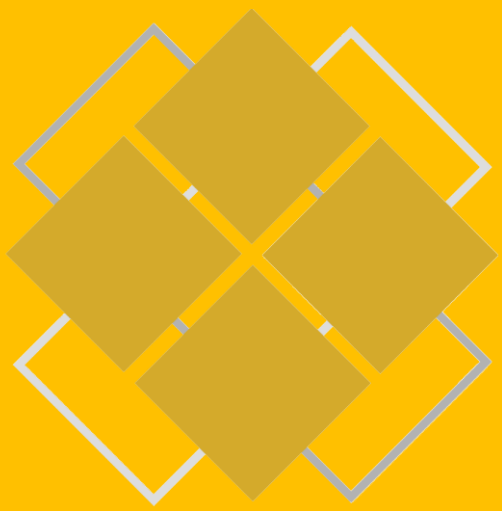
alkaram

TOWARDS A SUSTAINABLE WORLD IN A CIRCULAR WAY.

Environmental Performance Report **2022**



"Al-Karam's sustainability framework is primarily based on PEOPLE, PLANET & PROSPERITY. We are strictly acting on these principles since our foundation."

CONTENT

KEY NOTE

Sustainable Development at Al-Karam Textile Mills (Pvt.) Ltd.

Al-Karam Textile Mills (Pvt.) Ltd. has integrated UN SDGs (**Sustainable Development Goals**) into its business practices since 2017. From free health services for employees to free education for the underprivileged, efficiencies in our processes to investment in clean energy, all of our actions are supporting 17 SDGs. This report is based on our completed projects in calendar year 2022 which are linked with the environment-related SDGs.

HIGHLIGHTS 2022

5,221 MWh of electricity has been saved.

0.24 mln m3 of natural gas has been saved.

Saved energy amount is equal to the annual consumption of **11,000 Homes.**

3,236 Tons of CO2e has reduced from our Scope 1 & 2.

The amount of saved carbon dioxide emissions is equivalent to the plantation of **149,163** trees.

45 Million Gallons of water has been saved.

Saved water amount is equal to annual usage of **2,290 Persons.**

Consumption of packaging material is reduced by **310 Tons**.

By elimination of single use packaging, use of recycled materials and take back scheme of packaging material from customers.

48 Tons of chemicals have been saved **by the automated dispensing system.**

Total solid waste volume is reduced by 18,000 **Kgs**.

SERVICES - SYSTEM DEVELOPMENT - COMPLIANCE -

ENVIRONMENTAL PERFORMANCE REPORT

For The Year: 2022

Frequency: Annually

Ref. Std.: AKT/PR/064

ENERGY

EFFICIENCY

SDG's COVERED

7 AFFORDABLE AND CLEAN ENERGY

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

13 CLIMATE ACTION

15 LIFE ON LAND

OPTIMIZATION IN COMPRESSED AIR SYSTEM

In our weaving section, there were five compressors out of which four were running and one was on standby. The total running kW of a compressor at a time on average was 53760 kW per day. In order to reduce the pneumatic energy consumption, we conducted some modifications in our existing air distribution system by changing the loom setting. After modification, we were able to reduce such amount of compressed air requirement which led us to shut off one compressor of 560 kW. Now instead of four compressors with 53760 kW/day, we are smoothly running our department with similar efficiency and production with 3 compressors of 40320 kW/day.

Running Compressors

Standby Compressors

Completion Date: November 2022

Yearly savings	Payback
Unit (kWh of electricity)	Months / years
4,838,400	Immediate

REDUCING OVERHEAD CLEANING BLOWERS OPERATING TIME

In some of our weaving sheds, we had a total of 14 overhead cleaning blowers, previously all blowers were remain in operation all the time. An initiative was conducted where the alternate blower was in line was shut i.e. at a time only 7 blowers were remain in operation. This initiative helps us to reduce the 50% power consumption for overhead blower operations as the running time of blowers is reduced from 24 hrs to 12 hrs per day without any compromise on machine efficiency, worker's health and production. Each blower motor has a motor of 5.5 kW i.e. on average we are saving up to 38 kW units on a daily basis.

Alternate Blower Operations

Completion Date: November 2022

Yearly savings		Payback
Unit (kWh of electricity)	Saving in terms of cost per month or annual (PKR)	Months
328,320	3,885,120	02

REPLACEMENT OF SPLIT AC WITH CENTRALIZED CHILLER

In our weaving department, a sample room was being cooled with the help of two split Air conditioners of 02 Tons and had load of 2.5 kW each. Our sampling hall is adjacent to weaving production unit where we are using the chilled air from HOT absorption chiller (running on engines jacket water). We have removed split ACs and the hall has been provided a connection of chiller through a duct to maintain the temperature of weaving sample room.

Completion Date: November 2022

Yearly savings		Payback
Unit (kWh of electricity)	Saving in terms of cost per month or annual (PKR)	Years
36,000	396,000	1.13

INSTALLATION OF NEW GAS BURNERS

We replaced old gas burners in Stenter 2 & 3 of our processing department with new and energy-efficient burners, which helped us in saving a considerable amount of natural gas.

