

# KORDSA SUSTAINABILITY REPORT 2020



# CONTENTS

About the Report **03**

Messages to Our Stakeholders **04**

Message From Our Chairman.....05

Message From Our CEO.....06

Corporate Profile **07**

Kordsa Facts and Figures.....09

Products, Industries, Markets...10

Kordsa in the World.....11

Strategy and Governance **12**

Kordsa Strategy House.....14

Alignment Of Strategies.....15

Corporate Governance.....16

Business Ethics.....17

Trends and Risks.....19

ESG Risk Management.....20

Measures Of Covid-19 Pandemic...21

Sustainability Management **22**

Sustainability Milestones.....24

Sustainability Management Structure.....26

Communication With Our Stakeholders.....28

Material Sustainability Topics.....36

Sustainability Impacts Along Our Value Chains.....38

Material Topics And Un 2030 Global Goals.....39

Compliance With Developing Global Sustainability Standards.....40

Achievements On 2020 Roadmap.....41

Our Sustainability Targets.....42

SDG 9: Industry, Innovation and Infrastructure.....43

R&D and Innovation.....45  
Technology and Digitalization...51

SDG 12: Responsible Consumption and Production.....52

Raw and Other Materials Management.....53  
Energy Management.....56  
Emissions Management.....59  
Waste Management.....61  
Water Management.....63

SDG 8: Decent Work and Economic Growth.....65

Occupational Health and Safety..66  
Sustainable Growth.....69  
Supply Chain Management.....71  
Human Rights.....73  
Employment.....74  
Training and Development.....80

SDG 5: Gender Equality.....81

Equal Opportunities and Diversity.....82

SDG 4: Quality Education.....85

Community Development.....86

Performance Indicators **88**

Economic Performance Indicators.....89

Social Performance Indicators.....90

Environmental Performance Indicators.....95

Annexes **103**

Key Stakeholder Communication Platforms.....104

Employee Sustainability Survey.....105

OHS Committees.....106

Memberships.....107

UNGC Content Index.....108

GRI Content Index.....109

Kordsa 2020 Reporting Guidance.....111

Kordsa 2020 External Assurance Report.....114

Kordsa 2020 Scope 3 GHG Verification Report and Certificate.....116

Contacts.....118

Report Contact.....119

# ABOUT THE REPORT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



With our seventh sustainability report that reflects Kordsa's economic, environmental and social performance in 2020, we offer our stakeholders the opportunity to evaluate our impacts resulting from our activities and to examine our monitoring, improvement and measurement steps in managing them.



## The Scope and Topic Boundaries

The data in this report covers Kordsa's activities from January 1, 2020 to December 31, 2020. We also provide 2018 and 2019 data in order to monitor the trends. In addition to determining process of the report content, we explain the boundaries of the material topics in the [Sustainability Impacts Along Our Value Chain](#) section of this report.

The list of topics that we include on our materiality matrix are all relevant for our global operations with no limitations. This year the scope of our report has not changed. Externally our suppliers and contractors also have impacts regarding these topics. We provide details on management of impacts under [Selecting Suppliers](#) topic of this report. Regarding our economic performance, we provide figures representing the company, not as country specific.

## The Principles

This report is prepared in accordance with the [GRI Standards](#): Core option. In the process of identifying our strategic sustainability topics, we took into consideration GRI's principles of materiality, stakeholder inclusiveness, sustainability context and completeness. Our report also covers the 10 principles of [UN Global Compact](#) that we signed in 2014. [UNGC Content Index](#) is located here.

With our targets on material topics, we directly address five of [UN Sustainable Development Goals](#). Our report also covers the [International Finance Corporation](#) IFC's Performance Standards on Environmental and Social Sustainability that were established to pinpoint, assess, and manage social and environmental risks in project finance. Additionally, we analyzed the relevant [SASB's \(Sustainability Accounting Standards Board\)](#) topics and KPI's of the sectors Kordsa serve and explained how we support our customers' sustainability targets.

## External Audit and Verification

Selected 2020 performance indicators are audited by [PWC](#). Scope 1-2-3 calculations are verified by [QSI](#).

## Next Report

We aim to publish the eighth of our sustainability reports, which we plan to prepare annually, in the first half of 2022.

### TEXT

Throughout the report, you can reach the relevant topic link by clicking on the bold and underlined texts.



All items in the table of contents page are linked to relevant headings. You can simply click on the heading in the contents page to directly go to the relevant topic in the report.



You can reach any part of the report by using the navigation pane on top of each page.



You can move forward and backward through the pages by clicking on the arrows at the right end of each page.



Related video on pages with play button you can watch the content.

# MESSAGES TO OUR STAKEHOLDERS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

## We are Inspired to Reinforce Life!

We know that each moment of life is a unique and rich source of joy. We keep innovating in reinforcement technologies with the thrill of exploration and the inspiration driven by the courage of constant developments.

We take each step with passion towards a safe, easy, efficient, and sustainable world through tire, construction reinforcement and composite technologies we develop.

KORDSA  
SUSTAINABILITY REPORT  
2020

# MESSAGE FROM OUR CHAIRMAN



**CEVDET ALEMDAR**  
Chairman of The Board of Directors

## Dear Stakeholders,

2020 has been a year that we completed the actions on our first five-year's sustainability roadmap we have been exercising since 2016 while readjusting to the changes the Covid-19 pandemic brought in.

Kordsa continued to create value for its stakeholders with its "We are inspired to reinforce life" vision by taking swift action in all matters with its power to adapt in this year where we once more witnessed the importance of joining the power of being global with the agility of being local, digital transformation and the sustainability issues in all areas.

We had shared the first performance report on our sustainability impact with our stakeholders back in 2015 following our signing of the UN Global Compact in 2014, which laid down 10 principles in environment, human rights, work force and combat with corruption topics. Kordsa was received into the BIST Sustainability Index which lists companies with the highest corporate sustainability performances in 2016 and inducted among the Sustainability Leaders in 2020.

Kordsa crowned its success in operational sustainability performance and reporting by both being selected as one of

**“ Kordsa continued to create value for its stakeholders with its “We are inspired to reinforce life” vision by taking swift action in all matters with its power to adapt in this year where we once more witnessed the importance of joining the power of being global with the agility of being local, digital transformation and the sustainability issues in all areas. ”**

the three Leaders of CDP Climate and Water Programs in Turkey and also winning the second-place award for its Sustainability Report in the 'Best Materiality Report of Asia' category in 2020.

With our Industry 4.0 applications guided by technology and digitalization, we are transforming our sustainability works which we have been executing with the principle of creating value for all of our stakeholders. While we are working to build the factory of the future using smart manufacturing systems as a technology and innovation leader company on a global scale, we are also taking care of our corporate responsibilities sensitively by using resources effectively.

We are developing innovative and environment-friendly technologies focusing on human and environment with the continuous studies of our R&D centers which serve as kitchens for our innovations in all of our fields of business. For a sustainable mobility, we are utilizing the nylon yarns we recycle in tire reinforcement technologies while we are producing reinforcement materials in composite technologies which reduce fuel consumption by making vehicles lighter. In construction reinforcement technologies we are developing innovative products in order to make concrete structures stronger and have a longer life.

Having showcased its experience and know-how on advance material technologies in the direction of creating a sustainable future goal, Kordsa put its signature under an important achievement in 2020. The battery covers produced in the UK with Kordsa-marked fiber fabric on have come out as a very important step in reducing the weight of electric vehicles which are seen as the future of mobility.

In the field of composite technologies, Kordsa reached out into space with its subsidiary Fabric Development and provided NASA with the fabric to be used in the Orion space capsule and

expanded its high-temperature resistant Oxide-Oxide ceramic composite material portfolio to applications reaching 1,400°C through its other subsidiary Axiom Materials.

As the Sabancı Group, sustainability is one of the subjects we step forward in as a pioneer in the society and constantly force ourselves for progress. As a prime supporter of Sabancı Holding's "We unite Turkey and the world for a sustainable life with leading enterprises" vision, Kordsa possesses the strong technologic infrastructure and deep-rooted innovation culture crucial for sustainability.

In the upcoming period, we will continue to create value for our customers, employees, investors, and all the fields and societies we operate within and spread our mission to reinforce life on a global scale with our focus on sustainability.

I would like to thank all of our stakeholders who have been with us on Kordsa's sustainable reinforcement journey for their contributions to our achievements and especially our employees who have been in charge of their duties devotedly under the most challenging circumstances.

Sincerely,

**CEVDET ALEMDAR**  
Chairman of The Board of Directors



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# MESSAGE FROM OUR CEO



ALİ ÇALIŞKAN  
CEO

## Dear Stakeholders,

At the core of our understanding of sustainability lie the following goals: to create economical value for our shareholders and investors through growth with technology investments in all three main lines of our business, to maintain the constant development of our skilled human resources, and to create sustainable value for all of our stakeholders by using the natural resources responsibly.

As the economic impact of the COVID-19 pandemic continued to be felt across the entire globe, we continued to maintain our business continuity and produce “sustainable technologies” in the geographies we operate and on the road we took with the vision “We Are Inspired to Reinforce Life”.

As we were completing our 2020 Sustainability Roadmap which included our five-year sustainability targets and actions, we also updated our 2025-2030-2050 targets toward our strategic priorities from 2020 on in a way that would support the associated targets of the UN Sustainable Development Goals, and we started to implement the Kordsa 2050 Sustainability Roadmap.

