMIC REALITY

Shawkat Iqbal
Editor in Chief, Bangladesh Textile Journal

The government's ambition to establish creative industries as a mainstream economic sector marks an important shift in recognising arts, culture and traditional craftsmanship as drivers of economic growth. Finance Minister Amir Khosru Mahmud Chowdhury recently highlighted plans to support artisans, painters and cultural workers through financing, skills development, design, branding and international e-commerce platforms.

However, turning this vision into a sustainable industry requires addressing several important gaps.

1. Policy and implementation: The government has expressed its commitment, but the reported announcement does not specify implementation timelines, institutional responsibilities, measurable targets or sector-specific development plans.

2. Access to finance: Although budgetary support and private investment are anticipated, details of funding amounts, eligibility criteria and financing mechanisms remain unclear. Accessible grants and affordable financing are essential for artisans and small creative enterprises.

3. Skills and business development: Creative talent must be supported by training in product development, quality control, pricing, packaging, digital marketing and business management. Training should translate into improved sales and sustainable incomes.

4. International market access: Platforms such as Amazon, eBay and Alibaba offer opportunities, but creators also need support with digital storefronts, international payments, shipping, export documentation and quality standards. Different approaches are required for handicrafts, music, films and theatre.

5. Fair prices and intellectual-property protection: Artisans need stronger bargaining power, direct buyer connections and transparent pricing to secure fair returns. Protecting traditional knowledge, original designs and creators' rights is equally important.

6. Public-private partnerships: Collaboration among government, financial institutions, NGOs and cultural organisations must move beyond events and announcements towards coordinated programmes with clear responsibilities and measurable outcomes.

7. Data and international promotion: A baseline assessment of creative enterprises, employment, earnings and exports is necessary to evaluate progress. International exhibitions, cultural exchanges and distribution partnerships could also strengthen Bangladesh's global visibility and soft power.

The way forward

Bangladesh needs a coordinated national strategy combining accessible finance, practical skills development, market infrastructure, intellectual-property protection and transparent performance monitoring. Support should be measured not only by funding allocated or programmes delivered, but also by increased creator incomes, sustainable employment, enterprise growth and export earnings.

The government has articulated an important ambition. The next challenge is implementation. Bangladesh's creative economy can become a meaningful source of growth only when cultural talent is transformed into sustainable livelihoods and creators receive a fair share of the value they generate.



BANGLADESH TARGETS $1.4 BILLION TO STRENGTHEN CLIMATE-RESILIENT HEALTHCARE

Bangladesh has outlined a potential $1.4 billion financing roadmap to strengthen its healthcare system against the growing threats of climate change, including extreme heat, climate-sensitive diseases, unsafe water and natural disasters.

The proposed funding would support the country's Health National Adaptation Plan (HNAP) for 2026–2031, which requires approximately Tk17,000 crore to improve the health sector's preparedness for climate-related risks, according to a study by BRAC University's Centre for Climate Change and Environmental Research (C3ER).

Released at BRAC Centre in Dhaka on Saturday, the study identifies potential funding sources, investment priorities and institutional reforms needed to implement the plan. The proposed financing remains a target rather than a confirmed commitment.

Prof Iqbal Kabir, director of the Centre for Climate Change and Public Health, said the funding would be essential to implement the adaptation plan and reduce the adverse health impacts of climate change.

Ainun Nishat, emeritus professor at BRAC University and adviser to C3ER, stressed the importance of integrating climate-related health risks into national development planning and public financing.

He called for clearly defined ministerial responsibilities, dedicated budget allocations and greater access to international adaptation finance, particularly grants, to protect vulnerable communities.

Domestic financing to cover more than half of requirements

The study proposes mobilising $380 million from domestic public financing, $360 million through health-related investments in other sectors, $520 million from development partners and $140 million from international climate-finance mechanisms.

Domestic resources could be channelled through health-sector budgets, the Annual Development Programme (ADP) and the Bangladesh Climate Change Trust Fund.

The government could also incorporate climate-resilience measures into public development projects to strengthen healthcare facilities, prepare medical personnel and protect essential medical supply chains from climate-related disruptions.

Investments in drainage, sanitation, safe water and flood-resilient infrastructure could further reduce disease risks and maintain healthcare access, particularly in coastal and flood-prone areas.

Combined domestic public financing and health-related investments in other sectors could cover approximately 53% of the plan's total funding requirements.

However, the study recommends transparent financial accounting to identify expenditure directly attributable to climate-related health interventions and prevent double-counting across funding sources.

Development partners and global climate funds in focus

Development partners could contribute a proposed $520 million, equivalent to around 37% of the total financing target.

Potential opportunities include aligning programmes supported by the World Bank, UNICEF, the World Food Programme, the World Health Organization and the United Nations Population Fund with the HNAP's investment priorities.

Priority areas include climate-resilient healthcare infrastructure, disease surveillance, maternal and child health, nutrition and emergency preparedness. Financing could include concessional loans and programme support, subject to negotiations and existing commitments.

The study also identifies the Green Climate Fund, Adaptation Fund and Least Developed Countries Fund as potential sources of international climate finance.

Bangladesh could prepare targeted proposals for disease early-warning systems, heat-health advisories, climate-vulnerability assessments and adaptation measures in coastal and flood-prone communities.

Ahead of COP31, the proposed roadmap could help the country present more focused investment proposals to development partners and international climate-finance institutions.

The study particularly emphasises grant financing for prevention and preparedness measures that generate substantial public-health benefits but do not produce direct financial returns.

Further project preparation and negotiations would be required to establish the availability of grants and co-financing under the proposed $140 million international climate-finance target.

Four priorities account for 69% of planned investment

Four major components account for $966 million, or approximately 69% of the HNAP's investment framework.

The proposed allocations are:

- **$350 million:** Resilient, low-carbon infrastructure, technologies and supply chains.
- **$266 million:** Integrated risk monitoring, early-warning systems and emissions tracking.
- **$210 million:** Development of a climate-smart health workforce.
- **$140 million:** Leadership and governance.

Proposed interventions include upgrading healthcare facilities exposed to flooding and coastal hazards, installing solar power systems and strengthening vaccine cold chains to keep essential health services operational during disasters.

Integrating meteorological information with disease-surveillance systems could improve outbreak preparedness and enable authorities to respond more quickly to emerging health threats.

Specialised training would also help doctors, nurses,

pharmacists and other healthcare professionals identify and manage climate-related health risks.

Stronger governance and accountability needed

The study recommends introducing climate-risk assessments for new health-sector development projects and establishing a dedicated taskforce within the Ministry of Health and Family Welfare to develop costed interventions.

Relations Division would coordinate development-partner financing and applications to international climate funds. The Planning Commission would support climate-health assessments and identify health-related contributions from investments in other sectors.

The study emphasises that identifying existing resources, securing financing commitments and preparing projects with clear timelines and measurable health outcomes would be essential to translate the adaptation roadmap into funded programmes.

Coordination and capacity building remain critical

Speakers said Bangladesh had significant opportunities to secure international funding to address climate-related health risks but had faced challenges in mobilising such resources effectively.

