

This series showcases success stories of PaCT (Partnership for Cleaner Textile) partner factories in the Bangladesh textile sector that have implemented cleaner production projects.

The **5S** system is a lean manufacturing concept that improves work efficiency and reduces wastage, minimizes handling time, and increases the productivity and profit of an organization. 5S is a workplace organization method that uses a list of five Japanese words: Seiri, Seiton, Seisō, Seiketsu, and Shitsuke, which translates to sort, set in order, shine, standardize, and sustain. **5S** is a systematic framework for organizations based on the idea that a better work environment results in better operations, which leads to better productivity. 5S focuses on maintaining consistencies in the work environment and reducing disruptions in the production process, which in turn result in reduced waste and a more predictable (and higher) quality of output.

**Factory Background**

Lida Textile & Dyeing Limited, located at Gazipur near the capital, Dhaka, is one of the leading companies manufacturing knitted products in Bangladesh. Initially, both raw materials and finished items at the factory were placed in a haphazard manner, proper labelling of equipment was ignored, and housekeeping was not maintained. Moreover, there were no controls in place to check the anomalies in the system.

**Measures Implemented**

PaCT suggested the factory employ the 5S

system to improve productivity and reduce energy consumption. It recommended dividing the factory into different zones and dedicating a manager for each. Each zone would have a checklist, including housekeeping, red tagging, labelling, and signages. It was also recommended performing cross-functional audits for each zone and allocating scores. An increasing trend in the scores would indicate effectiveness of the system.

Following PaCT recommendations, the factory divided its area into different zones and for each zone, a daily 5S checklist was followed.

Lida Dyeing Textiles Ltd.									
Floor	Month		Daily 5S Checklist						
Location	XX-XX-XXXX								
5S	S/No	Checking Items	Date	1	2	3	4	5	
Sort	1	No irrelevant reference materials, documents, drawings, etc.							
	2	No excess pieces of equipment, documents, etc.							
	3	Garbage/wastage/scrap are regularly disposed or managed							
Set-in Order	4	Desks and cabinets are free of accumulations of papers and other objects							
	5	Documents, tools and equipment are well organized for ease of take and return							
	6	Labeling of cabinets, shelves, and files allows immediate identification							
Shine	7	The floor is kept clean and there are no signs of damage							
	8	Racks and cabinets are kept clean and in good condition							
	9	Desks, tables, and other furniture are kept clean							
	10	Walls and ceilings are in good condition and free from dirt and dust							
Standardize	11	Visual controls and display boards are used and regularly updated							
	12	Equipment maintenance records are visible and are being updated daily							
	13	Product waste is regularly cleaned up and removed from workspace							
Sustain	14	Recognition is given to teams that get involved in 5S activities							
	15	Operators, team leaders, and supervisors, are assigned 5S activities to be completed							
	16	Success stories are displayed							

5S audit and analysis of scores – A zone-wise 5S audit was completed. From the audit, areas with low 5S scores were identified and the corresponding 5S activities were strengthened there.

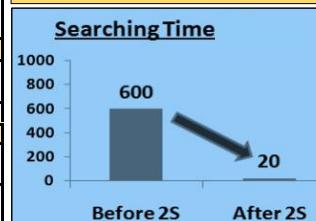
## Sample audit checklist adopted by the factory

		ABC Clothing Ltd.									
Floor		Month			5S Audit Checklist						
Location		XX-XX-XXXX									
	S/No	Checking Items				Score	1	2	3	4	5
Sorting	1	No items found of old or previous styles & PO which is/are not running at present (ex: thread, label, elastic, panel, garment).									5
	2	No unused, obsolete, damaged items are within the workplace (ex: carton, reject panel/gmt, sticker, poly, etc.)								4	
Individual Score						9					
Set in order	1	Items are not mixed with each other & they are kept separately in defined places with proper & clear traceability.						3			
	2	Machinery, equipment, furniture, electrical wires, cables & mechanical lines are safe & organized in the workplace.								4	
Individual Score						7					
Shine	1	Containers, boxes, bins, racks, etc. are clean and not cracked, torn, or damaged. They are neatly stacked.								4	
	2	Markings, signs, aisle marks, visual boards are clean, clear, not damaged & visible.						3			
Individual Score						7					
Standardize	1	Machine stands, fans, chairs, tables, racks, baskets, and bins are of equal height &/or size, alignment.									5
	2	All documents are labeled clearly as to contents and responsibility for control and revision.							3		
Individual Score						8					
Sustain	1	There is a defined checklist for internal audit with certain frequency (daily, weekly, monthly) & the team leader knows & updates it properly.								4	
	2	Above 5S activities are performed daily by responsible persons and are visible.									5
Individual Score						9					
Total score attained						40					
Maximum total score						50					

### 5S Audit Score analysis

Achieved Score	Achievement (%)	Satisfaction Level
80	80%	Satisfactory
	Satisfactory	≥ 80%
	Moderate	≥ 50%
	Poor	≥ 0%

### Reduction in searching time



### Environmental Benefits

- \$900 / Year Annual Monetary Savings
- 0.17% Increase in Productivity
- 5 tCO<sub>2</sub> / Year GHG reduction

### Benefits of Implementing 5S

- Improves safety
- Reduces search time
- Improves quality
- Improves visual control
- Enhances teamwork
- Improves productivity
- Eliminates distraction
- Reduces inventory and space
- Instills discipline to follow standard work

Threads were not placed on the thread stands and after 5S implementation, they were properly sorted.



Aisle mark (on right) was blocked by iron racks before, and after 5S implementation, it is now visible.



**IFC led Advisory Partnership for Cleaner Textile (PaCT)** is a holistic program that support the entire textile value chain – spinning, weaving, wet processing and garment factories in adopting Cleaner Production (CP) practices and engages with brands, technology suppliers, industrial associations, financial institutions, government to bring about systemic and positive environmental change for the Bangladesh textile sector and contribute to the sector's long-term competitiveness and environmental sustainability.

### WHAT PaCT DOES:

- Chemical Management Assessments
- Basic Cleaner Production Assessment
- In-Depth Cleaner Production Assessment
- Water & Energy Management
- Rooftop Solar PV Pre-feasibility Study
- Rooftop Solar Calculation
- Online Resource Monitoring

### DEVELOPMENT PARTNERS



Kingdom of the Netherlands

### IMPLEMENTING PARTNER



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### BRAND PARTNERS



### IMPLEMENTER



Creating Markets, Creating Opportunities