## Industry, Innovation and Infrastructure

At Kordsa we see R&D, innovation, technology and digitalization as the facilitators of our sustainable consumption and production

“As the economic impact of the COVID-19 pandemic continued to be felt across the entire globe, we continued to maintain our business continuity and produce “sustainable technologies” in the geographies we operate and on the road we took with the vision “We Are Inspired to Reinforce Life”.”

goals in particular. In our R&D centers we use the nylon yarn we recycle in the tire reinforcement sector and work on technologies that reduce fuel consumption by reducing friction resistance. We develop products and technologies that reduce fuel consumption and carbon emission by making vehicles lighter in the composites sector, and more durable and practical products and technologies in the construction sector. As of 2020 year-end, our Science, Industry and Technology Ministry approved R&D projects increased by 5%, and the number of registered patents was 228. The revenues from the new products reached 41 million dollars in 2020.

We are focusing on automation, data acquisition, data security and sensor technologies through ‘Lean Digitalization’. We are able to access to the data of all facilities from a single point mobile and work out the necessary improvements with ease. All these investments make it easier for us to be able to fulfill our sustainability goals.

## Responsible Consumption and Production

Our works in the circular economy field continued in 2020. We are working on making our scraps go back into the production process and create value for the economy. We prevented approximately 2.4 million pieces of material from going into waste by reusing them, ultimately saving nearly 2.7 million dollars. Average reuse rate across our entire facilities rose from 14% to 28%.

We are targeting to reduce our emissions by 17.5% until 2025 as part of combat global climate change. We are also targeting to reduce our waste water production and water consumption by 50% step by step until 2030 and increase the use of renewable energy in all of our facilities every year. Our 2021 target is to increase the portion of renewable energy use in total energy consumption to 5%.

In the 2020 evaluation of the CDP (Carbon Disclosure Project), which is the only independent body to report companies’ carbon and water-based risks on a global scale, we raised our rating in the Climate Change and Water Programs to A- and became one of the three leading companies in this field in Turkey. We are among the companies that comply with Ecovadis requirements in the maintenance of sustainability in global supply chains. We increased our score in the Ecovadis’ evaluation of 40,000+ companies in the 2015-2019 period for sustainability works and had ourselves placed in the Gold Rated Company category.

## Decent Work and Economic Growth

We continued our investments and projects for nearly 4,500-strong human resources in five countries including subcontractors uninterruptedly to provide them with a healthy and safe work environment that supports their productivity, protect their rights as

humans and workers, and provide our skilled workers platforms for personal development necessary for their long-term employment.

In 2020 we updated our Human Resources policy in line with the global expectations and demands and prepared our Sustainable Employment Policy. We provided our employees with 56 hours of training per person on average. Three of our facilities ended the year with zero accidents, and the average number of accidents registered was one per facility.

2020 was a year when we took important steps in caring for our suppliers’ sustainability impacts. We managed to have 73% of our global suppliers take part in our 2020 supplier sustainability evaluation survey.

## Gender Equality

In Kordsa we practice an equal opportunities policy from recruitment to retirement and provide everyone an equal working environment. Our multicultural structure in Kordsa brings the diversity along with it. This variety and cultural diversity form the basis of our corporate culture. In 2020, we put many exercises and projects into practice that will empower our female employees and also female engineers outside our company. We are aiming to increase the ratio of our female employees in our offices to 45% by 2025.

## Quality Education

With the voluntary participation of our employees in Kordsa, we are running projects that support the education of the children and the adolescent youth and empower their future regardless of their community, gender and income level backgrounds in the regions where our facilities are located.

In 2020, we collaborated with The Teachers Academy Foundation (ÖRAV) in the development of the teachers at the primary school we had renovated in Izmit. We supported three personal and professional development training programs for 109 school teachers in total.

We will continue to work with courage and devotion to make ‘We Are Inspired to Reinforce Life’ vision real in Kordsa. I would like to thank all of our employees, our business partners, customers and shareholders who have been with us in our works in these challenging times and contributed to our efforts in creating a sustainable world.

Sincerely,

ALİ ÇALIŞKAN  
CEO



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# CORPORATE PROFILE

For all the sectors we serve, we develop all our products with sustainability perspective and aim to grow by creating social, environmental, and economic value.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



As Kordsa, we develop innovative and value-added reinforcement technologies for a safer, more efficient, and sustainable world. With our tire reinforcement technologies, we reinforce one in every three car tires and two in every three aircraft tires manufactured in the world today. Through our composite technologies we reinforce the wings, bodies, cabin interiors and engines of aircrafts while reinforcing airfields by means of our construction reinforcement technologies. We carry the field that we reinforced with our vision, “We are inspired to reinforce life” to aerospace.

We reduce fuel consumption by reducing rolling resistance of tires and helping to build lightweight vehicles thanks to our reinforcement technologies. Moreover, we contribute to our stakeholders’ sustainability goals by using recycled yarns in tire reinforcement technology. We provide construction reinforcement technologies for sustainable building projects, which stand out with their low carbon emission and durability features. ”

## AWARDS and ACHIEVEMENTS

### Supply Chain Excellence Award

Kordsa was deemed worthy of Apollo Golden Partner – Supply Chain Excellence Award at Apollo Global Partners Summit of India based manufacturer Apollo Tyres.

### Automotive Quality Management Certificate

Kordsa obtained IATF 16949 Automotive Quality Management System Certificate.



# KORDSA FACTS & FIGURES



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Corporate Profile

**TL 4.5 Billion**  
Turnover

ECONOMIC	4 CONTINENTS	5 COUNTRIES	12 FACTORIES	2 R&D CENTERS
----------	-----------------	----------------	-----------------	------------------

**4,499**  
EMPLOYEES (INCLUDING SUB-CONTRACTORS)

**47** YEARS

**213,953** Hours  
TOTAL TRAINING

USD **2.7** Million  
Total savings resulting from the reuse of materials

ENVIRONMENTAL  
USD **1,051,195**  
Total amount of our environmental investments and expenditures

## Sustainability Profile

**TL 384 MILLION**  
REAL OPERATING PROFIT  
REGIONAL REVENUE SPLIT

<b>%32</b> EMEA	<b>%24</b> ASIA PACIFIC	<b>%32</b> NORTH AMERICA	<b>%12</b> SOUTH AMERICA
--------------------	-------------------------------	--------------------------------	--------------------------------

**%35** FEMALE\*

**%65** MALE\*

**0** FATAL OCCUPATIONAL ACCIDENTS AND DISEASES

**56** Hours  
AVERAGE TRAINING

**2.4** MILLION PIECES  
Number of reused materials

**%28**  
Global reuse ratio

**%9.1**  
EMISSION MANAGEMENT

**%22.4**  
WASTE RECYCLING

**%51.5**  
WASTE DISPOSAL

**%7.4**  
CONSULTANCY

**%9.6**  
TRAINING AND  
PROJECT  
INVESTMENTS

\* Data represents white-collar employees. Among all employees, the rate of female employees reached 13.5%.

# PRODUCTS, INDUSTRIES, MARKETS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

### Tire Reinforcement Technologies

SINGLE-END CORD	CORD FABRIC		INDUSTRIAL FABRICS
 AUTOMOTIVE INDUSTRY	 PASSENGER VEHICLES	 CONSTRUCTION VEHICLES	 MECHANICAL RUBBER GOODS
 MECHANICAL RUBBER GOODS	 AVIATION VEHICLES	 LIGHT COMMERCIAL VEHICLES	
	 HEAVY-DUTY VEHICLES	 AGRICULTURAL VEHICLES	

### Composite Technologies

FABRICS AND PREPREGS\*

- AEROSPACE AND AVIATION
- AUTOMOTIVE
- INDUSTRIAL APPLICATIONS
- MARITIME
- SPORTS EQUIPMENT

\* Resin impregnated fabric

### Construction Reinforcement Technologies

SYNTHETIC FIBER REINFORCEMENT

- INFRASTRUCTURES
- SUPERSTRUCTURES
- MINES

“ In the tire reinforcement industry, we manufacture cord fabric and single end cord products that provide flexibility and durability to vehicle tires in our high-tech factories. Our technology leadership, experience in reinforcement technologies and R&D works along with “The Reinforcer” title position us as the strategic partner of leading tire manufacturers.

In composite technologies, we produce innovative by-products and practices for aviation, automotive, maritime and rail systems industries. In our plants in Turkey and USA, we provide design, analysis, material library, prototype production services and develop fabric, resin and prepreg in line with our customers’ needs.