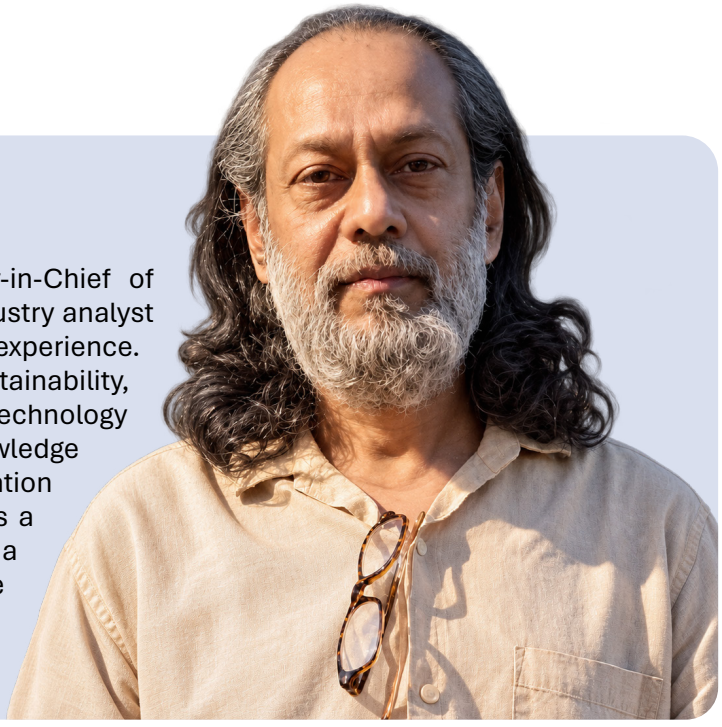
They called for stronger coordination among government agencies, private-sector organisations and non-governmental organisations, alongside blended financing approaches to address funding gaps in the health sector.

The speakers also stressed the need to train healthcare professionals on climate-related health risks and incorporate the subject into educational curricula.

As climate change increasingly threatens public health, the proposed $1.4 billion financing roadmap offers Bangladesh a framework for mobilising domestic resources and international support. Its success, however, will depend on converting proposed funding targets into firm commitments, strengthening institutional coordination and ensuring that investments deliver measurable benefits for climate-vulnerable communities.

Author Bio

Shawkat Iqbal is the founder and the Editor-in-Chief of Bangladesh Textile Journal (BTJ) and a textile industry analyst with more than 25 years of corporate and industry experience. He specializes in textile manufacturing, sustainability, circular economy, international trade, and technology trends. Through BTJ, he promotes industry knowledge sharing, global collaboration, and innovation across the textile and apparel value chain. He is a regular contributor to industry publications and a moderator and organizer of international textile industry events and business forums.




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Bangladeshi Textile King ***Mr. Mohammad Nurul Islam*** (the founder of the ***Noman Group, Zaber & Zubair Group, Saad Group of Industries & Talha Group***) is one of the most honorable and biggest clients of Ching Jui Trade International who has bought more than 6 lacs spindles of Textile Spinning Machineries. The company is really very thankful to all of its honorable clients for keeping their faith on its effort in this 28 years long journey.







Bangladesh Textile Journal
ARTICLE

MANDATORY FIELDS STILL MISSING
FROM SMALL-BRAND TECH PACKS

Ademar Neadstine
Founder, Clothing Manufacturer China



Small brands often treat a tech pack as a PDF that "looks complete." On a cut-and-sew line in China, completeness is measured differently: can a cutter, a sewing supervisor and a QC inspector execute the same garment without calling the merchandiser every hour? The packs that fail that test usually share the same gaps. Four fields are still missing more often than not: tolerances, measurement method, reference-sample version, and revision ownership.

This is a practitioner note for merchandisers and sourcing teams who brief overseas factories. It is not a PLM product review. The examples are from cut-and-sew menswear programmes (tees, polos, shorts, light jackets and related styles) at roughly 100 pieces per colour per design and above.

Tolerances are not optional decoration

A measurement chart that lists "chest 56 cm" without a tolerance is an invitation to argue after bulk. Factories need a signed tolerance band for critical points - typically ±1 cm or ±0.5 cm depending on the point and the fabric - and a clear rule for what happens when a sample sits on the edge of the band.

Without tolerances, every PP sample becomes a negotiation. With them, QC can pass or hold a size set against a written standard instead of a WhatsApp screenshot. If you only add one field this month, add tolerances next to every critical measurement and state whether they apply to the graded size set or only to the sample size.

Measurement method must travel with the number

"Chest 56 cm" still fails if nobody agrees how chest is measured. Across brands we see three common methods for the same point: high-point shoulder to high-point shoulder then down; armhole to armhole at a fixed distance; or circumference measured on a flat garment with a specific fold. Each can produce a different number on the same sample.

Put the method in the pack: where the tape starts, whether the garment is flat or filled, and whether measurements are taken before or after wash. Attach a one-page diagram if the point is non-standard. When the method is missing, the factory invents one - and the brand discovers the mismatch only when bulk arrives.

Reference-sample version control

Most disputes we see are not about the PDF. They are about which physical sample governs. Brands send a "gold" sample, then a revised sample, then a salesman's sample with a different wash or print placement. The line receives one of them. Merchandising retains another. QC measures against a third photo.

Name the governing sample in the tech pack: style code, colourway, size, date received, and a short label such as "PP approved 2026-09-12 - governs bulk." If a later sample overrides it, issue a revision that retires the old label. Do not leave two sealed samples in the factory without saying which one wins.



Revision ownership: who confirmed the change reached the line?

Comments pile up in email, WeChat and shared drives. A pocket move approved in a mark-up never reaches the cutting table. A print colour corrected in a lab-dip email never updates the bulk strike-off log. The missing field is not another comment thread - it is an explicit owner and timestamp for “production has this revision.”

A workable minimum: every approved change lists (a) what changed, (b) who approved it, (c) the document or sample version that now governs, and (d) who at the factory confirmed the line received it. Until (d) exists, treat the change as not live.

A minimum viable tech-pack checklist before bulk cutting

Before you release a cut-and-sew programme to bulk, check that the pack (or linked files) includes:

- Style identity: style code, colourway names, season or programme ID.
- Construction: stitch types, SPI where critical, seam allowances on risk seams.
- Measurement chart with tolerances and measurement methods for critical points.
- Graded size set or clear base size plus grade rules.
- Fabric and trim specs with approved lab dips / handlooms where colour matters.
- Artwork placement with measurable offsets from seams or centre lines.
- Reference-sample label (which physical sample governs).
- Bill of materials with supplier codes the factory can reorder.
- Revision log with owner and line-receipt confirmation for the latest change.
- QC hold points: what must pass before bulk cutting proceeds.



Why this reduces cost for both sides

Missing fields look like paperwork. In practice they create sample loops, delayed cutting tickets, disputed shipments and chargebacks. A tighter pack does not replace relationship or capacity. It reduces the number of times a line stops to ask which sample is real.

For Bangladesh and other export hubs serving small brands, the same gaps appear when tech packs are adapted from larger PLM exports without the factory-floor fields. A short, explicit pack beats a long, ambiguous one.

How missing fields show up on the line

When tolerances are absent, supervisors pad measurements “to be safe,” then bulk comes out large. When measurement method is absent, a chest number that matched the sample size fails on the graded set. When reference-sample version is unclear, print placement follows the salesman sample while wash follows the PP. When revision ownership is missing, an approved collar height change appears on only half the cut.

None of these failures require exotic machinery. They require the brand to write down what the line is already guessing.



A practical sequence for the next programme

For the next 100-piece-per-colour cut-and-sew drop:

1) Freeze the measurement chart with tolerances and methods before the first PP.

2) Seal and label one governing sample after PP approval.

3) Open a one-page revision log that production must initial when a change goes live.

4) Hold cutting until the four fields above are present or explicitly waived in writing.

That sequence is shorter than another round of samples. It also gives Bangladesh export teams a clearer handoff when the brand's PLM export is incomplete.

