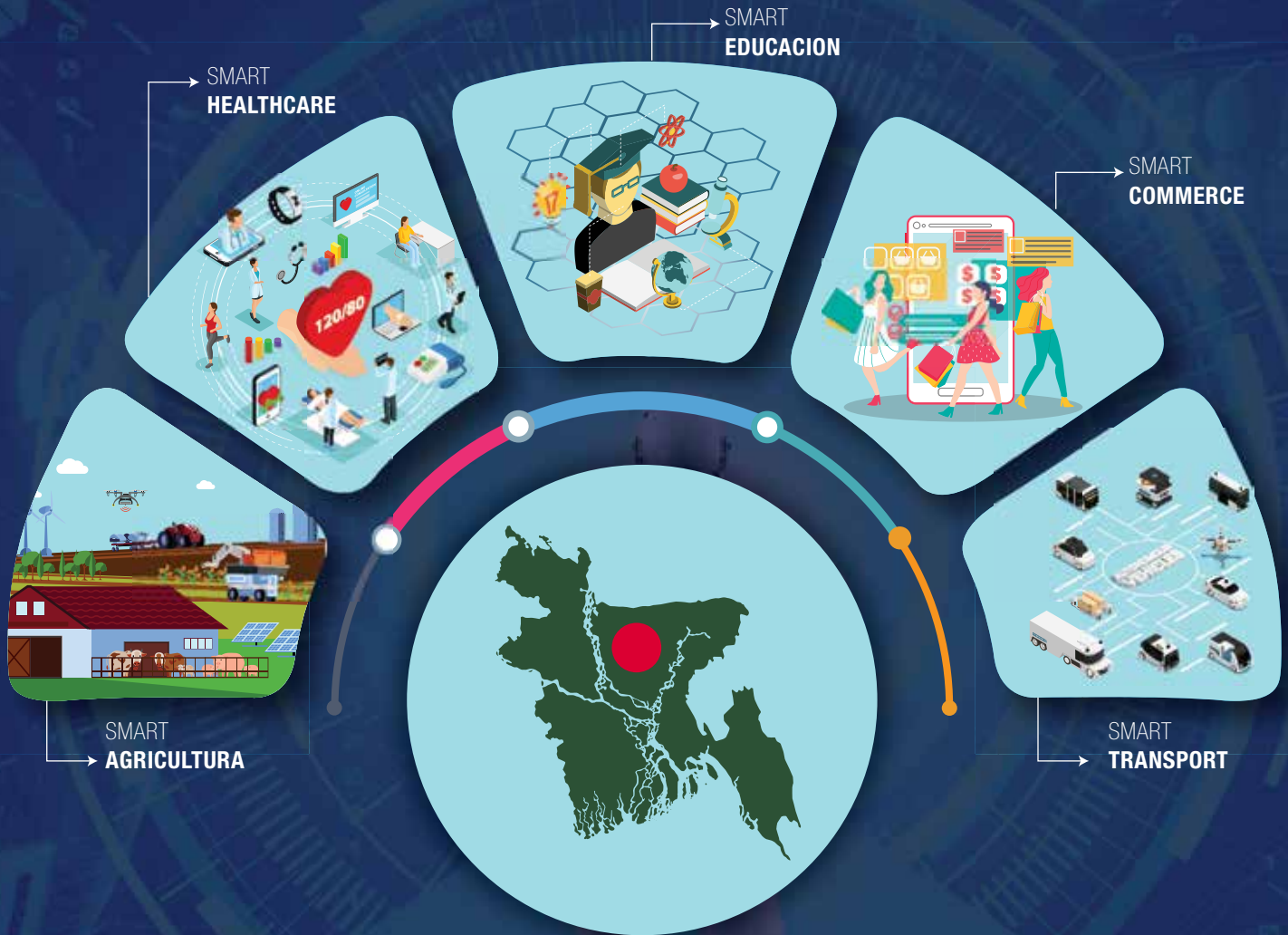




AmCham **JOURNAL**

Volume 17 • No. 1 • January-March 2023



WAY FORWARD TO SMART BANGLADESH

GROWTH AND EVOLUTION OF DIGITAL ECONOMY

A FRAMEWORK TO PREPARE BANGLADESH FOR
THE FOURTH INDUSTRIAL REVOLUTION

ROBOTICS AND AUTOMATION
A STEP TOWARD SMART BANGLADESH

Anecdote of a Green Factory Using AI

Serajul Islam Quadir, back from Bhaluka, Mymensingh



In spite of the magnitude of disasters like the Rana Plaza collapse and the Tazreen factory fire, the apparel sector in Bangladesh got a new life like a phoenix from the ashes and marked its presence on the global arena with a new reputation.