In construction industry, we stand out with our innovative macro and micro synthetic fiber reinforcements that provide ease of use, fast applicability, less labor work, energy efficiency, high concrete density, long-lasting durability, and low carbon emission in concrete reinforcement applications for both infrastructure and superstructure concrete reinforcement projects. ”

# KORDSA IN THE WORLD



About the Report

Messages to Our Stakeholders

Corporate Profile

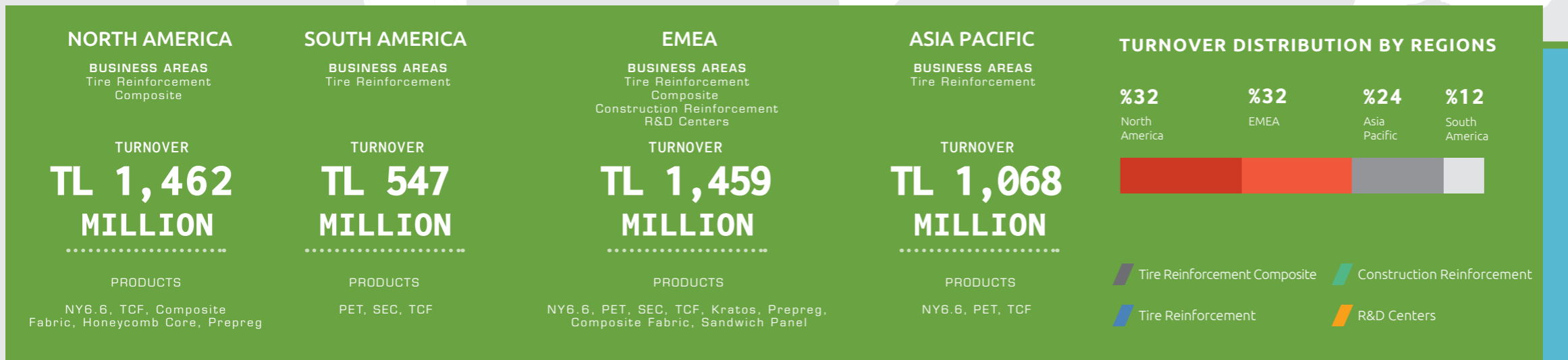
Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



# STRATEGY AND GOVERNANCE



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

We run all our operations in conformity with the Corporate Governance Principles; transparency, fairness, responsibility, and accountability.

# STRATEGY AND GOVERNANCE

“ In every geography we operate, we execute all our operations in compliance with regulations and corporate ethical values, and with our social and environmental responsibility awareness that we extend among our employees.

In the basis of our sustainability understanding, there lies creating sustainable value for all our stakeholders by using natural resources responsibly. We mean to achieve this by growing in our main business lines through our technology investments to create economic value for our shareholders and investors and ensuring continuous development of our talented human resources. ”

## AWARDS and ACHIEVEMENTS BIST Sustainability Index

Kordsa, among the 58 companies with the highest corporate sustainability performance, entered Istanbul Stock Exchange Sustainability Index for the 5th time.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

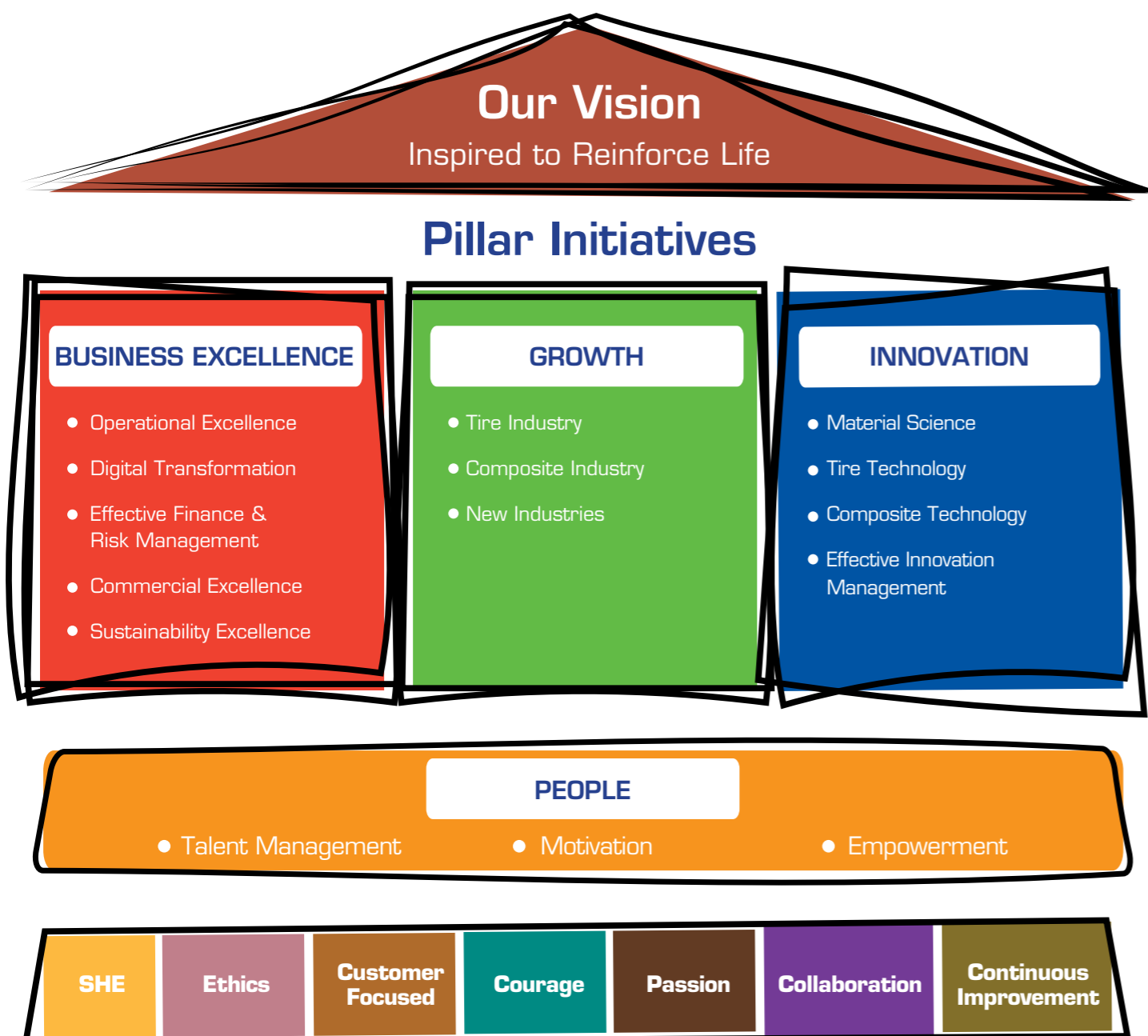
Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# KORDSA STRATEGY HOUSE



## MISSION

Deliver high value-added reinforcement solutions globally.

## SAFETY, HEALTH AND ENVIRONMENT

We work carefully, disciplined, and programmed. Following HSE rules, we create safe working areas.

## ETHICS

We work with an honest and transparent approach and comply with Ethical Rules and Policies.

## CUSTOMER FOCUSED

We know the demands and expectations of our customers, we work in line with these demands and expectations, and provide competitive advantage.

## COURAGE

We express our ideas freely, take calculated risks and are not afraid to make mistakes. We take responsibility and act by taking initiative.

## PASSION

We approach every work we do with enthusiasm, excitement, and determination by believing wholeheartedly; we prompt our whole environment with our energy.

## COLLABORATION

We create the environments to ensure the participation of all relevant stakeholders, encourage them, value different ideas and provide the highest benefit through multiple collaborations.

## CONTINUOUS IMPROVEMENT

We question ourselves and our work with a positive curiosity excited from innovation. To be always better, we learn from our past experiences, develop with our vision of the future, and become the pioneer of change.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# ALIGNMENT OF STRATEGIES

“ Our vision, strategic initiatives, and values that we updated in 2019, match with our material topics that shape our sustainability strategy. ”

	Pillar Initiatives	Material Sustainability Topics	Values
Pillar Initiatives	Business Excellence	Supply Chain Management All Environmental Topics	Customer-Focused
	Growth	Sustainable Growth	
	Innovation	Raw and Other Materials Management All Environmental Topics	Continuous Improvement
	People	Employment Equal Opportunities and Diversity Training and Development Human Rights Community Development	Courage
Values	Safety, Health and Environment	Occupational Health and Safety Energy Management Emissions Management Waste Management Water Management	Passion
	Ethics	Compliance Anti-Corruption	Collaboration
<b>Values</b>			



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



Kordsa Board of Directors represents and governs the company by monitoring the compliance of the company activities to the laws and regulations, articles of incorporation, internal regulations and determined policies. The board oversees Kordsa's long-term interests by making strategic decisions considering the company's ESG risks, growth, and gains.

Our Board of Directors consists of six members, and we have two independent members, one of whom is a woman (17%). One of the independent members is the chair of Early Risk Identification Committee and member of Corporate Governance and Audit Committees. The second independent member is the chair of both Corporate Governance and Audit Committees and member of Early Risk Identification Committee. All members except independent members hold executive functions.



## INTERNAL STAKEHOLDER VIEW

79% of our employees who responded to the sustainability assessment survey think that...