Closing

Tech packs fail less often because of software gaps than because of silent assumptions. Tolerances, measurement method, reference-sample version and revision ownership are the four assumptions we still see left unwritten. Write them once, and both the brand and the factory spend less time arguing about what "approved" meant.

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ARTICLE



ETHICAL MANAGEMENT IN BANGLADESH'S TEXTILE INDUSTRY:

FROM COMPLIANCE BURDEN TO COMPETITIVE ADVANTAGE

K. M. Ziauddin Mahamud

Ethical management in Bangladesh's textile industry is often reduced to audit readiness. Factories keep the policies, certificates and files that buyers ask for, yet the decisions that shape workers' lives and customers' trust are made elsewhere: in the quotation, the delivery promise, the production report and the supplier file. This conceptual paper examines ethical management from the commercial and operational side of the industry. Drawing on published research, international due-diligence guidance and common practice in woven-fabric manufacturing, it proposes a five-pillar framework, argues that responsibility is shared between buyers and suppliers, illustrates the argument with a hypothetical delivery-delay case, and offers performance indicators and a six-step implementation roadmap. The central point is simple: when ethics shapes how orders are priced, promised, reported and delivered, it stops being a cost of doing business and becomes part of running a mill or factory well.

Keywords: Ethical management, Bangladesh textile industry, labour rights, responsible sourcing, buyer–supplier relationships, sustainability, supply-chain transparency.

Introduction: Ethics Must Reach the Factory Floor

Textile and garment exports are one of the main engines of Bangladesh's economy, and the industry's standing with international buyers depends on more than capacity and price. Buyers expect consistent quality and dependable delivery, and they increasingly expect evidence that goods are made responsibly.

Discussions of ethics in this sector usually focus on labour rights, building safety, environmental protection and social compliance audits (Khan et al., 2019; Ethical Trading Initiative [ETI], 2024). These topics matter, but they describe only part of the picture. Ethics also appears in how a sales team prices an order, how a planner reports a delay, how a supervisor responds to a complaint and how a buyer changes an order late in the production cycle.

A factory can hold every required policy and still struggle in these everyday moments. Workers hesitate to report problems because they fear blame. Sales teams accept delivery dates that production cannot meet. Managers delay bad news until the shipment is already at risk. Environmental targets appear in the sustainability report but not in the daily production plan. Compliance systems alone cannot prevent this.

The distinction matters. Compliance asks whether a company meets laws, standards and contractual requirements. Ethical management asks a further question: are our decisions fair, honest and respectful of the people they affect? Take a yarn shortage that disrupts dyeing, weaving, processing and shipment. No manager can make the shortage disappear, but an ethical approach means reporting it honestly, assessing the consequences, coordinating corrective action and refusing to make promises with no realistic operational basis.

Responsibility also does not end at the factory gate. International buyers shape working conditions through their prices, order volumes, forecasts, delivery expectations, payment practices and late changes (Islam et al., 2023). Responsible business conduct therefore has to be considered across the whole supply chain (OECD, 2018).

This paper asks how ethical management can become a working management approach inside Bangladesh's textile industry. It is a conceptual, practice-oriented review drawing on research on ethical labour management and purchasing practices, international due-diligence guidance, recent regulation and operating patterns commonly seen in textile manufacturing. It reports no primary survey or interview data, and the case in Section 6 is hypothetical. The framework, indicators and roadmap are meant as a practical structure for managers and a starting point for empirical testing.

Industry Context: Scale, Pressure and Opportunity

The scale of the industry makes ethical management an economic concern as well as a social one. According to provisional Export Promotion Bureau data published by the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), ready-made garment exports reached about US$38.70 billion in fiscal year 2025–26. That was around 80.6% of total merchandise exports of roughly US$48.0 billion (BGMEA, 2026; The Business Standard, 2026). An industry this dependent on one export category cannot afford to lose its reputation for reliability.

Buyers want competitive prices, consistent quality, shorter development cycles, traceability and evidence of responsible production, while manufacturers manage uncertain raw-material supply, energy availability, financing costs and shipping schedules.

Textile production is unusually sensitive to coordination. A delay in yarn procurement can hold up yarn dyeing, weaving, wet processing, finishing, inspection and shipment, even if every other department performs well. Under that kind of pressure, rushed decisions, optimistic promises and incomplete reports become tempting, and problems get passed to the next department instead of being solved. This is where ethical management becomes an operational matter. A company that encourages early reporting has time to arrange alternative materials, reset priorities or negotiate a realistic delivery date. A company that discourages bad news may find out only when the options have run out.

The industry therefore has an opportunity to move past a narrow idea of compliance. A factory should be judged not only by whether it passes an audit or holds a certificate, but by how consistently its managers apply policies, respond to grievances, report risks, treat suppliers fairly and complete corrective actions. Ethical management is part of commercial success, not separate from it: it is how a business protects its people, serves its customers and keeps the trust that long-term relationships depend on.

Understanding Ethical Management in Textile Manufacturing

Ethical management means making and carrying out business decisions in a way that is fair, honest, transparent, accountable and respectful of the legitimate interests of stakeholders. In textile manufacturing these include workers, managers and owners, suppliers and subcontractors, international buyers, regulators, surrounding communities and the natural environment. Their interests sometimes conflict, and ethical management helps managers balance them without relying on short-term financial considerations alone.

Consider an urgent order that would bring welcome extra business. If production lacks the capacity, materials or processing time, accepting it without a recovery plan may end in excessive overtime, compromised quality, added cost or a late shipment. The ethical response is not necessarily to refuse. It is to check capacity, consult the departments involved and give the customer a commitment that can actually be kept.

This paper organises ethical management around five connected pillars (Figure 1):

- **People and labour ethics:** respect for workers' rights, safety, dignity and voice.
- **Customer and commercial ethics:** honest information, realistic commitments and fair commercial treatment.
- **Operational integrity:** accurate reporting, responsible planning, quality discipline and accountability.
- **Environmental responsibility:** careful management of resources, chemicals, emissions, wastewater and waste.
- **Business integrity and transparency:** no corruption, conflicts of interest, falsification or unauthorised subcontracting.



Figure 1. The five-pillar framework of ethical management in textile manufacturing, built on a foundation of ethical leadership (developed by the author).

All five rest on ethical leadership. Policies cannot create an ethical workplace if managers reward people for hiding problems, overlook unfair treatment, or push departments to hit targets at all costs. When senior management communicates honestly, accepts accountability and applies rules consistently, those habits spread through the organisation.

The Five Pillars in Practice

1. People and Labour Ethics: Respect Beyond Compliance

Workers are central to textile manufacturing. Their skill, experience and commitment shape efficiency, quality and delivery, so protecting their rights is both an ethical duty and sound management. Labour ethics covers safe conditions, lawful wages, reasonable working hours, fair treatment, freedom from harassment and discrimination, and access to effective grievance mechanisms (Khan et al., 2019). Workers should be able to raise concerns without fear of retaliation.

A policy on paper does not guarantee any of this. A grievance procedure has little value if workers believe complaining will cost them their jobs, and formal overtime rules mean little when poor planning keeps forcing long hours. The useful question is how policies work in practice: do workers know their rights, are complaints investigated objectively, and are corrective actions recorded and finished?

Production pressure needs special attention. When a shipment slips, management may need extra hours or revised priorities, but those decisions must stay within labour law, contractual requirements and worker-protection standards. A delivery problem should never become an excuse for unsafe conditions or coercion. Supervisors matter most here because they turn management decisions into daily practice. One who humiliates workers or discourages defect reporting damages morale and performance; one who explains targets clearly and listens to concerns builds trust. Equal opportunity, fair recruitment, harassment prevention and maternity protection belong in regular management reviews, not only in audit files.