Completion Date: November 2022

Yearly savings		Payback
Unit (m3 of Gas)	Saving (PKR)	Years
200,000 m3	7,600,000	<1

REDUCING GAS CONSUMPTION IN GAS FIRED BOILER

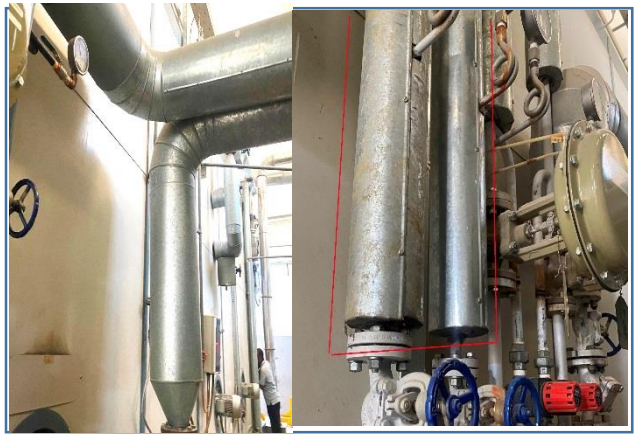
We are reducing usage of gas by utilizing flue gas analyzer along with evaluation of the gas consumption of engines on quarterly basis by monitoring air and gas quantities and keeping the oxygen and gas ratio in accordance with OEM or standard, we have saved significant amount of natural gas by implementing this method.

Completion Date: September 2022

Yearly savings		Payback
Unit (m3 of Gas)	Saving in terms of cost per month or annual (PKR / $ / €)	Months / years
30,240	10,160,640	01 Months

INSTALLATION OF CLADDING INSULATION ON STEAM PIPES AND STEAM VALVE

We have replaced old and deteriorated insulation from our steam pipes with fresh cladding. This initiative helped us in reduction of heat loss.

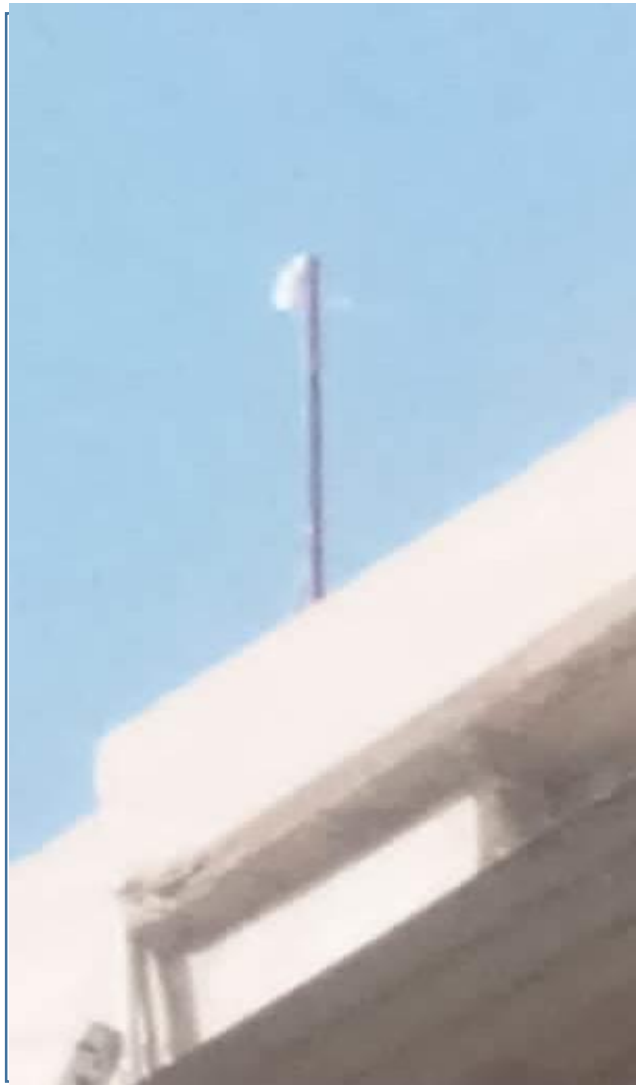


Completion Date: September 2022

Yearly savings		Payback
m3 of Gas	Saving in terms of cost per month or annual (PKR)	Year
115	4,105	<1

DAY LIGHT SENSOR

Daylight sensors save energy costs dramatically, especially in big or multi-structure complexes where parking lots, entrances and other light-intensive areas need to be lighted at night. Unlike conventionally designed lighting system Alkaram save electricity by installation of daylight sensors on all street lights. Before daylight sensors all street lights need to be switched off manually and there is always chances of street lights remain open during day time. By installation of daylight sensors street lights automatically turn off and on with respect to sun.