**Kordsa manages all its business processes in line with corporate governance principles which are transparency, fairness, accountability, and responsibility.**

### Committees Reporting to The Board

### Responsibility on Sustainability Topics

<p><b>Audit Committee</b></p>	<ul style="list-style-type: none"> <li>• Sustainable Growth</li> <li>• Supply Chain Management</li> <li>• Compliance and Anti-Corruption</li> </ul>
<p><b>Corporate Governance Committee</b></p>	<ul style="list-style-type: none"> <li>• Sustainable Growth</li> <li>• Supply Chain Management</li> <li>• Compliance and Anti-Corruption</li> <li>• Employment</li> <li>• Human Rights</li> <li>• Equal Opportunities and Diversity</li> <li>• Community Development</li> </ul>
<p><b>Early Risk Identification Committee</b></p>	<ul style="list-style-type: none"> <li>• Sustainable Growth</li> <li>• Supply Chain Management</li> <li>• Compliance and Anti-Corruption</li> <li>• Occupational Health and Safety</li> <li>• All environmental topics *</li> </ul>

\* Energy Management, Emissions Management, Waste Management, Water Management



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



“ The Code of Business Ethics that regulates Kordsa’s relationships with its customers, employees, shareholders, suppliers, business partners, competitors, the environment and society cover four main topics: legal obligations, integrity, confidentiality and conflict of interest. Kordsa Code of Business Ethics is available in the native languages of the countries we operate in (Turkish, English, Bahasa, Thai, and Portuguese) and is published on [our website](#). ”

## 2020 Global Legal and Compliance Department Activities

- We provided all our employees with online and class trainings on the 6698 Law on Personal Data Protection (KVKK), and continued our harmonization works to KVKK regulations.
- Within the framework of the Competition Law Compliance program, we started to work on the Competition Law Compliance Manual, Competition Policy and Employee Training.
- We established an Export Control Policy that is applicable across all our group companies in line with the Sanctions & Export Controls Compliance Process
- We provided export control trainings and sexual violence awareness trainings to our employees in our companies in the US.
- We edited the employee handbook that includes employee rights according to the changes in regulations.

## INTERNAL STAKEHOLDER VIEW

85% of our employees who responded to the sustainability assessment survey think that...

**Kordsa’s policies, trainings and audits on compliance including anti-bribery and anti-corruption are adequate.**

### Kordsa Code of Business Ethics

The processes of ethics management are explained on our [website](#).

### Anti-Corruption and Anti-Bribery

[Kordsa Anti-Corruption and Anti-Bribery Policy](#)

### Compliance Management

The processes of compliance management are explained on our [website](#).

## 2020 Results

Our 1,462 (✓) white-collar employees received a total of 1,488 hours of ethics training in 2020. We provide our blue-collar employees with ethics training as part of their on-the-job trainings. Ethics training comprise the topics of bribery, corruption, fraud, discrimination, mobbing and human rights.

We received two notices through our Ethics Hotline, both of which were resolved. In this period one corruption case was discovered, for which three employees received disciplinary penalty.

No public cases on compliance occurred and/or finalized on environmental, social or governance topics against Kordsa. Kordsa paid 676,220,39 TL non-compliance fines because of customs, taxes, and social security regulations. The related departments took the necessary precautions against the duplication of these fines.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

Country	Legal Updates	Impact on Kordsa	Actions Taken by Kordsa
Turkey	Amendment to The Regulation on Commercial Communication and Commercial Electronic Messages (January 2020 for some articles, and September 2020 for others)	It has been made mandatory on all sole traders and companies who wish to send commercial electronic messages to register to a new system named "IYS". As a company that sends commercial electronic messages, Kordsa must fulfill its obligation to register to this system.	We completed our IYS registration as per Amendment to The Regulation on Commercial Communication and Commercial Electronic Messages on August 6, 2020. We uploaded the entire existing electronic message recipients list to IYS. Since this is a continuing process, new recipients will be added to the system as and when they come in.
Turkey, USA, Indonesia, Thailand, Brazil	Amendment to the Law on Protection of Competition (June 2020) and Competition Law Compliance Program	The Amendment to the Law on Protection of Competition is not expected to have any impact on our regular activities.	We started the Competition Law Compliance Program where we provided online and vis-à-vis trainings in order to raise awareness among Kordsa employees and initiated the preparation of a guide on the topic.
Turkey	Communiqué on Common Principles Regarding Significant Transactions and The Retirement Right (June 2020)	It will be mandatory to act according to the amended principles in this communiqué if any transaction falls under the definitions in the Communiqué on Common Principles Regarding Significant Transactions and The Withdrawal Right and is made after its date of effect.	We informed the Finance Department of the changes in the regulations to make sure that we act in compliance to the law.
Turkey	Amendment to the Communiqué on Corporate Governance (October 2020)	Kordsa is subject to the principles of sustainability as per the Amendment to the Communiqué on Corporate Governance, therefore the declarations within the principles of sustainability compliance framework must be included in the corporate governance compliance reports.  Henceforth, it will be mandatory to include and comply with the principles laid out in the Principles of Sustainability Compliance Framework as published by the Capital Markets Board (CMB) when preparing the annual reports in 2021, and the years thereafter.	We informed the departments of Finance and Corporate Communications & Sustainability of the changes in the Communiqué on Corporate Governance. The Corporate Communications & Sustainability Department prepared a list of principles that would be included in the annual reports, which we are set to include in our 2020 Annual Report.  We planned to have the Code of Conduct amended according to the Advertisement and Marketing Ethics. We planned to have the Anti-Bribery and Anti-Corruption Policy amended in line with the honest tax principles.
Tayland	Data Protection Law	Although the effective date of the relevant Law is postponed to 01.06.2022, detailed analysis regarding data transfer and changing the way of business will be required.	We initiated the analysis work and preparation of the policies and procedures.
Brazil	Data Protection Law	Developments in Data Protection Law at our Brazilian subsidiary will be followed and adapted within the scope of data processing and transfer processes.	We started to evaluate the compliance process of Kordsa and its subsidiaries within the scope of comparative data protection law.
USA	US Data Regulations and California Consumer Privacy Act	Developments in Data/Privacy Protection Law at our US subsidiaries will be followed and adapted within the scope of data processing and transfer processes.	We initiated the analysis work and preparation of the policies and procedures.

# TRENDS and RISKS

When we evaluate our risks at Kordsa we follow not only the in-house risks, but also the changes globally, and prepare our company for the future by taking global issues, industrial trends, possible regulation changes and external factors all into account. Besides mobility, new technologies and digitalization trends that affected our business directly in 2020, we also followed the new legislative changes and global regulations of the EU Green Deal.

## Mobility Trend

In Kordsa, we follow the developments and trends in mobility closely because of our products and solutions in the fields of tire reinforcement and composites.

A research and analysis carried out by the globally renowned consultancy firm McKinsey revealed the mobility trends of today and tomorrow and the impacts these trends will have on diverse set of industries. According to the consultants at McKinsey, the progresses in the four basic trends in the industry, autonomous drive, electrification, connectivity, and the vehicle sharing look like they will create a groundbreaking change not only in the automotive sector, but also in many other fields such as insurance, service, and public sectors.

Because battery-operated electric vehicles have larger battery capacities and the need for a flexible structure for the protective material for the battery cells and the flexural stiffness requirements that come with it, carbon-fiber is becoming a good choice as material. Therefore, one of the focal points for Kordsa will be battery-operated electric vehicles. Kordsa will continue to develop its technologies to serve materials for both today's, and tomorrow's transport vehicles, from passenger cars to spacecrafts and drones.

The appeal to electric vehicles is increasing very rapidly on both the manufacturer and the consumer end. Electric vehicles with low carbon emission are playing an important role in the future of mobility. According to McKinsey Center for Future Mobility Report, 20% of the people who are considering a vehicle purchase show interest in electric vehicles. According to the International Energy Agency, to reach zero emissions targets by 2050, the share of electric vehicles in the global vehicle market must increase to 50 percent by 2030.

In 2020, Kordsa achieved an important success in this field, too. The collaboration with the British manufacturer TRB Lightweight Structures since the beginning of the year resulted in Kordsa's carbon-fiber fabrics being used in the mass-production of the battery sections for electric vehicles. We aspire to contribute to the world's transition to sustainable transportation with our carbon-fiber fabrics.

“As Kordsa, we are following the mobility trends closely, and providing the British electric car battery cell housing manufacturer TRB Lightweight Structures carbon-fiber fabric, which makes their battery cell housings lighter and safer. We are aiming to contribute to the world's transition to sustainable transportation with this product of ours.”

## EU Green Deal

Combatting climate change, which comes first in the World Economic Forum Risk Perception Survey, and transition to low-carbon society are among the most important challenges of today.

The Green Deal roadmap which EU announced in 2019 lays out the actions to be taken to achieve zero emission value by 2050. EU officially announced that they will reduce the greenhouse gas emissions by 50-55% compared to 1990 levels by 2030. Other countries that countersigned the Paris Agreement started to announce similar targets as well.

Even though there is no target or operational Trade Emission System in Turkey now, we are following these developments closely for our trade with European countries.

## New Technologies and Digitalization

One of the most striking powers today is the huge speed in the advent of technology and its direct impact on all industries in the world. To renew and digitalize our processes and trigger innovation, we need to embrace this potential.

Digitalization of operations and management based on clear data is getting more critical every day in us taking more data-based decisions. New digital applications open us to opportunities where we can offer more efficient products through more value-creating processes thanks to robots and artificial intelligence technologies and reduce the effects on our total value chain.

The steps that Kordsa takes toward new technologies and digitalization are available in detail under **R&D & Innovation** and **Technology & Digitalization** topics in our report.