2. Customer and Commercial Ethics: Honest Costing and Realistic Commitments

Export customers judge a supplier on more than price. They look at consistency, communication, responsiveness, traceability and, above all, whether commitments hold. Ethical customer management starts with accurate information. A quotation should rest on a sound assessment of material cost, processing requirements and specifications, and any assumption that could materially change the price should be stated.



A low quotation may win the order, but if the cost was never properly assessed it puts pressure on production, tempts people to cut necessary controls and leads to disputes when extra costs surface. Delivery dates need the same discipline. Before confirming one, the relevant teams should review material availability, capacity, laboratory approvals, processing lead

times, and inspection arrangements. In a textile mill the delivery date is not simply a number entered by sales. It is the result of a chain of linked activities, and a promise that ignores the chain creates pressure all the way down it.

When circumstances change, the customer should hear about it promptly, with a realistic recovery plan. Hiding a known problem avoids an awkward conversation for a while and damages the relationship badly when the buyer finds out. The same applies to quality: a manufacturer should not conceal defects, substitute materials without approval or report test results that misrepresent the product. Commercial ethics does not mean agreeing to every buyer demand. It means negotiating professionally, explaining constraints honestly and keeping promises.

3. Operational Integrity: Planning, Reporting and Accountability

Operational integrity is the honesty and discipline with which an organisation plans, runs, monitors and reports its work. A typical woven-fabric order may pass through yarn procurement or spinning, yarn dyeing where required, weaving, fabric inspection, wet processing, finishing, testing, final inspection and shipment. Routes and durations vary, but the delivery outcome depends on coordination across the whole chain (Figure 2).

It begins with reliable information. Production reports should show actual progress, not the progress

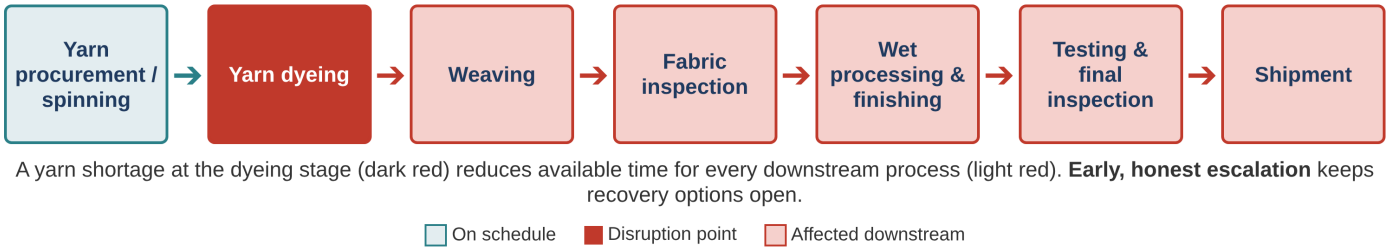


Figure 2. Simplified woven-fabric order chain showing how a delay at one stage moves downstream to shipment (developed by the author; actual routes vary by product).

managers would like to see. Material shortages, machine downtime, quality concerns and capacity limits must be recorded accurately; if a department reports an order as on schedule despite a substantial delay, management loses the chance to step in early. The cause is not always dishonesty. People often avoid bad news because they fear blame, and departments may calculate completion dates on different assumptions. Clear reporting definitions, consistent data and a culture that welcomes early escalation are the remedy.

Delivery performance is a shared responsibility. Sales should not commit to dates without production input, planning should set achievable schedules, procurement should watch critical materials, production should report real capacity and quality should flag approval risks. One practical principle helps: separate a problem from the reporting of that problem. People should answer for negligence, concealment or repeated failure to follow procedures, but not be punished for raising a genuine risk early. Otherwise the organisation teaches silence.

4. Environmental Responsibility: Beyond Green Buildings and Certificates

Textile manufacturing puts real pressure on water resources, energy systems and the surrounding environment, particularly in wet processing, dyeing, washing, printing and finishing. Many factories have invested in cleaner technology and management systems, which is valuable, but environmental responsibility cannot be judged by buildings, certificates or audit scores alone. It has to show up in daily operating practice.

In practice that means proper chemical storage and handling, wastewater treatment, monitoring of discharge parameters, efficient use of water and energy and responsible waste disposal, all within environmental law, permit conditions and customer requirements. Claims also need evidence: a product should not be described as sustainable, recycled or low-impact unless the company can support that with verified information on composition, origin, processing and certification. Water reuse and resource efficiency can reduce environmental pressure and improve resilience (Isaac & Webster, 2026), but they need technical assessment, investment and monitoring, and they are not universal solutions.

Environmental and operational efficiency often point the same way, since less rework and better process control mean less waste and lower cost. A practical programme starts with measurable baselines, such as water and energy use per unit, wastewater compliance, chemical-management performance and waste generated, and reviews progress over time. The aim is not to show that a policy exists but that environmental risks are understood, controlled and steadily reduced.

5. Business Integrity and Supply-Chain Transparency

Ethical management also demands integrity in purchasing, recruitment, subcontracting, financial transactions and documentation. Conflicts of interest arise when employees recommend suppliers, approve purchases or negotiate deals in which they have an undisclosed personal stake, and gifts or commissions can quietly distort decisions. Organisations need clear rules for such situations and a safe way to report suspected misconduct.

Records must match reality. Purchase orders, invoices, production records, inspection reports, test results and shipment documents should be accurate and consistent with the underlying transactions, because falsified records expose a company to legal, financial, contractual and reputational risk. The same applies to the supply chain. A manufacturer should know which suppliers and subcontractors are involved in an order and obtain approval before production moves elsewhere, since unauthorised subcontracting clouds quality, labour conditions and traceability. Where customers specify fibre origin, recycled content or restricted substances, claims should rest on records and verification, not verbal assurances.

Transparency does not mean publishing every commercial detail. It means keeping accurate records, giving authorised stakeholders the information they are entitled to and never misrepresenting how a product was made. These practices work when employees understand the rules and managers apply them without favouritism.

Buyer–Supplier Ethics: Responsibility Must Be Shared

Ethical management cannot be achieved by placing all responsibility on manufacturers. Buyers and suppliers work inside the same commercial relationship, and both sets of decisions affect production conditions, financial stability, quality and delivery. Buyers legitimately expect competitive prices, reliable quality and on-time delivery; suppliers need accurate forecasts, clear requirements, workable lead times, timely approvals and commercially sustainable terms.

The tension shows up in purchasing practice. A request for a lower price, a shorter lead time, a smaller quantity or a changed order may look reasonable on its own. Repeated, such requests increase material waste, disturb capacity planning and raise the risk of late delivery. Islam et al. (2023) studied unfair purchasing practices affecting Bangladeshi garment suppliers during the COVID-19 period and documented order cancellations, price reductions and delayed payments. Those findings describe the period studied and should not be read as a measure of current practice across all buyers, but they show why responsible purchasing deserves attention alongside factory-level compliance.