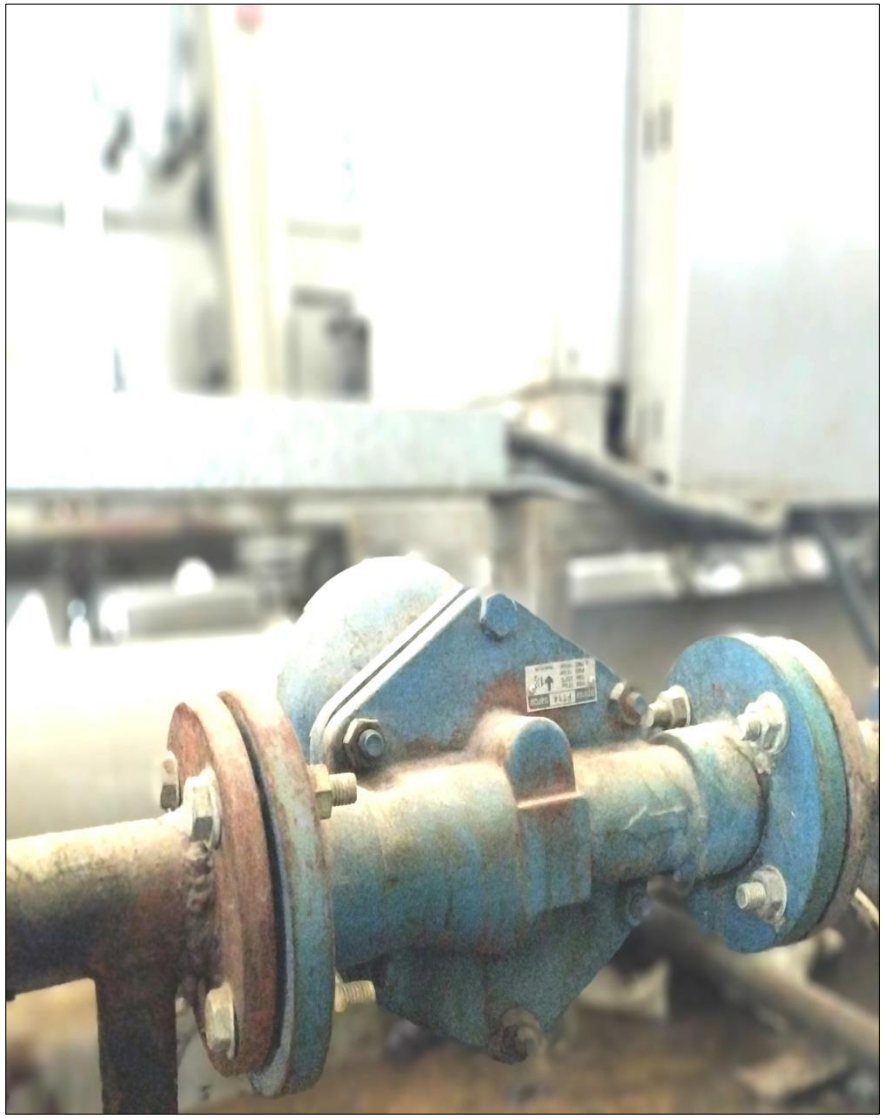


Completion Date: December 2022

Yearly savings		Payback
kWh of electricity	Saving in terms of cost per month or annual (PKR)	Months / years
3432	37,752	9 Months

INSTALLATION OF STEAM TRAP ON CONTINUOUS WASHING MACHINE'S STEAM LINE

The continuous washing machine's steam consumption is 130 kg/hour hence the same amount of condensate is produced. Installation of steam trap has reduced the loss of steam and has quicken the process of attaining the desired temperature, also reinjecting condensate water in boiler feed tank.



Completion Date : April 2022

Yearly savings		**Payback**
Unit (m3 of Gas)	Saving Annual (PKR)	Months / years
11,259	**402,117**	**2.3 months**

USE OF SERVO MOTORS

We have replaced 31 clutch (Pegasus) machines with servo motors stitching machines (golden wheel) in our stitching tower-1. Servo motors consume approximately 70% less energy than clutch motors as clutch motor constantly runs when the sewing machine is turned on, while a servo motor doesn't run until the foot pedal is pressed. Also, servo motors are more quieter than clutch motors.

Machine with Clutch Motor

Machine with Servo Motor

Completion Date: November 2022

Yearly savings	Payback
kWh	years
7,440	1 Year

USE OF LED LIGHTING

We have replaced 115 conventional 40 Watts tube lights with energy efficient LED tube light of 10.5 Watts in our stitching tower 01.

Completion Date: December 2022

Yearly savings		Payback
kWh	(PKR)	years
7,816	85,979	2.2

SDG's COVERED

6 CLEAN WATER AND SANITATION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

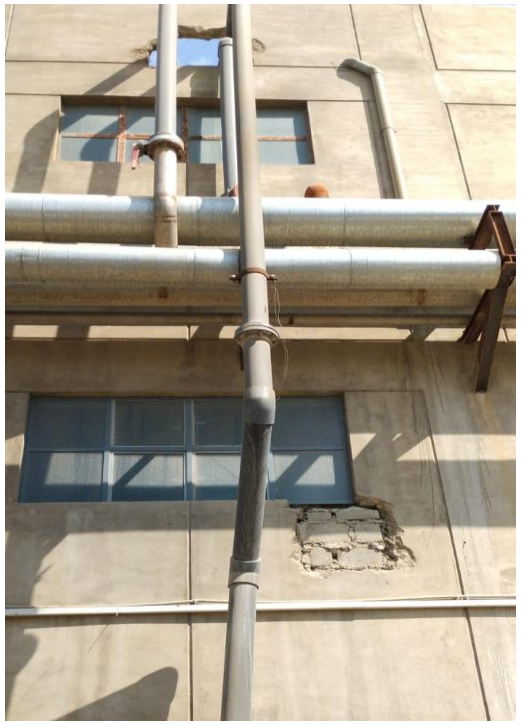
12 RESPONSIBLE CONSUMPTION AND PRODUCTION

14 LIFE BELOW WATER

WATER CONSERVATION

PREVENTION OF OVERFLOW WATER WASTAGES

We observed water wastage by overflow from the overhead water storage tank in our knits processing department. We have connected the overflow wastage through a drainage line into our water underground water reservoir.



Completion Date: December 2022

Yearly savings		Payback
Unit (m3 of water)	PKR	Months / years
77,760	**6,928,416**	**3 Months**

For The Year: ___2022____

Frequency: Annually

RECOVERY OF NON-CONTACTED COOLING WATER FROM DYEING MACHINES

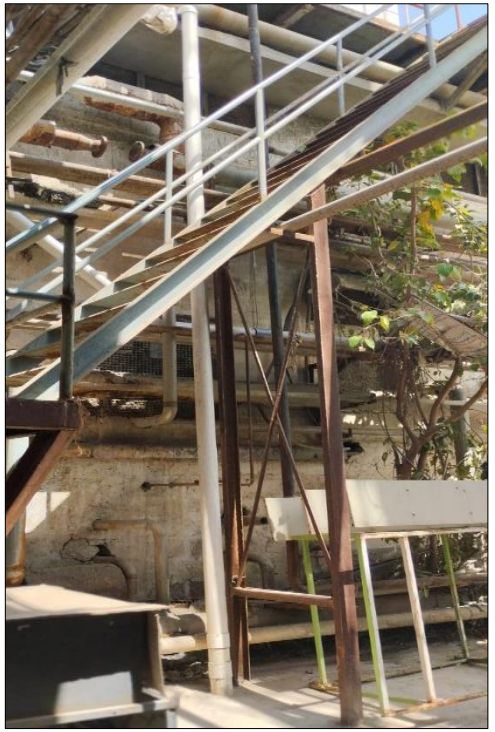
Water is a pivotal part in processing of fabric, therefore after installing the lines for recovery of non-contacted cooling water we'll be able to save 10% of water and also cut down the process cost.