## Legal Developments

The new regulations that were introduced in 2020 in the countries we are active, their impact on Kordsa's activities and the actions Kordsa took are available under **Business Ethics** topic in our report.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

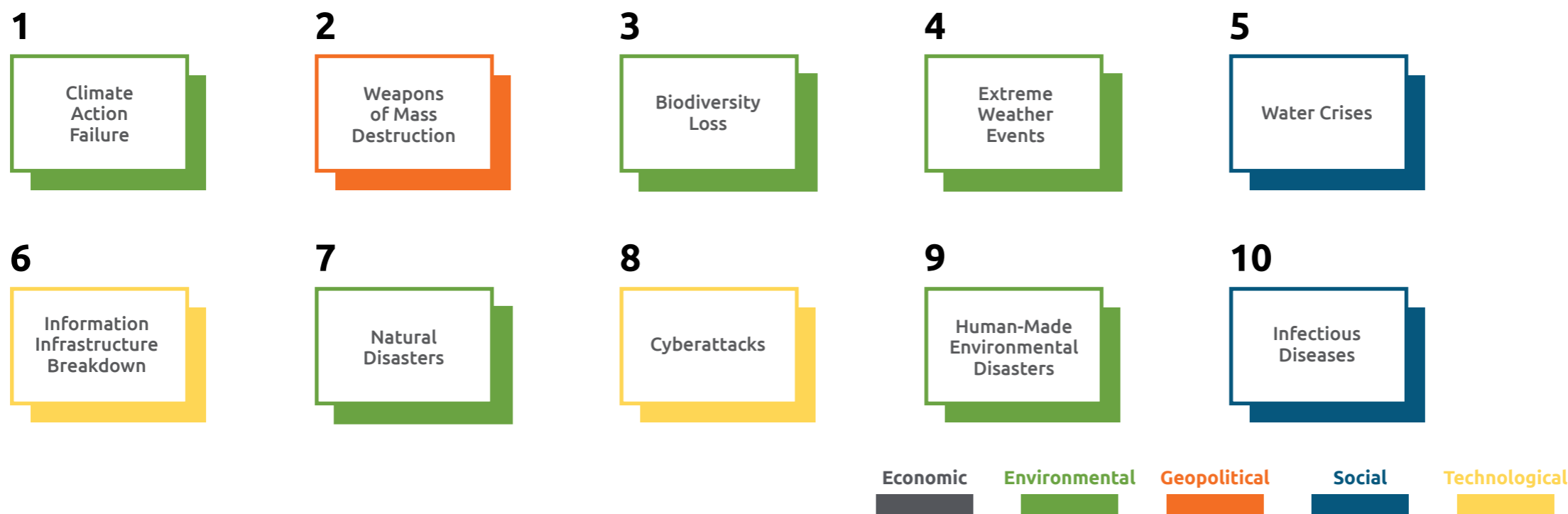
KORDSA  
SUSTAINABILITY REPORT  
2020

# ESG RISK MANAGEMENT



“ World Economic Forum 2020 Risk Report stated that first of the 10 most likely risks emerging in the next 10 years is failure to mitigate climate change where five of the rest of nine risks also appear to be other environmental and social risks associated with climate change. ”

## World Economic Forum Risk Report 2020 WEF Long Term Risk Outlook Top 10 Risks Over the Next 10 Years



Resource: WEF World Economic Forum Risk Report 2020

At Kordsa, we manage all environmental, social and governance factors that may create risks and actions to mitigate them in accordance with our strategies. In the first quarter of 2020, all Kordsa’s subsidiaries worldwide were investigated in detail on country and plant basis, and their risks were listed and prioritized by our Risk Management Department.

Action plans and a Crisis Emergency Management standard covering all facilities were created to manage risks with high-risk scores. Kordsa Executive Leadership Team prioritized the risks and completed the work necessary to monitor crucial risks with critical risk indicators.

Additionally, we defined our technology-related risks, one of the top 10 risks in the World Economic Forum’s risk map, under three headings in 2020 and prepared our action plan. Although climate related risks are not included in scenario-analysis risks, Kordsa has renewed all loss of business and third-party indemnity insurances which cover claims for damages of the investment amounts, 12-month revenue loss and potential deficits due to extreme weather conditions which also cover high-risk natural disasters in 2020. Climate change, water safety and corruption risks are considered in high-risk category by the Risk Committee.

WEF Risks	Kordsa’s Approaches
WEF 1: Climate Change Risks	<u>Energy Management</u> and <u>Emissions Management</u>
WEF 5: Water Security Risks	<u>Water Management</u>
WEF 6 and 8: Data Security and Cyber-Attack Risks	<u>Technology &amp; Digitalization</u>
WEF 4, 7 and 9: Natural Disaster Risks	<u>ESG Risk Management</u>
WEF 10: Infectious Diseases	<u>Measures for Covid-19 Pandemic</u>
WEF 3: Biodiversity Loss	Kordsa <u>Web Site</u>
WEF 2: Weapons of Mass Destruction	This risk is irrelevant to our operations.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# MEASURES OF COVID-19 PANDEMIC

“As Kordsa, we were successful in business continuity in all our geographic locations during COVID-19 pandemic thanks to our strategic and operational decisions we made since the first day of the pandemic impacts. In 2020, our two facilities in Turkey obtained TSE COVID-19 Safe Production Certifications.”



## Measures of COVID-19 Pandemic

During these are unprecedented times in the world and as Kordsa due to recent COVID-19 (coronavirus) epidemic; keeping our employees, customers, all stakeholders, and their families safe and healthy is paramount. Since the first day that COVID-19 was seen in our country, various administrative and operational decisions have been implemented by our company and factories with precision and in line with the measures on occupational and public health announced by our Ministry of Health and the Coronavirus Scientific Committee.

- Prepared Pandemic Infection Prevention and Control Procedure.
- Carried out arrangements regarding common use areas such as services and cafeteria.
- Kept in touch with our employees weekly in general, and with those who are in risk group daily via I-Am-Fine Surveys, online courses, announcements, telephone, information posters, messages, mailing and videos.
- Sent informative letters to the families of all our employees.
- Got test appointments for our employees and provided transportation to hospital for them when needed.
- Sent employees with symptoms Covid Positive Food Packs and Hygiene Packs.
- Provided distant working opportunity and supplied internet service and computer.
- Provided all employees with disinfectant kits.
- Those who had chronic conditions and those whose job descriptions allowed even though they were not in the risk group were all diverted to work from home.
- Provided food support for those who worked from home.

Thanks to the precautions we took from day one of the pandemic which were also expected by the ministry from the employers, the infection rate in our company has been below 1%.

The statement regarding the measures we have taken is available on the [PDP website](#).



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# SUSTAINABILITY MANAGEMENT

As a global reinforcement brand, we manage our performance as per our sustainability targets with the respect and responsibility we feel for the society and environment we live in.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

“ In the basis of our sustainability understanding, there exist our goal to create sustainable value for our key stakeholders by growing in our main business lines via R&D and technology investments, constantly developing our talented workforce, using global resources efficiently and conducting social development projects. ”

## AWARDS and ACHIEVEMENTS

### Sustainability Rating Certificate

Kordsa took its place in the Gold Company category by raising its overall score in the assessment executed under Environment, Labor & Human Rights, Ethics and Sustainable Procurement topics by Ecovadis, the world's most trusted business sustainability rating which serves over 200 sectors in 160 countries.



### Asia's 2<sup>nd</sup> Best Materiality Reporting

Kordsa, won the Silver Award for Best Materiality Reporting at Asia Sustainability Reporting Awards, where entries are accepted throughout the whole Asia continent.



[About the Report](#)

[Messages to Our Stakeholders](#)

[Corporate Profile](#)

[Strategy and Governance](#)

[Sustainability Management](#)

[Performance Indicators](#)

[Annexes](#)

KORDSA  
SUSTAINABILITY REPORT  
2020

# SUSTAINABILITY MILESTONES



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## 2010

- Joined TBCSD Turkish Business Council of Sustainable Development.

## 2014

- Signed UN Global Compact.
- Prepared CDP Supply Chain report.

## 2015

- Published Kordsa's first sustainability report.
- Entered Istanbul Stock Exchange 100 Index.
- Won two gold awards from LACP with our sustainability report.

## 2016

- Started Preparing CDP Climate Change, Water Security and Supply Chain reports.
- Entered Istanbul Stock Exchange Sustainability Index.
- Entered Istanbul Stock Exchange 50 Index.
- Prepared Kordsa 2020 Sustainability Road Map.
- Received LEED Gold Certificate with Composite Technologies Center of Excellence.

## 2017

- Continued preparing CDP Climate Change and Water Security reports. CDP Climate Change score was D and Water Security score was C.

## 2018

- Sustainable Business Awards 2018 Turkey (SR2016). Won Sustainability Report Category 1st Place Award.
- Asia-Pacific Excellence Awards 2018 (SR2016) Won 1st Place Award in Integrated Annual and Corporate Responsibility Report Category.
- LACP Inspire Awards 2018 (SR2016) Won the 1st Place - Platinum Award in Sustainability Report Category.
- Received AS9100\* Certification with our Production Plant at Composite Technologies Center of Excellence.
- Raised CDP Climate Change score to C- and Water Security score to B-.



# SUSTAINABILITY MILESTONES



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## 2019

- Entered Istanbul Stock Exchange Sustainability Index for the 4th time.
- Raised CDP Climate Change score to B and Water Security score to B.
- ARC 2019 Communication Awards of Mercomm (SR2017). Awarded with the Silver Medal in Asia-Middle East and Pacific Region.
- Started to work on Kordsa 2025-2050 Sustainability Road Map.