Buyers can act responsibly in several concrete ways:

- providing clear and reasonably stable forecasts;
- communicating design, specification and order changes promptly;
- allowing lead times that match the product and production route;



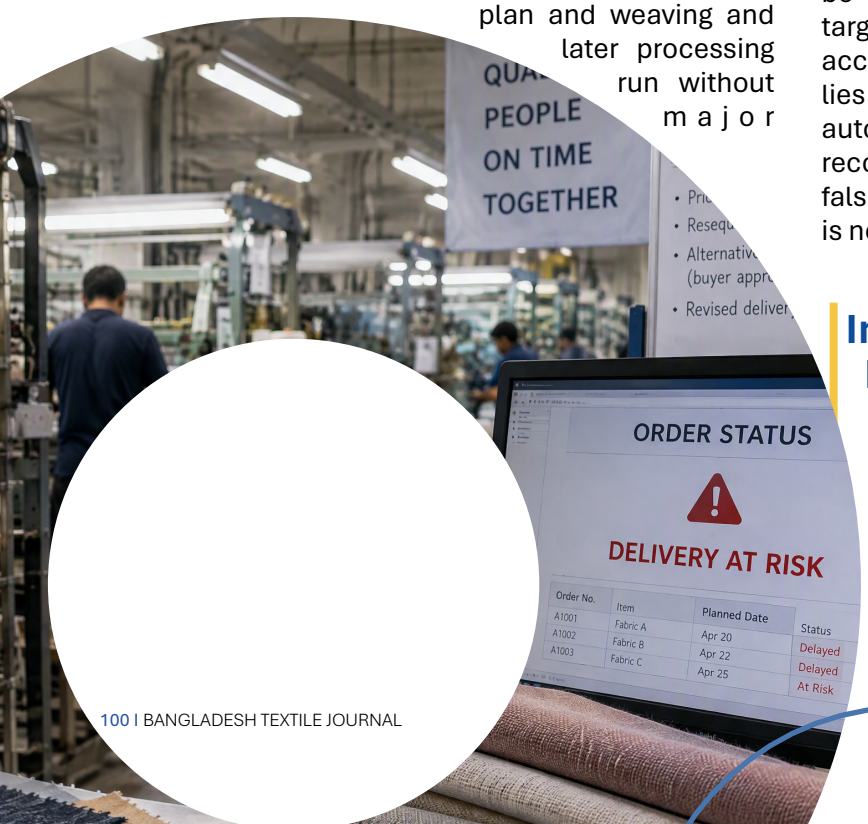
- paying on the agreed terms and handling cancellations and claims fairly;
- avoiding demands that effectively push suppliers to compromise worker welfare, quality or legal requirements; and
- working with suppliers on significant risks instead of relying only on penalties.

Suppliers carry their own duties. They should not accept orders without a realistic assessment of capacity, conceal known production risks, manipulate test results or use unauthorised subcontractors. When a genuine shortage or interruption occurs, the supplier should give an evidence-based explanation, identify the affected quantities and present a recovery plan, and the buyer should assess the facts and consider reasonable options while keeping its contractual rights. Shared responsibility does not mean every delay is the buyer's fault or that poor planning should be excused. It means each party answers for the decisions within its control.

An Illustrative Case: When a Delivery Date Becomes an Ethical Test

The following example is hypothetical. It illustrates a common kind of operational challenge and does not describe a specific company or verified incident.

A woven-fabric manufacturer accepts an order for a buyer's seasonal collection. The delivery schedule assumes yarn arrives on time, yarn dyeing goes to plan and weaving and later processing run without major interruption. Then a yarn shortage develops and dyeing falls behind. Weaving cannot complete the planned quantity, and the delay moves on to finishing, final inspection and shipment preparation. The delivery date in the order system has not changed, but the real position has deteriorated. The company now faces an ethical test.



One response is to play down the delay. Sales keeps reporting that delivery is under control while production is told to recover the schedule without a realistic look at capacity. As the deadline nears, the company faces rushed processing, extra cost, pressure on employees, quality risk and possibly air freight or cancellation.

The other response is to acknowledge the risk early. The responsible teams verify the available yarn, identify the affected quantities, review remaining lead times and work out the earliest realistic completion dates. Management then tells the buyer plainly, without exaggeration, and proposes options: prioritising certain quantities, resequencing production where technically feasible, using alternative materials subject to buyer approval, or agreeing a revised delivery arrangement. Any plan must respect quality requirements, worker protections and contractual obligations. This approach does not guarantee that the original date will be met. Its value lies in the quality of the decision-making.

Four lessons follow. Accurate information comes first, because nobody can decide responsibly on misreported status. Early escalation is a strength, not a weakness. Commercial commitments must be backed by operational evidence, and sales targets should not override realistic lead times. And accountability should follow the cause, whether it lies in material supply, planning or approvals, not fall automatically on the last department in the chain. A recovery plan that protects the date by ignoring safety, falsifying records or knowingly compromising quality is not a recovery plan.

International Due Diligence: Preparing for Responsible Business Expectations

Global garment supply chains increasingly expect companies to identify, prevent, mitigate and address the adverse impacts of their activities, and to show how they do it. The OECD's due diligence guidance for the garment and footwear sector offers a useful framework: embed responsible

conduct in policies and management systems, assess actual and potential impacts on workers, human rights and the environment, prevent and mitigate them, track results, communicate accurately and provide for remediation where appropriate (OECD, 2018, 2026). For manufacturers this means reviewing labour risks, monitoring subcontractors, keeping accurate material records, strengthening chemical management, investigating grievances and documenting corrective action.

Regulation is moving in the same direction, though more slowly than once expected. The European Union's Corporate Sustainability Due Diligence Directive, Directive (EU) 2024/1760, was amended by Directive (EU) 2026/470, published in the Official Journal on 26 February 2026 (European Parliament & Council of the European Union, 2024, 2026). Member States must transpose it by 26 July 2028, with application from 26 July 2029. The amendment narrowed the scope to very large companies: broadly, EU companies with more than 5,000 employees and over EUR 1.5 billion in net worldwide turnover, and non-EU companies with over EUR 1.5 billion in net turnover generated in the EU.

Exact obligations depend on the legislation, the company's circumstances and the implementing rules. Bangladeshi manufacturers will generally not be covered directly, but many of their European buyers will be, and they are likely to pass due-diligence expectations down the chain through information requests and contract terms. The sensible response is to build reliable systems now, with accurate records, a clear view of significant risks, named owners for corrective actions and regular checks that improvements work, rather than wait for a particular audit or deadline. Due diligence should not become another paperwork exercise; its purpose is to find and fix risks before they cause harm.

Measuring Ethical Management: From Audit Findings to Performance Indicators

A policy that is never reviewed has little influence on daily work, while too many indicators create administration without improving decisions. Companies should choose a manageable set that reflects their main risks, rests on reliable data and has named owners. Table 1 gives examples that can be adapted to a factory's size, processes and available information.

Area	Possible indicators	Management purpose
Worker welfare	Grievances received and resolved; resolution time; safety incidents; overtime patterns	Assess worker protection and responsiveness
Customer ethics	Frequency of order changes; documented delivery-risk notifications; disputes linked to unclear commitments	Improve communication and commercial discipline
Production integrity	Schedule adherence; material shortages; accuracy of production status; defect and rework rates	Identify operational risks earlier
Environmental performance	Water and energy use per unit of output; wastewater compliance; waste generated	Monitor resource efficiency and environmental control
Supply-chain transparency	Approved subcontractor coverage; traceability-record completeness; supplier corrective-action closure	Strengthen visibility and control
Business integrity and leadership	Ethics-training completion; conflict-of-interest declarations; investigated reports; corrective-action closure	Review awareness, accountability and governance

Table 1. Example indicators for measuring ethical management in a textile factory.