Completion Date: December 2022

Yearly savings		Payback
Unit (m3 of water)	PKR	Months / years
1,754	**2,103,441.80**	**5 months**

COLLECTION OF WATER FROM COOLING TOWER

We have completed a project to shift the discharge water from our cooling tower of the weaving department into our water reservoir. The overall impact of this initiative is a reduction of approximately 3% in our water consumption.



Completion Date: August 2022

Yearly savings		Payback
m3 of Water	Cost saving (PKR / $ / €)	Months / years
126,000	**11,226,600**	**immediate**

SERVICES - SYSTEM DEVELOPMENT - COMPLIANCE -

ENVIRONMENTAL PERFORMANCE REPORT

For The Year: ___2022____

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WASTE

REDUCTION

SDG's COVERED

8 DECENT WORK AND ECONOMIC GROWTH

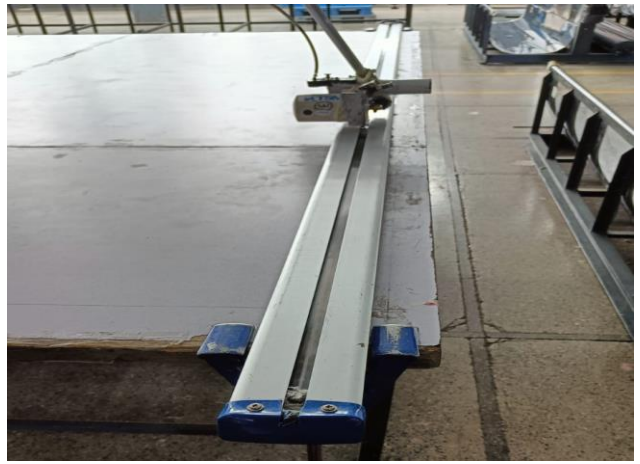
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

15 LIFE ON LAND

WASTAGE REDUCTION IN CENTRALIZED CUTTING WITH USE OF END CUTTER

In one of our Lean transformation drives, we are in the process of optimizing the manual fabric cutting mechanism in our centralized cutting unit-2, the manual cutting system has been replaced by 08 end cutter along with fabric roll opening equipment. We have reduced the scissor wastage up to 20%, improved the worker's ergonomics by reducing loading works, increased productivity by 35% as well as improved our hectic changeover by 76%.



Completion Date: March 2022

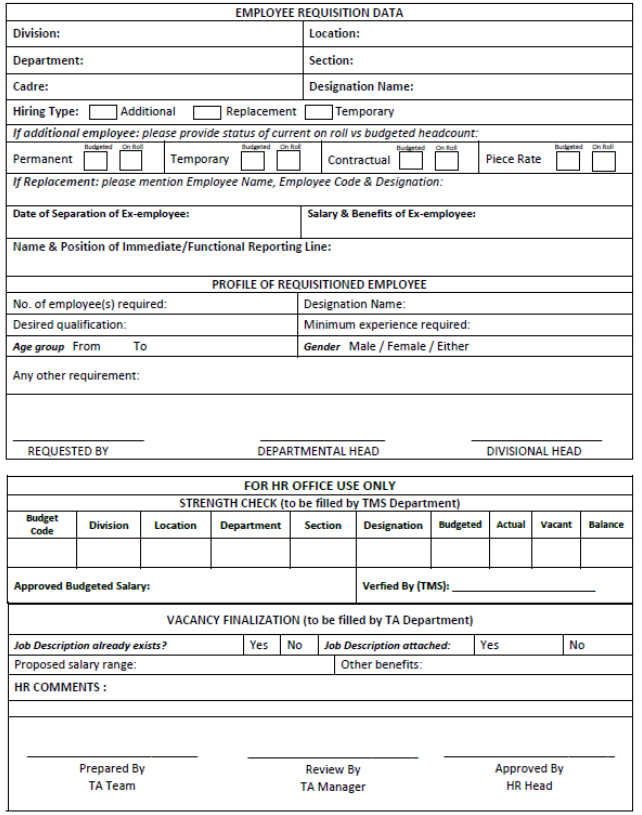
Yearly savings			Payback
Unit (kg of waste etc.)	CO2e in kgs	(PKR)	years
12,000	240,000	10,800,000	<1

PAPERLESS ENVIRONMENT

In Human resource operations, Employee Requisition and Personnel-Communication Request Forms were being submitted to the Human resource department manually on hard copy. With a vision of digitization and paperless environment, the organization has eliminated paperwork and developed these forms on ERP.