## 2020

- Entered Istanbul Stock Exchange Sustainability Index for the 5th time.
- Raised CDP Climate Change score to A- and Water Security score to A-.
- Raised our score in Ecovadis Sustainability Assessment Questionnaire and received Gold Certificate.
- Received AS9100\* Revision D Certification with our Advanced Honeycomb Technologies (AHT) production plant located in the USA.
- Received Carbon Neutral Certificate through three main projects to meet its commitment to reduce its carbon level with our US based company Axiom Materials.
- Revised targets for 2025-2030-2050 Sustainability Road Map.

Our CDP Climate Change and  
CDP Water Program Scores:



\* Conformity with the Aviation, Space, and Defense Industry Quality and Risk Management Standard



# SUSTAINABILITY MANAGEMENT STRUCTURE

“ Our performance in our sustainability priorities is embraced at the level of Board of Directors, our supreme governing body in Kordsa. Our Chief Executive Officer (CEO), who reports to the Board of Directors, determines our company’s environmental, social and governance (ESG) priorities, risks, and opportunities working with the Kordsa Executive Leadership Team, and develops ESG policies accordingly. ”

To deploy our sustainability approach to all facilities and departments in our company and to establish a more holistic sustainability management, we established a new management structure.

Our performance in sustainability priorities is embraced at the level of Board of Directors, our supreme governing body in Kordsa. The Board of Directors takes sustainability principles and the environmental impacts of company activities into account when determining its corporate governance strategy. Our targets on our sustainability focus topics are determined through internal review workshops biennially and revised as necessary by the Kordsa Executive Leadership Team, which consists of our Chief Executive Officer (CEO), the Chief Operational Officers in charge of plant operations, and our Directors. Our CEO, who reports to the Board of Directors, works with the Kordsa Executive Leadership Team to determine our company’s environmental, social,

and governance (ESG) priorities, risks, and opportunities, and develops ESG policies accordingly. These policies are publicized on our website, following approval by the Board of Directors.

Our Corporate Communication, Brand and Sustainability Manager who reports directly to the CEO leads the Sustainability Management Team, with whom she meets four times a year, and the Sustainability Reporting Group, with whom she communicates constantly during the reporting period. She ensures the coordination between departments and senior management to achieve the relevant goals while coordinating the preparation of the annual sustainability performance report.

In 2020, Kordsa Executive Leadership appointed our Chief Operational Officer EMEA as Kordsa Sustainability Sponsor globally. This appointment will be effective from 2021.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



## Sustainability Management Team

Nine “Sustainability Leaders” working at different plants are permanent members of the Sustainability Management Team. Their duties include monitoring performance indicators set to achieve the sustainability targets envisaged as part of the company’s strategic plans and ensuring the implementation of the planned projects that will help reach the targets by following them with the relevant regional departments. The Team also has members from the Market Development, R&D, Supply Chain, Human Resources, Finance, and Operations departments who are not permanent but who act as “Advisory Members” as necessary.

Sustainability Leaders track and report sustainability performance indicators for their regions using the Monthly Sustainability Performance Indicators Tracking Chart. These reports include Kordsa sustainability performance indicators. Sustainability Leaders also create Quarterly Sustainability Performance Tracking Reports, which include tracking and evaluations towards achieving the targets, and are submitted to senior management quarterly. With the new salary and bonus scheme effective from 2022, we aim the results of the annual sustainability targets to be effective on the annual performance marks and pays of the leaders who work in different facilities and departments (CEO and Directors).

## Sustainability Reporting Group

The Reporting Group is responsible for ensuring regular data and best practices collection in all company plants for the annual sustainability report. Reporting group representatives collect the information according to the reporting criteria demanded from them, between February and March every year. The reporting group consists of representatives from different departments. These departments are Occupational Health and Safety, Environmental, the Energy Committee, Finance, Supply Chain, Human Resources, Legal, Market Development, Corporate Communications, R&D, Quality, and TPM. The reporting group also includes some of the Sustainability Leaders and some of the Advisory Members.

The Corporate Communication, Brand and Sustainability Department who reports to the Corporate Communication, Brand and Sustainability Manager, works to raise awareness on sustainability through social responsibility projects, awareness events and trainings, as well as brand and communication activities.

At Kordsa, we create implementation and action plans in line with our short and long-term goals and make them public through our reports. We included the actions taken and their results of our first five-year sustainability roadmap in the 2019 Sustainability Report. As part of the new targets set in 2020, we formed four new workgroups. In 2020, Employment and Human Rights, Business Ethics, Environment, and Sustainable Purchasing workgroups all started to design projects and programs to be carried out towards the new five-year goals.

## Kordsa Sustainability Road Map 2050

We prepared a five-year sustainability roadmap in the last quarter of 2016 which was approved by Kordsa Executive Leadership Team according to the material sustainability topics that we identified at Kordsa. Considering 2016 as the base year, we prepared all sustainability management actions up to 2020. We accomplished most of our targets by the end of 2019. We decided to include Scope 3 to emission calculation target in all plants in 2020, the one target we could not reach in 2019. Our 2020 Scope 3 data is included in the **Emission Management** section.

In the second quarter of 2020, we reviewed our strategic priorities and set new short, medium, and long-term sustainability goals based on the United Nations (UN) 2030 Sustainable Development Goals. After examining which UN sub-goals our company’s activities serve, we decided to focus on five related goals; SDG 9: Industry, Innovation, and Infrastructure, SDG 12: Responsible Consumption and Production, SDG 8: Decent Work and Economic Growth, SDG 5: Gender Equality, and SDG 4: Quality Education. The sustainability targets we updated in the fourth quarter of 2020 is located **here**.

# COMMUNICATION WITH OUR STAKEHOLDERS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

“ While striving for sustainable development and growth goals at Kordsa, we listen to our key stakeholders and aim to sustain the social and economic benefits that we create for all. ”

## Communication With Our Stakeholders

We define our stakeholders as people and organizations that are being influenced by our activities, and at the same time having impacts on our company to achieve its business targets.

Following the first stakeholder prioritization studies in 2015, we reviewed our stakeholders in terms of their priority after the restructuring of our Sustainability Department in 2019. We grouped our key stakeholders that had an intensive economic, social, and environmental interaction with our company concerning our strategic topics, by the extent they were influenced by our company's activities and their impacts on our company's efforts to achieve its business targets.

In the earlier years we had three groups of stakeholders in terms of communication priorities. As we aimed to have a better focus on our stakeholders and material topics, we grouped our stakeholders in two groups in 2019. These groups are given in **Key Stakeholders** chart. We plan to review our stakeholders every two years as we review our priority topics.

## Sustainability Materiality Communications

### 2015

- Sustainability Project Team / Sustainability Strategy Workshop
- Sustainability Project Team / Stakeholder Prioritization
- Kordsa Executive Lead Team / Sustainability Strategy Survey and one-on-one interviews
- Employees / Sustainability Performance Evaluation Survey
- Customers / Sustainability Interviews

### 2016

- Employees / Sustainability Performance Evaluation Survey

### 2017

- Sustainability Task Force / Sustainability Strategy Review Workshop
- Employees / Sustainability Performance Evaluation and Materiality Survey
- Customers / Online Materiality Sustainability Survey

### 2018

- Employees / Sustainability Performance Evaluation Survey

### 2019

- Sustainability Task Force / Sustainability Strategy Review Workshop
- Employees / Sustainability Performance Evaluation and Materiality Survey
- Customers / 1-to-1 meetings
- Shareholders and Investors / Direct written and verbal communication channels

### 2020

- Kordsa Executive Lead Team / Sustainable Development Goals and Focused Targets Determination Meetings
- Employees / Sustainability Performance Evaluation and Materiality Survey
- Customers / Online Sustainability Materiality Survey

The communication platforms for our employees and other key stakeholders, together with their content and communication frequency, are included in the **Key Stakeholder Communication Platforms** table.



# COMMUNICATION WITH OUR STAKEHOLDERS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

**67% OF KORDSA EMPLOYEES MENTIONED THAT KORDSA'S EFFORTS TO SET AND MEET SUSTAINABILITY TARGETS, CREATE HIGH IMPACT ON THEIR DECISION TO CONTINUE WORKING FOR KORDSA.**

## Sustainability Communication with Our Employees

Since 2015, we conduct a sustainability assessment survey annually to raise the awareness of our employees on sustainability and domains of our company. Through this survey, we aim to understand our employees' priorities and gather their opinions on our company's sustainability performance. We share these views in the relevant sections of our report.

344 white-collar employees including engineers, specialists, supervisors, managers, directors, and top management, 35% of which have been working for Kordsa for more than 15 years, participated in the sustainability survey to assess 2020 performance. 34% of the participants responded the survey for the first time where all participants selected and prioritized the topics of their concerns and also evaluated Kordsa's performance on them.