Indicators need careful reading. A rise in reported grievances does not necessarily mean conditions have worsened; it may mean workers trust the reporting system more. Likewise, a high on-time delivery rate proves little if it is achieved through unsustainable overtime, hidden subcontracting or inaccurate reporting. Targets should reward responsible performance, not a single outcome at any cost, and repeated delivery failures that stem from unrealistic commitments call for better order acceptance and capacity planning, not just pressure on production staff. The purpose of measurement is not a perfect ethical score. It is to show where risks exist and whether controls work.

A Six-Step Roadmap for Implementing Ethical Management

Ethical management does not require a complicated new system. Often the more important task is to connect existing policies, responsibilities and procedures so that ethical principles influence everyday decisions. Figure 3 shows a six-step roadmap as a practical starting point.

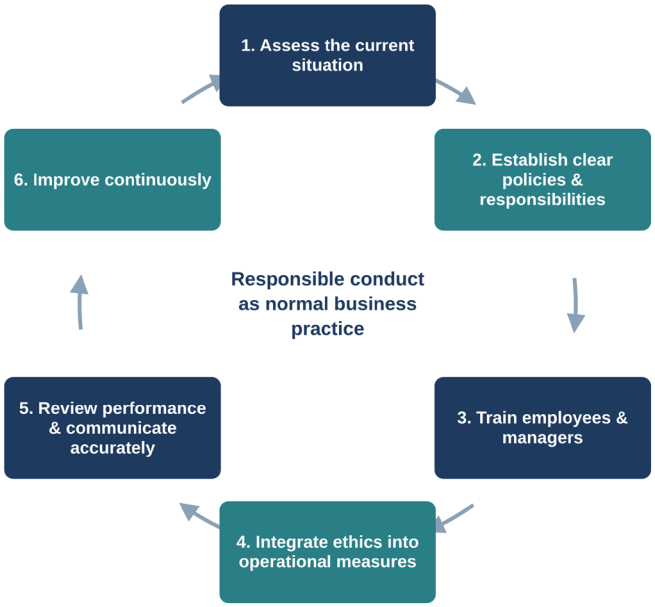


Figure 3. Six-step roadmap for implementing ethical management as a continuous cycle (developed by the author).

Step 1: Assess the current situation. Review policies, audit findings, grievances, customer complaints, environmental records, production delays and supply-chain risks, and look for gaps between documented procedures and actual practice. A policy may require delivery risks to be escalated, but are they reported in time to act? Employee input reveals what documents cannot, and the assessment should be used to learn, not to assign blame.

Step 2: Set clear policies and responsibilities. Define expectations for labour rights, respectful behaviour, anti-bribery, conflicts of interest, accurate reporting, environmental duties, customer communication and supply-chain transparency. Say who is responsible for implementation and escalation, how concerns are reported and what protects people from retaliation. Senior management must apply these rules consistently.

Step 3: Train employees and managers. Training works best when it addresses situations people actually face: realistic costing and delivery commitments for sales and marketing; accurate reporting and risk escalation for production and planning; conflicts of interest and documentation for procurement; respectful communication and grievance handling for supervisors. Refresh it when procedures change or problems recur.

Step 4: Build ethics into operational routines. An order-review meeting can look at material availability, realistic lead times, capacity and the risk of late changes as well as price and delivery date, and a production review can test whether reported progress matches actual output. Labour and environmental indicators should sit beside productivity and quality, so that financial and delivery targets are not the only measure of success.

Step 5: Review performance and communicate accurately. Review the indicators from Table 1 regularly, looking at trends, repeated failures, open grievances and the effectiveness of corrective action. Separate individual misconduct from weak systems, inadequate training and unrealistic expectations, because each needs a different response. Report honestly on what has been done and what remains unresolved.

Step 6: Improve continuously. New customer requirements, regulations, technology and workforce needs create new risks. Learn from complaints, delays, quality failures and supplier assessments, and address root causes. If the same issue keeps recurring,

ask whether the procedure, resources, incentives or leadership behaviour has to change, and recognise people who report risks early or suggest practical improvements.

Challenges and Recommendations

Implementation is rarely straightforward. Manufacturers face financial limits, intense price competition, limited technical resources and short lead times. Smaller suppliers may struggle to build documentation systems, invest in environmental upgrades or answer many different buyer assessment frameworks, and even larger firms stumble when departments have conflicting targets. Measurement needs care too: if managers are rewarded only for shipments they may underreport risks, and if grievance numbers are read as failure, workers may stop raising legitimate concerns. A practical answer is to start with the most significant risks, clear responsibilities and a few reliable indicators, and build more advanced systems as capacity grows. Each group has a different part to play.

Factory owners and senior management should treat ethical management as a core responsibility rather than leaving it to the compliance team: set clear standards and apply them consistently, review production commitments before accepting orders, encourage timely risk reporting, protect workers' rights, link environmental goals to measurable practice and avoid incentives that reward output at the expense of safety, quality or honest reporting. Leaders should also examine their own behaviour. If employees are told to be honest but every reported problem is met with punishment, the organisation sends conflicting messages.

Sales, marketing, planning and production teams meet where commercial promises collide with production reality. Sales should consult the relevant departments before confirming demanding orders, planners should use realistic assumptions, production should keep progress data accurate and quality teams should report non-conformities objectively even under commercial pressure. Cross-functional meetings should focus on evidence and solutions, not blame.

International buyers and brands should assess suppliers on whether their own purchasing practices support responsible production, not only on price, quality, delivery and audit results. Better forecast visibility, early notice of changes, feasible lead times, payment on agreed terms and fair handling of claims all help. Joint industry recommendations for Bangladesh make a similar point about the role of brands (ETI, 2024). Responsible purchasing does not remove suppliers' obligations; it recognises that outcomes are shaped by decisions on both sides.

Industry associations and policymakers can offer practical guidance, management training and shared learning, particularly for smaller manufacturers that need accessible help with grievance systems, traceability, environmental measurement and due-diligence requests. They can also bring manufacturers, buyers, workers' representatives and public institutions together on recurring problems no single factory can solve, and clear regulation with transparent enforcement helps responsible businesses compete on a level footing.

Conclusion: Ethical Management as an Operating Advantage

Ethical management is becoming central to the long-term success of Bangladesh's textile industry. As international supply chains put more weight on responsible conduct, manufacturers must show not only that they meet formal requirements but that their daily decisions reflect honesty, fairness, accountability and respect for people and the environment.

This paper has examined five connected areas: worker welfare, customer relationships, operational integrity, environmental responsibility and business transparency. They reinforce one another. Unreliable production reporting threatens customer commitments, unrealistic delivery expectations increase pressure on workers, weak supplier controls undermine traceability, and poor environmental management creates operational, regulatory and reputational risk. Responsibility is also shared: manufacturers answer for production, quality, labour conditions and honest communication, while buyers shape outcomes through forecasts, lead times, order changes and payment practices.

Ethical management will not remove every delay, disagreement or environmental challenge, and it does not promise immediate financial gain. Its value lies in a more reliable basis for decisions, earlier warning of risk and stronger credibility. For Bangladesh's textile industry the way forward is not simply better audit preparation. It is to build organisations where

responsible conduct is part of normal management: in how orders are accepted, workers treated, risks reported, resources used and relationships maintained. That is how ethics becomes a foundation for long-term competitiveness.