Completion Date: October 2022

Yearly savings			Payback
kg of Paper	Saving in PKR	CO2e in kgs	Months / years
38	27,336	45.6	Immediate



EMPLOYEE REQUISITION DATA

Division: | Location:

Department: | Section:

Cadre: | Designation Name:

Hiring Type: ☐ Additional ☐ Replacement ☐ Temporary

If additional employee: please provide status of current on roll vs budgeted headcount:

Permanent (Budgeted ☐ On Roll ☐) Temporary (Budgeted ☐ On Roll ☐) Contractual (Budgeted ☐ On Roll ☐) Piece Rate (Budgeted ☐ On Roll ☐)

If Replacement: please mention Employee Name, Employee Code & Designation:

Date of Separation of Ex-employee: | Salary & Benefits of Ex-employee:

Name & Position of Immediate/Functional Reporting Line:

PROFILE OF REQUISITIONED EMPLOYEE

No. of employee(s) required: | Designation Name:

Desired qualification: | Minimum experience required:

Age group From To | *Gender* Male / Female / Either

Any other requirement:

REQUESTED BY | DEPARTMENTAL HEAD | DIVISIONAL HEAD

FOR HR OFFICE USE ONLY

STRENGTH CHECK (to be filled by TMS Department)

Budget Code	Division	Location	Department	Section	Designation	Budgeted	Actual	Vacant	Balance

Approved Budgeted Salary: | Verfied By (TMS): _____

VACANCY FINALIZATION (to be filled by TA Department)

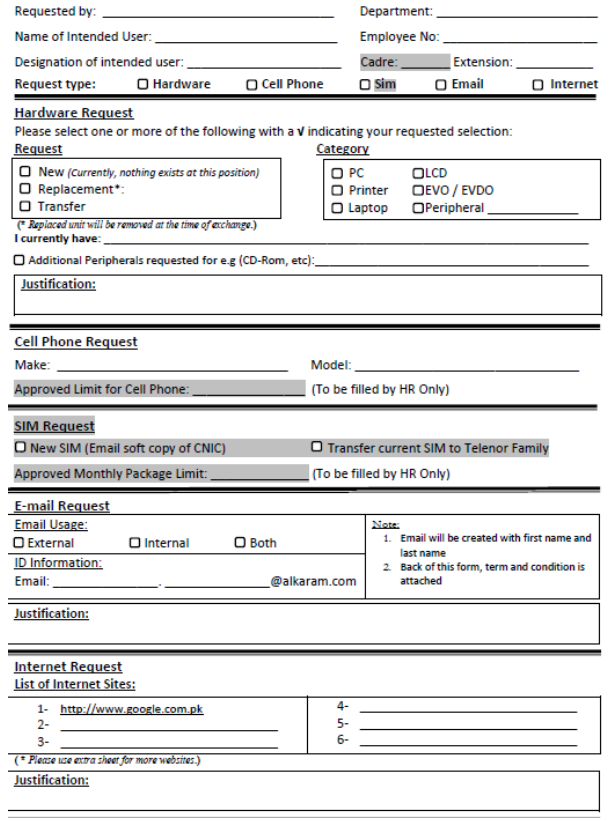
Job Description already exists? Yes ☐ No ☐ | *Job Description attached:* Yes ☐ No ☐

Proposed salary range: | Other benefits:

HR COMMENTS :

Prepared By TA Team | Review By TA Manager | Approved By HR Head

Requisition Form



Requested by: _____ Department: _____

Name of Intended User: _____ Employee No: _____

Designation of intended user: _____ Cadre: _____ Extension: _____

Request type: ☐ Hardware ☐ Cell Phone ☐ Sim ☐ Email ☐ Internet

Hardware Request

Please select one or more of the following with a √ indicating your requested selection:

Request: ☐ New *(Currently, nothing exists at this position)* ☐ Replacement*: ☐ Transfer

Category: ☐ PC ☐ LCD ☐ Printer ☐ EVO / EVDO ☐ Laptop ☐ Peripheral _____

(Replaced unit will be removed at the time of exchange.)*

I currently have: _____

☐ Additional Peripherals requested for e.g (CD-Rom, etc): _____

Justification:

Cell Phone Request

Make: _____ Model: _____

Approved Limit for Cell Phone: _____ (To be filled by HR Only)

SIM Request

☐ New SIM (Email soft copy of CNIC) ☐ Transfer current SIM to Telenor Family

Approved Monthly Package Limit: _____ (To be filled by HR Only)

E-mail Request

Email Usage: ☐ External ☐ Internal ☐ Both

ID Information: Email: _____._____@alkaram.com

Note:
1. Email will be created with first name and last name
2. Back of this form, term and condition is attached

Justification:

Internet Request

List of Internet Sites:

1- http://www.google.com.pk
2- _____
3- _____
4- _____
5- _____
6- _____

(Please use extra sheet for more websites.)*

Justification:

Communication Form

SELVEDGE WASTE REDUCTION IN WEAVING

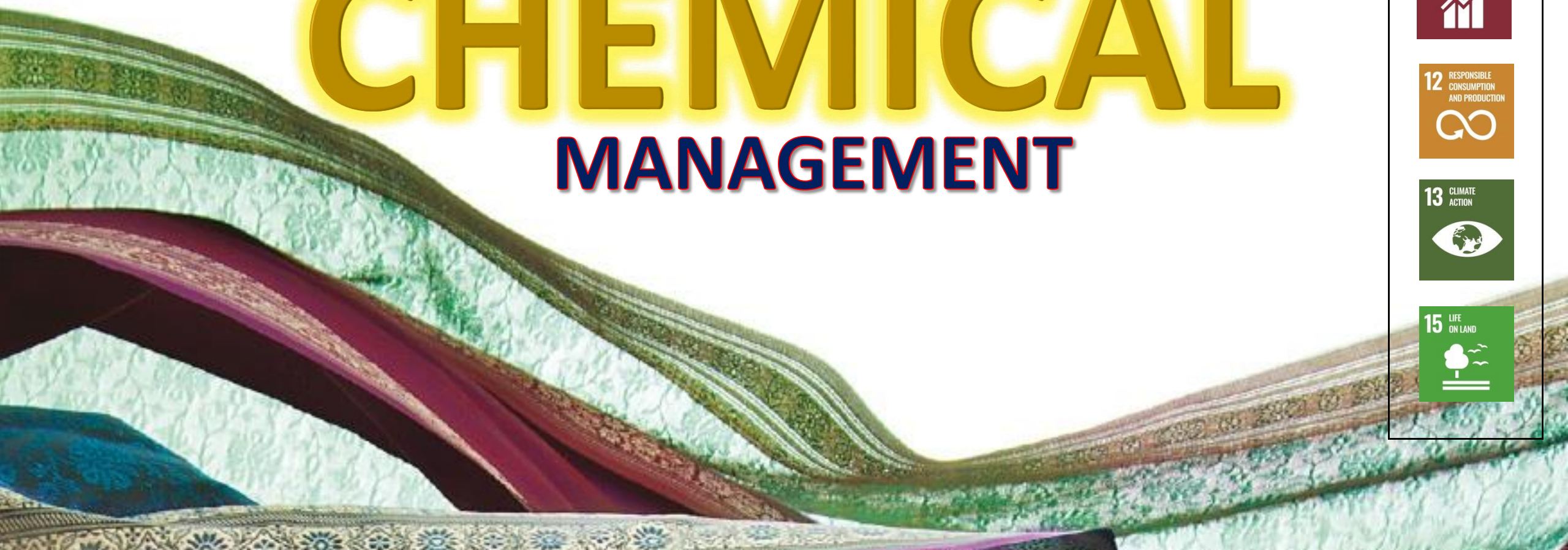
In the weaving department, the catch cord thread which previously consisted of 12 threads, has been reduced to 8 threads i.e. 30% reduction in catch cord yarn weight has been achieved without any compromise on production efficiency. On average weaving department has managed to save 420,000 meters of 30/2 threads per day.