Bangladesh, whose image has been battered by multiple industrial accidents, can now boast accommodating half of the world's top 100 LEED certified green industrial units.

After the Rana Plaza disaster in 2013, the country's apparel sector entrepreneurs focused on issues related to carbon, energy and environmental sustainability to enhance the industry's image at the global level and to get more attention from reputed brands and retailers.

For instance, Envoy, with its highest level of dedication, could achieve the platinum award for the first time and make a record.

It was evening and a dark cloth was

slowly covering the neighborhood when we entered the plant at Jamirdia, Bhaluka in Mymensingh district, about 60 kilometers north of Dhaka, the capital city of Bangladesh. The 45-acre manufacturing facility is owned by Envoy Textiles Limited (ETL), an arm of Envoy Legacy and world's

management to give the premises a green touch everywhere. The company has a dedicated area near the guest accommodation center where exotic birds are kept, including peacocks, macaws, and others. In addition to the birds, Envoy Textile has also set up a petting area where rabbits are



first LEED Platinum certified denim plant.

raised and maintained.

Envoy Textile is equipped with



What first caught our attention were the signs of sincere efforts of the

a versatile training and audio-visual center where we had a



comprehensive overview of the organization, from its origin to the present day through interactive presentations.

Environmental Sustainability

Leed Certification

The US Green Building Council (USGBC) awarded Envoy Textiles Limited LEED (Leadership in Energy and Environmental Design) Platinum certification in 2016, the first for any textile manufacturer in Bangladesh and denim maker in the world.

Effluent Treatment Plant (Etp)

The plant has a fully operational Effluent Treatment Plant (ETP), and it discharges only treated water to the nature. Most of the ETP treated water is used for other internal purposes, such as toilet flushing, gardening, and fire hydrant usage. The company also aims to reduce ground water usage down to 50% by 2025. To

do so, zero liquid discharge will be implemented by recycling ETP-treated water using Reverse Osmosis (RO) technology.



Rainwater Harvesting

Rainwater is harvested and stored for future use, rather than allowing it to

run off. It provides an independent water supply for fire-hydrants and other usage. An aesthetic lake has been created which is used for rainwater harvesting and fish farming.

Circular Economy

Use Of Recycled Materials

The plant has a conscious objective of preserving the scarce natural resources. In line with this objective, the plant has adopted effective processes that enables it to recycle used materials and reuse them in making denim products or fabric.

One such example is the use of Caustic Recovery Plant. It works by recovering

the corrosive caustic substance used in the process, cleaning it, and then recycling it for reuse. This innovative technology reduces the need for fresh caustic, which in turn reduces the environmental impact associated with its production, transportation, and disposal.

“We are reusing the wastage from our denim production processes to make a denim fabric and recycling the solid waste generated in manufacturing processes,” said Mohammad Al Tauhidul Islam, a senior official of ETL.

Envoy Textile is strategically focused on raw materials’ circularity and reaching the sustainable raw





materials ratio to 90% within 2025. The company has already attained all kinds of sustainable raw material standards like Global Organic Textile Standard, Organic Content Standard, Better Cotton Initiative, Cotton Made in Africa to reach the goal. The factory is considering to recycle fiber to use in spinning process and also exploring the 100% usage of all wastes of different categories by providing to the small industries where wastes are the inputs of manufactured products.

“The product is our target, and sustainability is our way to achieve it,” Rezaur Rahman, Senior General Manager and Head of Project Management said, adding, “We have long pursued a sustainable journey on four key pillars. (Human, social, economic and environmental)”

Innovation

Research & Development



By investing in Research & Development and exploring new materials, Envoy Textile is leading the way towards an eco-friendly future for denim fabric production.