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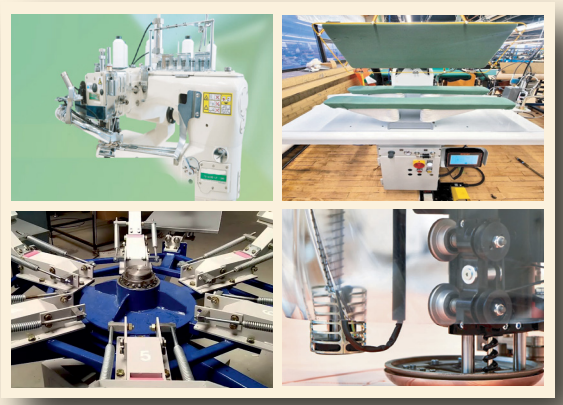
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STÄUBLI SUPPORTS ASIA'S WEAVING INDUSTRY

WITH SOLUTIONS ACROSS THE FULL VALUE CHAIN

From PCB fiberglass fabrics to denim production, and from premium Jacquard weaving to 3D technical textiles, Stäubli continues to drive the transformation of Asia's textile industry through innovative technologies. With reliable machine performance, advanced automation solutions, and a comprehensive service offering covering the entire equipment lifecycle, Stäubli is committed to helping weaving mills enhance productivity and overall operational efficiency, enabling them to better meet future market challenges.

At **ITMA ASIA 2026, Stäubli will be exhibiting at Booth D05 in Hall 3**, showcasing its innovative solutions across the entire weaving process. **From weaving preparation to advanced shedding systems**, including Jacquard technology, and technical weaving systems, Stäubli delivers future-ready intelligent production capabilities designed to support the next generation of Asian weaving manufacturers.

Advanced weaving solutions for high-volume Asian production environments

In an Asian market shaped by high production volumes, increasing quality expectations, and growing demand for automation and process reliability, weaving mills are looking for technologies that help them improve efficiency, and remain competitive over the long term.

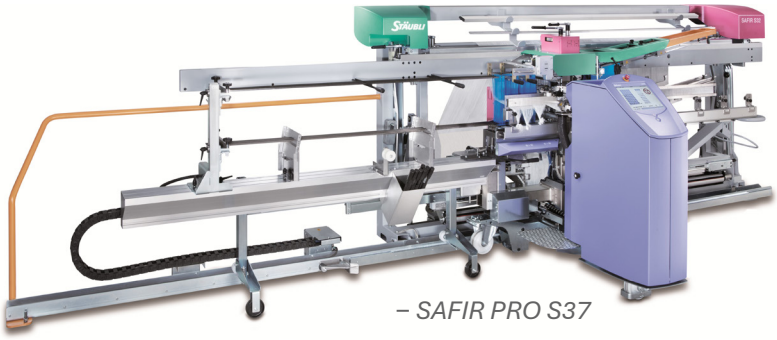
Stäubli solutions are designed to help manufacturers achieve stable processes, consistent fabric quality, reduced downtime, and reliable performance across extended production runs.

At the booth, visitors will be able to discover technologies that respond directly to the needs of modern weaving mills: **faster preparation, precise shedding, flexible patterning, robust operation, and dedicated support throughout the machine lifecycle.**

Stäubli's participation at ITMA ASIA 2026 reflects its long-standing commitment to supporting textile manufacturers across China and Asia. With a **strong local presence**, technical expertise, and global application know-how, Stäubli works closely with weaving mills to address their daily production challenges and support long-term competitiveness.

Stäubli solutions on display at ITMA ASIA 2026

Weaving Preparation Systems



– SAFIR PRO S37

SAFIR PRO S37 will be presented as a high-performance automatic drawing-in system designed for filament yarns and demanding weaving applications. With advanced yarn handling and automation, it supports greater efficiency and consistent preparation quality.



– MAGMA

MAGMA automatic warp-tying machine for coarse and technical yarns, will also be on display. Its single and double-knot capability and optoelectronic double-end detection support flexible, reliable warp changes across a wide range of demanding applications.

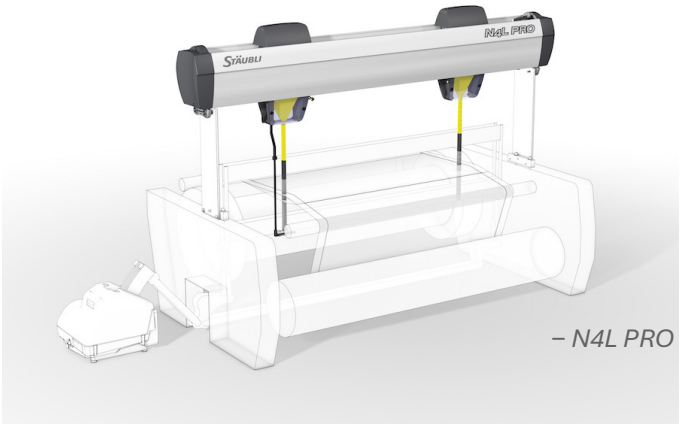
Advancing Jacquard weaving across Asia

Stäubli's comprehensive Jacquard portfolio, offering formats from 80 to 25,600 hooks, combines precision, reliability, and advanced control technology to enable high-quality woven fabrics and broad creative possibilities.



– SX PRO

The SX PRO with harness will be showcased as a versatile Jacquard solution designed to deliver performance, reliability, and flexibility for a wide range of applications (terry, apparels, upholstery, tapestry, silk fabrics, technical textiles…)



– N4L PRO

The N4L PRO will also be presented, completing the Jacquard area. This machine provides true added value to premier fabrics by enabling the brand name to be woven into selvedges.

Optimized shedding solutions for Asian weaving mills

Stäubli frame weaving solutions are designed to meet the demands of high-speed industrial weaving, supporting stable shedding performance, fabric quality, and operational reliability.



– S1628 cam motion

The S1628 cam motion is designed for **air-jet and rapier weaving applications,** offering a robust solution for efficient shedding in demanding production environments, with **speeds of up to 1,200 rpm***.

The S3018 rotary dobby will be presented in two configurations:

- for r**apier and air-jet weaving machines**, offering speeds of up to 650 rpm
- for **water-jet weaving machines** with speeds of up to **740 rpm**

The **S3060 rotary dobby** will also be exposed, highlighting its suitability for air-jet weaving applications and offering speeds of up to 800 rpm.



– Speed: maximum mechanical speed depending on the loom parameters and application.

Customer success story:

JIEDE Textile JIEDE Textile is a large-scale denim producer based in Guangdong Province, China. Integrating spinning, dyeing, weaving and finishing, the company has an **annual denim fabric production capacity of 100 million meters** and develops high-quality denim fabrics for customers worldwide. Since implementing Stäubli solutions, JIEDE Textile has seen clear improvements in production efficiency and stability. Stäubli dobbies perform reliably at high speeds, helping reduce downtime and fabric defects while improving batch-to-batch consistency. At JIEDE Textile, **a total of 430 Stäubli S3060 rotary dobbies are currently in operation**, demonstrating the proven performance and reliability of Stäubli technology in large-scale denim production.



> *For us, Stäubli is more than an equipment supplier. It is a key technology partner. From solution design to ongoing service, they support us throughout the entire lifecycle.*
>
> **-Ms. WANG Lihua,**
> **General Manager at JIEDE Textile**

Technical Weaving Systems

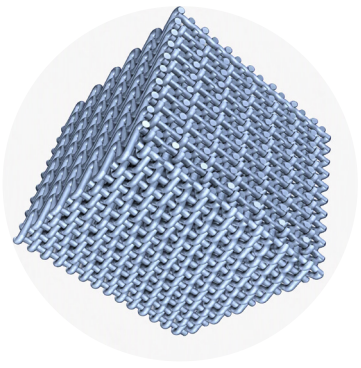
Driven by growing requirements in **aerospace, automotive, energy and industrial applications**, the technical textiles market continues to expand, opening **new opportunities for advanced weaving** technologies and high-performance composite materials.