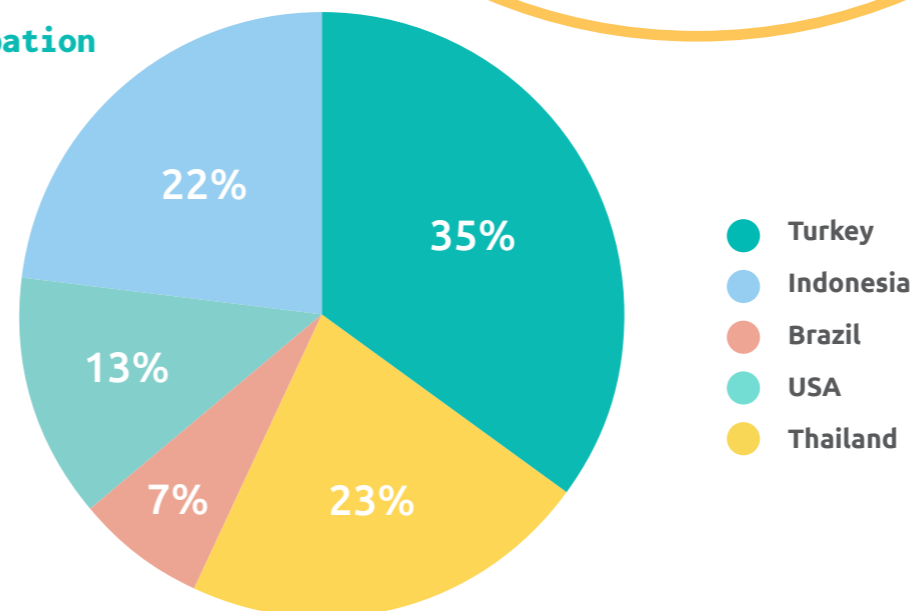
Performance evaluation part of the survey is explained in summary and actions under **Employee Sustainability Survey** topic.



## Priorities of Employees\*



## Kordsa Employee Sustainability Survey Participation



(GRI 102-40)  
(GRI 102-42)  
(GRI 102-43, GRI 102-44)

\* Topics which have 20% and higher priority rate are included.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Sustainability Communication with Our Customers

Since the first year of sustainability reporting at Kordsa, we have been communicating with our customers to receive feedback on both our sustainability performance and the strategic issues they expect us to focus on. Each year, we aim to engage more customers in our sustainability processes.

Until 2019, the first topic we included in the report as a result of the feedback from our customers was 'evaluation of social and environmental impacts in the supply chain'. We have been conducting supplier sustainability performance surveys for a growing number of suppliers since 2017. The details are presented under **Selecting Suppliers** topic of the report.

The second issue we heard from our customers was 'human rights', which was also brought up in BIST Sustainability Index evaluations. As a response, we launched **Kordsa Human Rights Policy** effective for all operations from March 2018 on.

In 2020, we carried out interviews with customers from three different product groups with whom we conducted online sustainability prioritization survey. 36% of the participating customers were from tire reinforcement, 22% were from composites and 43% from construction reinforcement technologies market. The feedback we received and the actions we took for them as Kordsa are available in the following pages.

## Employee and Customer Online Survey Method

In the surveys, we list all the topics that we receive from Kordsa top management and other stakeholders on an online platform moderated by our consultant and ask all our employees and customers to put them in an order according to their own priorities. If there is a priority that our employees and customers may have but is not already listed, they are given the opportunity to share it freely with an open-ended question. The results of the survey are analyzed by our consultant and integrated in our report.

In both surveys in 2020, we also asked our key stakeholders to prioritize Sustainable Development Goals for Kordsa to increase their awareness.

We ask performance evaluation questions to our employees on primary topics to raise awareness in them and have their opinions on these topics in the meantime. We also asked our customers the reasons behind their decision to work with Kordsa. All results are placed in relevant sections of our report.



# COMMUNICATION WITH OUR STAKEHOLDERS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Topics by Key Stakeholders Priority (Summary Table)

Topics / Stakeholders	Employee	Customer	Shareholder** and Investor
Occupational Health and Safety	1	3	4
Sustainable Growth (Economic Performance)	3	6	1
Business Ethics*	2	4	5
Energy and Emissions		2	2
Raw and Other Materials		1	9
Waste Management	5		3
Training and Development	6	7	7
Water Management			3
Human Rights	4		6
Supplier Assessments		5	9
Employment	7		
Equal Opportunities and Diversity	7		8
Community Development			10

1 represents first priority of the relevant stakeholder.  
\* Business Ethics covers anti-corruption and compliance.  
\*\* Sabancı Holding

# COMMUNICATION WITH OUR STAKEHOLDERS

## Expectations of Our Tire Reinforcement Customers

## Our Actions and Future Plans

Life Cycle Assessment (LCA)	Aiming to specify the product portfolio to implement LCA in 2021.
Run supply chain ESG assessment	Integrating social and environmental aspects to supplier selection process
Prepare Ecovadis Report	Preparing our Ecovadis Report annually
Monitor and reduce CO <sub>2</sub> emissions	Setting targets on GHG emission reduction for 2025, 2030 and 2050
Monitor and reduce water consumption	Setting targets on water consumption reduction for 2030
Prepare CDP Reports (Climate Change & Water Security)	Preparing CDP reports since 2014
Use sustainable materials in production / Monitor and report SMR index (Sustainable Material Ratio) Use recycled raw materials (PET-Polyester) Reduce waste and reuse product wastes	Are ready for NY6.6 recycling Looking for appropriate sources for recycled materials Undertaking works for reprocessing and using Kordsa's PET waste. Started production trials using recycled PET chips acquired from suppliers.
Propose low footprint products / Use bio-based materials in production.	Evaluating LCAs of raw materials from our suppliers / Looking for new sources and testing them
Find out about Kordsa's sustainability approach in detail	Bringing up and sharing Kordsa's sustainability agenda during customer visits
Collaborate for environmentally friendly technologies	Continue working with 3rd parties like customers, universities institutions and H2020 projects.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



# COMMUNICATION WITH OUR STAKEHOLDERS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

**Sustainability Management**

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Expectations of Our Composite Customers

## Our Actions and Future Plans

Light weighting especially for long-range electric vehicles and aircraft	Meeting and discussing for opportunities / Working together with third parties.
Market preference for sustainable "green" products Drive to re-use or recycle materials at product end of life	Using reactive thermoplastics or bio-based thermoset resins and develop new resin systems
Governmental policy, legislation, and consumer pressures to find a solution to end-of-life composites	Reprocessing waste and improve manufacturing processes including digital, analytics and sensors.
Thermoset polymer usually being burnt at end of life	Increasing bio-content in resins to reduce CO <sub>2</sub> emissions, using reactive thermoplastics to reduce the cost of producing low volume recyclable thermoplastic parts.
The assessments indicating that CO <sub>2</sub> emissions need to be significantly reduced by 2040 to avoid catastrophic climate change	Working to extend the life cycle of composites to further reduce their environmental impact with associated enhancement to the articulation of the benefits
The cost of waste management and lack of landfill space	Working on supplying our products to assure that they could be fully re-used or recycled at end of life, with no negative sustainability impacts
Regulatory requirements and cost of virgin raw materials	Continue working with 3rd parties like customers, universities, institutions, H2020 projects etc. Especially working with Sabanci University under CTCE roof.
Production of repairable composite structures	Initiated project on repairable composite parts and we continue to discuss with our clients on the current development stage and possible uses.
Eliminating the use of toxic/hazardous materials in fire retardant applications	Continuing works on the development of alternative fire-retardant products. Development of products with prolonged fire-retardance and reduced toxic emissions is crucial.



# COMMUNICATION WITH OUR STAKEHOLDERS

## Expectations of Our Construction Reinforcement Customers

## Our Actions and Future Plans

Eco-friendly concrete reinforcement solutions.

Proposing much lower-carbon-footprint products than existing reinforcement materials made of steel that are produced under high temperatures.

Efficient and less source-consuming application designs.

Providing reinforcement solutions that require less labor and less time compared to conventional wire mesh, while achieving better results.

Greatly enhanced product service life and decreased maintenance needs.

Providing fiber reinforcement technologies that eliminate corrosion risk in concrete and increase its durability resulting with extended service life and minimum maintenance needs, and thus ultimately decreasing energy and source utilization.

Reduce waste and reuse product wastes

Studying on reprocessing and reusing Kordsa's polypropylene technologic waste.

Reduce CO<sub>2</sub> emissions.

Enabling efficient stocking area and less transportation than conventional steel products, as the weight of Kratos needed for one square meter is about six times less than a conventional reinforcement material

Increase the efficiency of systems in magnetic fields.

Supplying synthetic raw materials which are not affected by magnetic fields. Serves advantages on construction projects like smart warehouses, light rail systems, highways, and bridges where signalization is installed.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# COMMUNICATION WITH OUR STAKEHOLDERS



## Other Expectations of Shareholders\*

Technology and Digitalization	<b><u>Technology and Digitalization</u></b>
Innovation	<b><u>R&amp;D and Innovation</u></b>
Risk Management	<b><u>ESG Risk Management</u></b>
Stakeholder Collaboration and Partnerships	<b><u>R&amp;D and Innovation</u></b>

\*Sabancı Holding's priorities are given in parallel to its own materiality assessment.