Banana stem, so far considered a complete waste, is now being made into a commercial fiber, making an entry to the fashion industry. It is eco-friendly, chemical-free, non-toxic and

odor-free. “Banana fiber clothing is comfortable and not likely to trigger allergies,” said Mohammad Al Tauhidul Islam.

Fiber from bamboo is an easily grown natural fiber with lots of benefits for fashion industry. Bamboo requires only one third of the water for fiber cultivation straight from mother nature. “It saves our natural resources, and it requires minimal harmful chemicals and pesticides. It has natural anti-microbial property,” said Arnab Das, a manager at the Research & Development department of the company.

State-Of-The-Art Eco Lab

Envoy Textiles has already set-

up a state-of-the-art Eco-Lab in partnership with the world-renowned Spanish company Jeanologia to provide sustainable finishing processes. Put in a lab environment, the high-tech denim production line implements modern laundry 5.0 solution. One of its key technologies is using ozone gas instead of traditional chemical bleaches and acids to create unique wash effects on denim. It reduces water consumption by up to 95% and eliminates the need for many harmful chemicals.

The lab also accommodates Flexi Lab, a laser marking technology, designed to meet the needs of jeans and knit ateliers at labs or



development centers. It is the perfect tool to develop endless samples or for small production, up to 1,000 pieces of garments per day.

“It was our long-cherished dream to build such a green plant with the application most modern technologies without harming the nature,” said Engr. Kutubuddin Ahmed.

Robotics: Towards 4th Industrial Revolution

Keeping up with the modern world, Envoy Textile uses the Autocoro 9, a machine that is used to spin fibers (such as cotton) into yarn. Designed to be faster and more efficient than traditional spinning machines, it has revolutionized the world of rotor spinning. It impressively demonstrates the superiority of its technology. With its increased intelligence, it sets new standards in energy efficiency, productivity, economy, user-friendliness, and quality. Spinning mills all over the world that produce large volumes of commodity yarns have already reshaped their markets with the new Autocoro technology.

“It’s how we do business, and how we respond to what our planet, our industry, and our customers need,” said Shama Proshad Ghosh, the deputy plant head.

The new Autocoro 9 with E3 added value can easily reduce energy costs by up to 25% and achieve maximum productivity results along with reducing personnel and maintenance costs substantially. This is a large step towards fourth industrial revolution, a future with smart automation.

“Autocoro not only reduces energy costs but also maximizes efficiency with the unique individual spinning position technology,” said the official in charge of the section at the factory. Introduction of advanced robotic technology has helped the plant reduce manpower requirement up to 50% along with outstanding efficiency & productivity.

“We aim to provide our customers with innovative products that make a difference in their production and profitability. The passion for our products drives our innovation, by focusing on our customers’ requirements,” said Mohammad Majibur Rahman, the head of the spinning division.

Social Responsibility

Envoy Textile is engaged with many social influencing programs and community development initiatives as part of its corporate social responsibility (CSR) leadership activities. It facilitates many universities like BUET, BUTEX and NSU in research activities through

supporting PhD program, industrial research, and study tour. Wastewater Management Practices, Textiles Wet-Process Practices, Diploma in Social Compliance Practices, Chemical Management, Sustainability Textile Industries Practices, Workers Welfare Industries Practices etc. are also among the areas of partnerships with educational institutions.

Helping the affected of the industry, setting up the country’s first pediatric burn unit in Dhaka Medical College, etc. are a few of the CSR activities accomplished by ETL. As recognition for the business and other excellences, ETL has been honored with more than 35 prestigious awards and recognitions.

“We make every effort to produce less waste, emit less carbon, and try to have as little impact on the environment as possible,” said Kutubuddin Ahmed, Chairman of Envoy Legacy, the mother organization of Envoy Textiles Limited. His dream envisions a future that is greener, with Envoy Textile at the forefront of pioneering the way.

The writer of this article is the Executive Editor of the AmCham Journal and former Bureau Chief and Chief Correspondent of Reuters in Bangladesh.