For more than a decade, **Stäubli has been at the forefront of industrial 3D weaving**. Based on this experience, Stäubli has developed the **TF platform into a highly modular and configurable weaving system that adapts to evolving products, materials and applications.**

At the booth, visitors will be able to discover samples of technical fabrics woven on Stäubli TF machines, illustrating the concrete potential of these advanced weaving systems.



– High-temperature composites



– Multilayer weave Z-direction fabrics

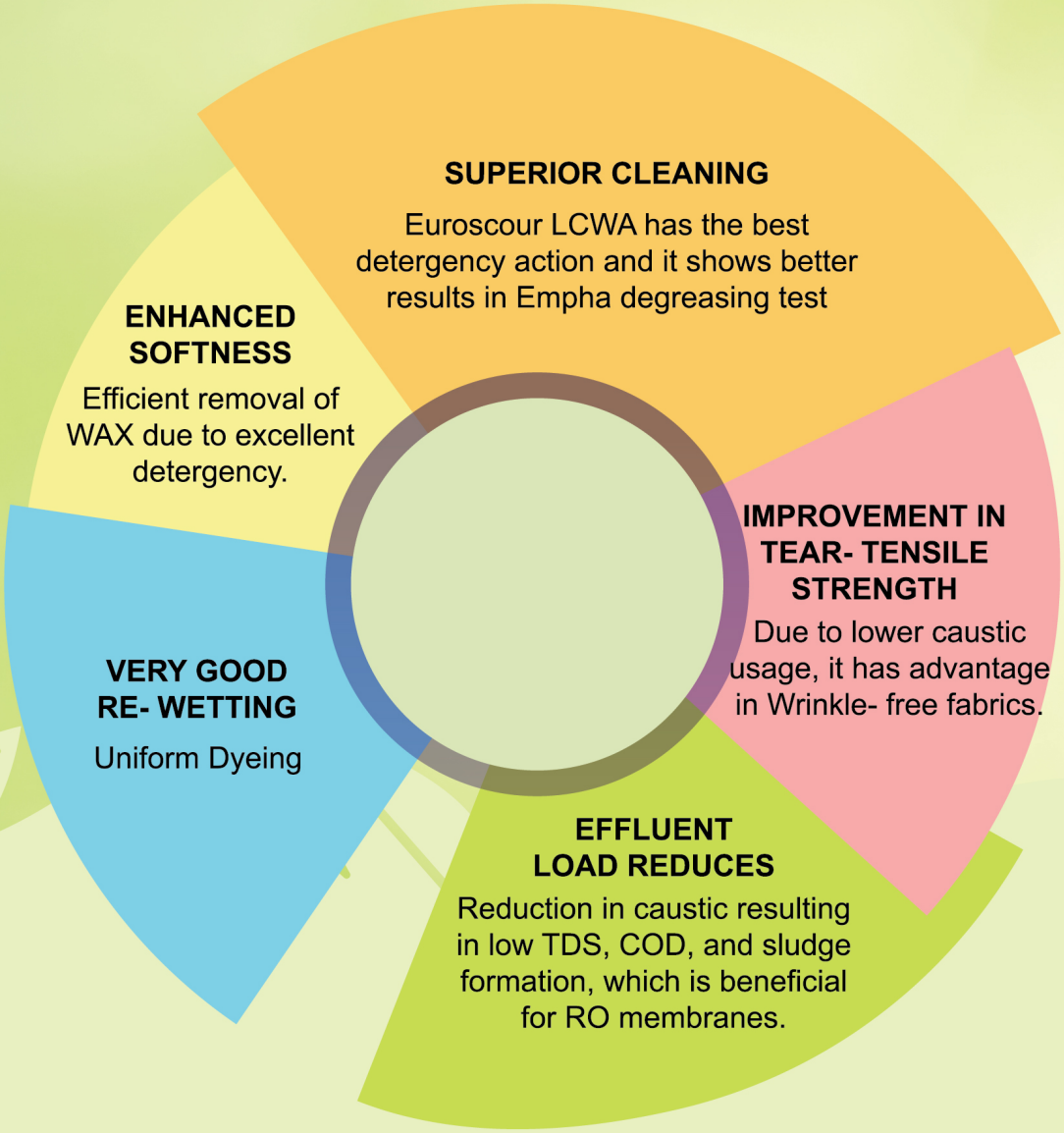


– Multilayer distance fabrics

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WHY AI HAS BECOME IMPORTANT FOR TEXTILES

Mima



Artificial intelligence (AI) is opening new possibilities for textile creativity, helping transform ideas about clothing, colours, patterns and fashion into compelling digital images and videos. It offers designers and textile professionals new ways to visualise concepts and communicate the creative potential of fabrics.

In my own AI work, I always begin with a real fabric. Its colour, texture and distinctive character form the foundation of my digital projects, inspiring the fashion concepts I develop using AI. My aim is to represent the original material as faithfully as possible while exploring its creative possibilities.

I deliberately use my own face in these visualisations to give my work a personal identity. Through video, I particularly seek to convey the lightness, elegance and movement of the fabrics, bringing their visual qualities to life.

However, digital representations can illustrate ideas and potential applications; they cannot replace the physical assessment of a fabric. Its actual drape, feel and suitability for garment production must still be evaluated using the real material.

For me, the true value of AI lies in building a bridge between an existing textile and the possibilities we imagine for it. My creativity determines the direction, while AI supports the visual execution and helps me communicate ideas about fabrics and fashion in new ways.

Author Bio

Textile Knowledge | Digital Creativity

Mima lives in Germany and combines practical experience in the textile machinery industry with a passion for fabrics and digital creativity.

Her knowledge of textile materials, structures and production processes informs her creative work.

By observing and handling real fabrics, she develops ideas inspired by their texture, fineness, colour and character.

Using Al, she translates these ideas into fashion concepts, images and videos that explore the creative possibilities of textiles.



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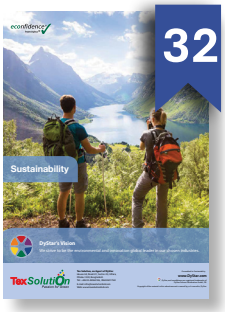


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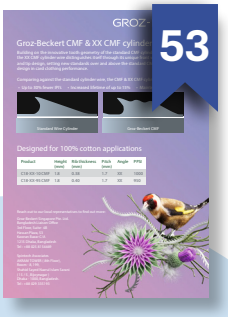
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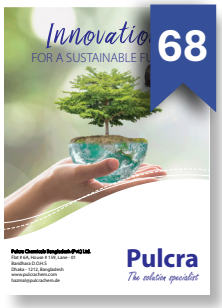
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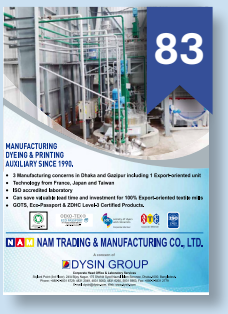
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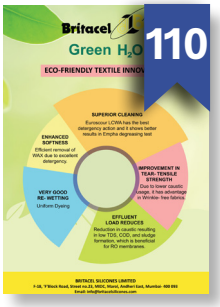
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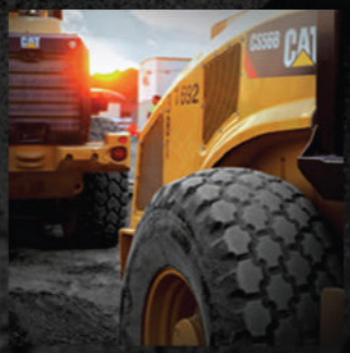














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