Out of 12 holders 08 catch cords are running & 04 are empty.

Completion Date: November 2022

Yearly savings		Payback
kg of waste	PKR	Months
5,960	360,000	Immediate

IMPROVEMENT IN CHEMICAL MANAGEMENT



SDG's COVERED

AUTOMATED DISPENSING SYSTEM

Al-Karam textile mill's Knits Processing unit has installed Lawer dispensing system. Lawer dispensing system is an automated dispensing system which has enabled us in reducing the interaction of labor with the chemicals, resulting in the reduction of safety and health hazards . This has lessen the loss of chemicals and dyes by 4%, hence also reducing the possibility of floor contamination.

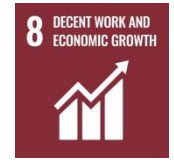
Completion Date: September 2022

Yearly savings		Payback
kg of chemicals etc.	PKR	Years
48,000	**9,720,000**	**3.5**

PACKAGING

OPTIMIZATION

SDG's COVERED



USING HDPE TUBES INSTEAD OF PAPER TUBE

We have replaced the paper tube (usually one time useable material) with plastic tubes (can be used multiple times) in our finish fabric rolling department. This circularity initiative helped us in saving of 16,800 paper tubes.

Completion Date: September 2022

Yearly savings		Payback
kg of paper tube	PKR	Months / years
239,400	30 Million	1 Year

BEFORE

AFTER

TAKING BACK PACKAGING MATERIAL FROM SUPPLIERS

In one of our operation where we provide the finished yarn to Knitting facility, we have started taking back the packaging material from some of our knitters which includes polyethylene bags for of single cone packing, polypropylene bags covering the cones pack, wooden pallets as well as paper cones. We are able to reduce our packaging cost up to 50% after the successful implementation of our this circularity initiative

Completion Date: September 2022

Material	Yearly savings		CO2e
	kgs	PKR	kgs
Paper cone	776.7	133,789	543
Poly Bags (Polyethylene)	8,476.3	4,000,844	5,0857.8
Poly bags (poly propylene)	7,712	7,172,836	1,5038
Wooden Pallets	2,065	3,153,811	3,056.2

Paper Cone

Wooden Pallet

PE Bags

PP Bags

USE OF POLYBAGS MADE FROM RECYCLED MATERIAL

We have replaced the polybags from virgin source with 100% recycled source in some of our articles. Our this circularity initiative helped us in reduction of 2.7 metric tons of CO2 emission per year.

Polybags from virgin material

Polybags from 100% recycled material

Completion Date: June- 2022

Yearly savings
Reduced Plastic (LDPE)
1.12 metric tons

SERVICES - SYSTEM DEVELOPMENT - COMPLIANCE -

ENVIRONMENTAL PERFORMANCE REPORT

For The Year: ___2022____

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ENVIRONMENTAL CSR ACTIVITIES 2022

SDG's COVERED

- 11 SUSTAINABLE CITIES AND COMMUNITIES
- 13 CLIMATE ACTION
- 14 LIFE BELOW WATER
- 15 LIFE ON LAND

CELEBRATION OF WORLD ENVIRONMENT DAY 2022

SUSTAINABILITY SESSION BY EXPERTS

AL-KARAM FAITH FOR ENVIRONMENT

ONSITE PLANTATION

PROMOTE BIODIVERSITY

FROM WASTE TO FERTILIZER

Plantation Drive - 2022

•Following our vision to plant 50,000 trees by 2025, **Al-Karam Textile Mills** organized a visit of its employees to WWF-Pakistan's Wetland Center as a part of its CSR initiatives in March 2022.

•A session was delivered followed by the plantation, nature meditation and transit walk in the mangrove forest. The beach cleaning campaign was also part of the nature exploration drive.

2022

STAKEHOLDER ACKNOWLEDGEMENT ON OUR INITIATIVES

HIGHEST CONTRIBUTION FROM AL-KARAM TEXTILE IN FY 21 SUSTAINABILITY BOOKLET

Supplier Sustainability Solutions FY21

Co-creating a sustainable future for the many people: good examples and inspiration from suppliers to suppliers

Recycling waste for in-house production

With an aim to reduce the environmental impact and to take a step towards becoming zero waste, this supplier has installed a fabric shredding plant.

Internal fabric wastage in the form of cut pieces is being collected, shredded and utilised in house for new production based on the color blend or theme.

Separating the waste fabric by color and quality was a challenge, but it was solved by following standard operation procedures and continuous monitoring during the fabric waste collection (as per color and blends). Printed fabrics were also challenging to recycle with the current capacity at 100,000 kgs per month.

With a decreased dependence on external sources for the raw material, the value of the fabric wastage increased by recycling it into fiber.

For more information: contact aysegul.koseoglu@inter.ikea.com

IKEA

The supplier used the UN Sustainable Development Goals* as a guideline in terms of indirect reduction of water, energy, chemicals and GHG emissions.

Sustainable Development Goals
United Nations

Optimising old machinery

In order to save energy, this supplier replaced an inefficient production equipment. The fiber dyeing plant uses a stamping machine to make cakes of fiber before dyeing.

The prior stamping machine was based on a crank shaft principal with a load of 10 kWh, which required 60 minutes to make the fiber cake of 200 kg. The old stamping machine has been replaced with a new hydraulic stamping machine (TDB-1600) of 7 kWh.

Benefits:

- new equipment is more efficient (10kW to 7kW)
- process time is reduced by 75% - from 60 mins to 15 mins
- allows more production with less energy

For more information: contact aysegul.koseoglu@inter.ikea.com

Reducing water loss during cooling process

A textile supplier was experiencing total high water evaporation losses. They upgraded the system by installing a new type of radiator to reduce water consumption.
The new radiators replace the conventional cooling tower process that requires more energy.

The radiator is now contained in a closed-circuit system where the water loss by evaporation has been reduced by 2%. This air-cooled process lowers the power engine's hot jacket water temperature. It saves water during the reduction of evaporation.

For more information: contact aysegul.koseoglu@inter.ikea.com

Yearly savings

€ ≈ 22 000 Euro

□ ≈ 54 000 m3

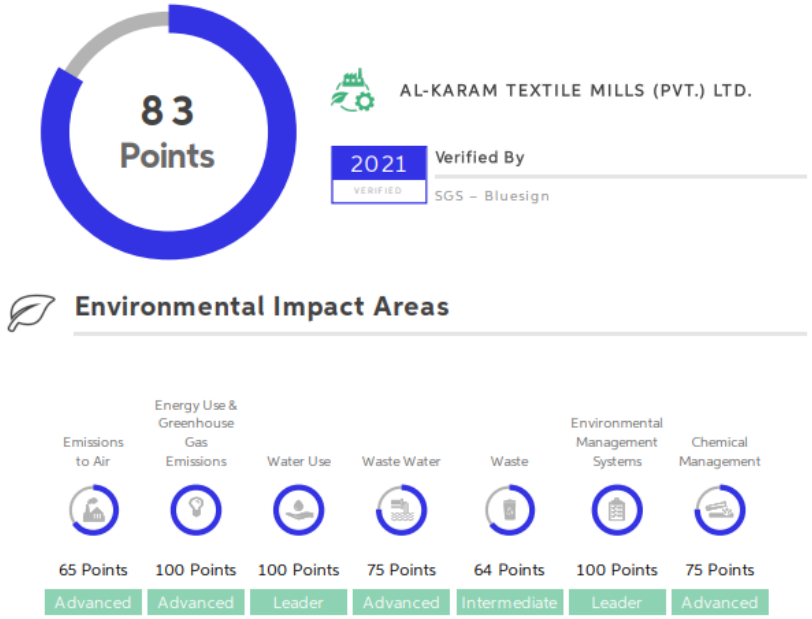
Payback time

3 years

ACKNOWLEDGMENT FROM BRANDS & GLOBAL BODIES

CERTIFICATE FROM WALMART

- Project Gigaton is the Initiative of **WALMART**.
- In 2020 Al-Karam achieved GIGA GURU status in this program and has sustained it since then.
- The goal is to avoid one billion metric tons of CO2 emissions by 2030.



HIGG FACILITY ENVIRONMENT MODULE REPORT

CERTIFICATE FROM TARGET

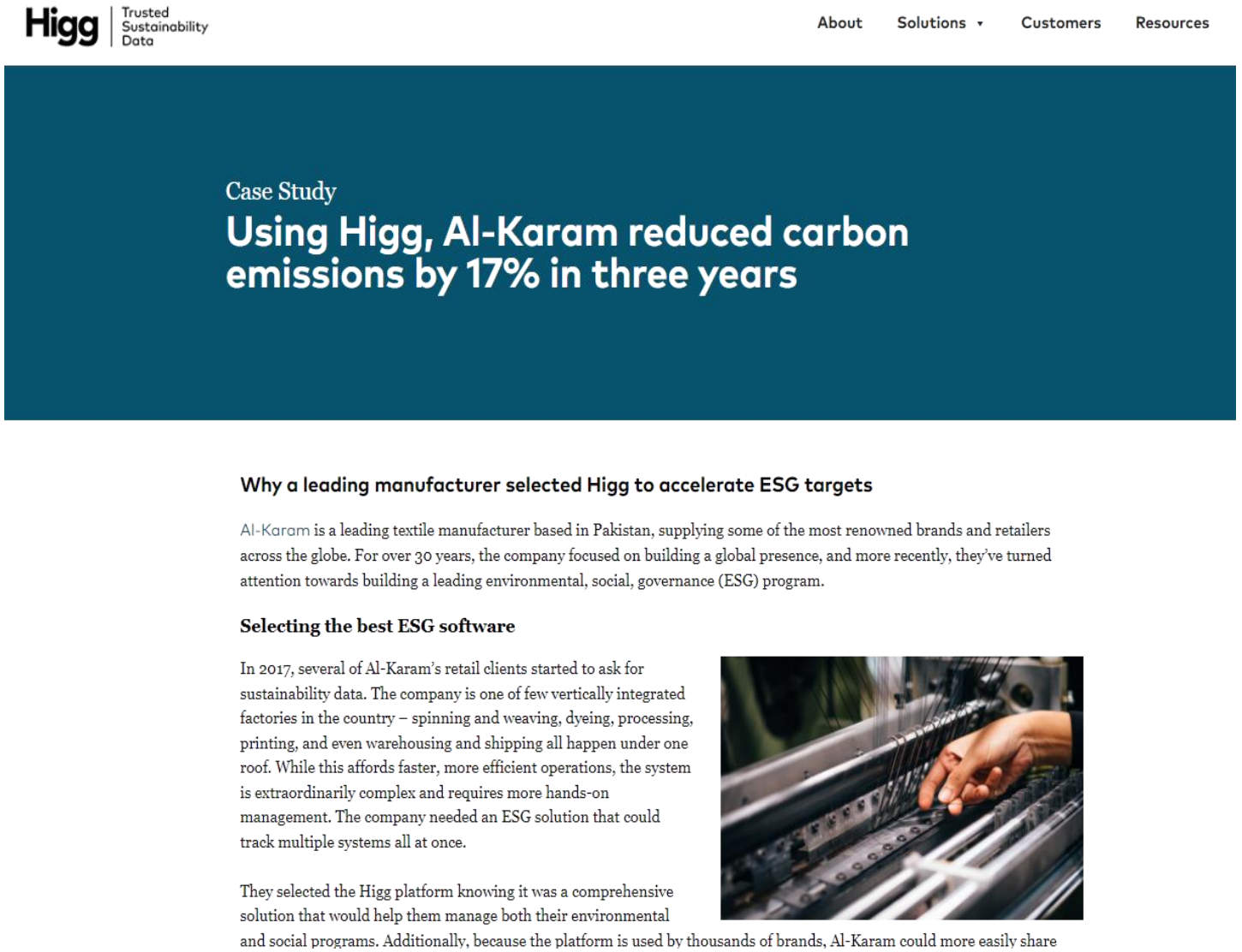
- ***Clean by Design*** program aims to decarbonize its supply chain.
- Al-Karam successfully completed this program in March 2022.

INTERNATIONAL RECOGNITION

- A PROUD MOMENT

Higg Index

Among 21,000+ HIGG user facilities globally, only 5 factories were selected based on their sustainable initiatives and their case studies were published by HIGG.



Higg Trusted Sustainability Data

About Solutions Customers Resources

Case Study

Using Higg, Al-Karam reduced carbon emissions by 17% in three years

Why a leading manufacturer selected Higg to accelerate ESG targets

Al-Karam is a leading textile manufacturer based in Pakistan, supplying some of the most renowned brands and retailers across the globe. For over 30 years, the company focused on building a global presence, and more recently, they've turned attention towards building a leading environmental, social, governance (ESG) program.

Selecting the best ESG software

In 2017, several of Al-Karam's retail clients started to ask for sustainability data. The company is one of few vertically integrated factories in the country – spinning and weaving, dyeing, processing, printing, and even warehousing and shipping all happen under one roof. While this affords faster, more efficient operations, the system is extraordinarily complex and requires more hands-on management. The company needed an ESG solution that could track multiple systems all at once.

They selected the Higg platform knowing it was a comprehensive solution that would help them manage both their environmental and social programs. Additionally, because the platform is used by thousands of brands, Al-Karam could more easily share

SUSTAINABILITY HIGHLIGHTS

Past Years

SUSTAINABILITY HIGHLIGHTS

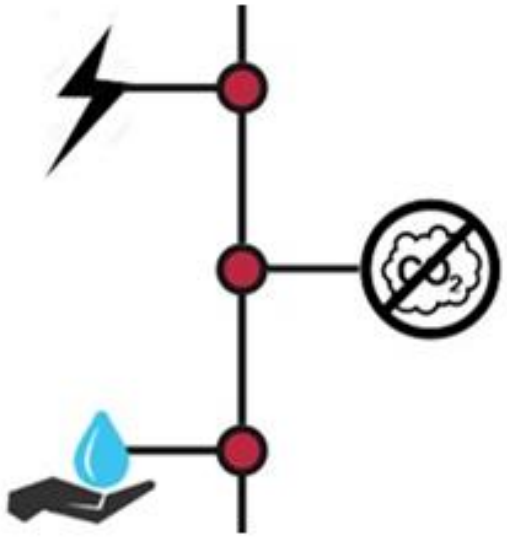
2019-2022

Energy Efficiency

- In 2019 | (16,982 MWh)
  Equivalent to 11,000 Houses
- In 2020 | (7,558 MWh)
  Equivalent to 4,900 Houses
- In 2021 | (17,831 MWh)
  Equivalent to 30,000 Houses
- In 2022 | (6,084 MWh)
  Equivalent to 6,300 Houses

Water Conservation

- In 2019 | (153,341 m3)
  Equivalent to 1,700 Persons
- In 2020 | (48,151 m3)
  Equivalent to 530 Persons
- In 2021 | (113,502 m3)
  Equivalent to 1,250 Persons
- In 2022 | (205,514 m3)
  Equivalent to 2,290 Persons



Reduction in Carbon Emission

- In 2019 | 963 tons of CO_2e
  Equivalent to 44,385 trees
- In 2020 | 428 tons of CO_2e
  Equivalent to 19,756 trees
- In 2021 | 945 tons of CO_2e
  Equivalent to 43,557 trees
- In 2022 | 345 tons of CO_2e
  Equivalent to 15,900 trees

AL-KARAM SUSTAINABILITY PHILOSOPHY

"Al-Karam's sustainability framework is primarily based on PEOPLE, PLANET & PROSPERITY.

We are strictly acting on these principles since our foundation."