## Other Expectations of Investors

## Our Responses and Actions

Profitability and growth, especially in the field of composites in the coming years	Continue to invest in composites especially in the USA
Request for information about the efforts made to make Kordsa products environmentally friendly	Include relevant information regarding these issues in Investor Relations presentations which are updated quarterly and located on our web site.
Sustainably sourced raw materials and supplier assessment reporting	Integrate social and environmental aspects to supplier selection process
Executive pay including a component that is related to sustainability management and targets	Link executives' salary performance to the performance of all sustainability goals.
Board level responsibility for sustainability management and targets	Attribute all sustainability topics to the relevant Board Committees. Lead and monitor ESG efforts of Kordsa
Biodiversity and ecosystem preservation practices	<b><u>Kordsa Web Site</u></b>

## Individual Expectations of Employees

## Our Responses / Location in Report

Increasing investments on talent and skills management	<b><u>Training and Development</u></b>
Deployment of Technological Developments	<b><u>Technology and Digitalization</u></b>
Start community projects on recyclable materials	Noted for future evaluation.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

**Sustainability Management**

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# MATERIAL SUSTAINABILITY TOPICS

“ In addition to our employees and customers, we included our shareholders and investors in our stakeholder engagement efforts. We update our matrix annually by taking Kordsa’s and four group of stakeholders’ priorities into consideration. ”



## Material Sustainability Topics

Since our first report, we regularly review our material sustainability issues with the participation of our Kordsa Executive Leadership Team and the Sustainability Management Team and support the process with key stakeholders’ engagement.

Considering the BIST Sustainability Index requirements, we added biodiversity and climate change issues in the evaluation process. Actions towards climate change are given under the **Emissions Management** topic in the report.

As our plants are located within industrial zones, biodiversity is not in our area of high impact. So, we disclosed our general approach regarding biodiversity conservation on our **web site** for BIST evaluation.

Supplier Assessments, as a topic brought up by our major customers in the previous years, are also placed in the matrix this year. In the matrix, compliance and anti-corruption topics are covered under Business Ethics.

In addition to our employees and customers, we included our shareholders and investors in our stakeholder engagement efforts in 2019. In this regard, we update our matrix annually by taking Kordsa’s and four group of stakeholders’ priorities into consideration. We present feedback of previous years from our key stakeholders in this section of the report and disclose feedback from the current reporting period in **Communication with our Stakeholders** section.

Each year, priority material topics are approved by Kordsa Executive Leadership Team before publishing. In 2020, our priority topics remained unchanged after employee and customer surveys.

The explanations on how we grouped the material topics into two are given on the same page of **Kordsa Sustainability Matrix**.

We present our prioritized topics as main headings that include the Sustainable Development Goals. The relevant explanations are given under **Material Topics and UN 2030 Global Goals**.

In the coming terms, we will continue to exchange ideas with the four key stakeholder groups which are our employees, customers, shareholders, and investors, and further develop our goals regarding our focal points.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



## Kordsa Materiality Matrix High

**INFLUENCE ON STAKEHOLDERS**  
(Assessments and Decisions on Kordsa)



### SIGNIFICANCE OF IMPACTS FOR KORDSA (Reputation, Regulatory, Financial, Operational)

#### Legends

**Group 1:** Topics raised by three or two of our key stakeholders.

**Group 2:** Topic raised by one of our key stakeholders and we provide the related disclosures only on our web site.

\* Business Ethics covers Anti-Corruption and Compliance.

# SUSTAINABILITY IMPACTS ALONG OUR VALUE CHAINS

“ In 2018, we included our product value chains in our report to identify the boundaries of impacts of our material topics in tire reinforcement and composite business areas. In 2019, we defined and included our impacts in construction reinforcement business as well. In 2020, we included our focused SDGs on this diagram. ”

## SUSTAINABILITY IMPACTS ALONG KORDSA'S VALUE CHAINS (TIRE REINFORCEMENT, COMPOSITE AND CONSTRUCTION REINFORCEMENT TECHNOLOGIES)



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# MATERIAL TOPICS AND UN 2030 GLOBAL GOALS



## Our Journey to Support UN Sustainable Development Goals!

- We signed the UN Global Compact in 2014 and started to support the vision of “sustainable and comprehensive global economy” with our commitments.
- Following the announcement of the Sustainable Development Goals (SDG) by the UN in 2015, we have matched 13 of the global goals with our sustainability focus topics.

- In 2019, we decided to focus on the related five SDGs after examining which sub-goals Kordsa activities serve.
- SDG 3 - Good Health and Well-Being was brought forward by our employees and customers in the stakeholder engagement surveys in 2020 because of Covid-19 pandemic.

### UN 2030 Sustainable Development Goals

### UN Targets Supported by Kordsa

### Related Disclosure Topics Located in the Report

	<p>9.4: By 2030, with each country acting in accordance with its own capacity, improve infrastructure and reinforcement industries in a way that renders them sustainable, through increasing more efficient use of resources and further adopting more solid clean and environmental-friendly technologies and industrial processes more.</p> <p>9.5: Encourage innovation in all but particularly developing countries by 2030, improve scientific research, and expand the technological capabilities of industries through increasing the number of R&amp;D experts per 1M people, public and private studies and governmental spending substantially.</p>	<p>R&amp;D &amp; Innovation Technology &amp; Digitalization</p> <p>R&amp;D &amp; Innovation</p>
	<p>12.2: By 2030, achieve the sustainable management and efficient use of natural resources</p> <p>12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment</p> <p>12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse</p>	<p>Energy Management Water Management</p> <p>Materials Management Emissions Management Waste Management</p>
	<p>8.2: Pushing economic efficiency to higher levels through focusing on high value added and labor-intensive industries and by diversification, technology development and innovation</p> <p>8.8: Protect labor rights and promote safe and secure working environments for all workers</p>	<p>Sustainable Growth Employment Training and Development</p> <p>Human Rights Occupational Health and Safety</p>
	<p>5.1: End all forms of discrimination against all women and girls everywhere</p> <p>5.5: Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life</p>	<p>Employment</p> <p>Equal Opportunities and Diversity</p>
	<p>4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.</p> <p>4.c: Significantly increase the number of qualified teachers through international cooperation for teacher trainings in developing countries by 2030</p>	<p>Community Development</p> <p>Community Development</p>



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# COMPLIANCE WITH DEVELOPING GLOBAL SUSTAINABILITY STANDARDS

“ In every phase of our sustainability journey as Kordsa, we follow the progresses in international standards that will develop our sustainability vision and targets to increase the value we create for our company and our key stakeholders.

We believe that integrating financial values with non-financial ones is highly essential. In that regard, we reviewed the related SASB standards for each sector that we have relations and interactions with, and in our report, we gave references to the issues that stand out in the sectors we supply products and services to and how we contribute to the related key performance indicators. You can see the details in the following tables. ”

## SASB Auto Parts Standard 2018 SASB Aerospace Defense Standard 2018 SASB Construction Materials Standard 2018 Common Sustainability Topics and KPI's

Topic	Accounting Metrics	How Kordsa Responds
Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Location in the Report Energy Management
Product Safety	Number of recalls issued; total units recalled	Location in the Report R&D and Innovation
Waste Management	(1) Total amount of waste from manufacturing, (2) percentage hazardous, (3) percentage recycled	Location in the Report Waste Management

## SASB Auto Parts Standard 2018 Other Sustainability Topics and KPI's

Topic	Accounting Metrics	How Kordsa Responds
Data Security	(1) Number of data breaches, (2) percentage involving confidential information	Location in the Report Technology and Digitalization
Materials Sourcing	Description of the management of risks associated with the use of critical materials	Location in the Report Supply Chain Management
Business Ethics	Total amount of monetary losses as a result of legal proceedings associated with incidents of corruption, bribery, and/or illicit international trade	Topic in the Report Business Ethics

## SASB Aerospace Defense Standard 2018 Other Sustainability Topics and KPI's

Topic	Accounting Metrics	How Kordsa Responds
Design for Fuel Efficiency	Revenue from products designed to increase fuel efficiency and/or reduce emissions	Location in the Report R&D and Innovation
Materials Efficiency	Percentage of recyclable products sold Percentage of input materials from recycled or remanufactured content	Location in the Report Raw and Other Materials Management
Competitive Behavior	Total amount of monetary losses because of legal proceedings associated with anti-competitive behavior regulations	Location in the Report Business Ethics

## SASB Construction Materials Standard 2018 Other Sustainability Topics and KPI's

Topic	Accounting Metrics	How Kordsa Responds
Greenhouse Gas Emissions	Gross global Scope 1 emissions, long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets	Location in the Report Emissions Management
Water Management	(1) Total fresh water withdrawn, (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress	Location in the Report Water Management
Product Innovation	Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production	Location in the Report R&D and Innovation



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



# ACHIEVEMENTS ON 2020 ROADMAP

## Roadmap 2020 Actions



Integrate Supplier Sustainability Assessment System



## What We Achieved by 2020

**2018:** Implemented first assessment and reached our global suppliers with the highest trade volume.

**2019-2020:** Implemented a more comprehensive survey and reached 78% of global and 28% of our local suppliers on average.

**Turkey:** Completed recertification audits.

**Indonesia:** Completed in May 2017

**Brazil:** Completed in April 2018

**Thailand:** Completed in July 2018  
**Chattanooga USA:** Completed in May 2019

Increased our score by two levels every year

**2017:** D; **2018:** C-; **2019:** B **2020:** A-

Increased our score by one level every year

**2017:** C; **2018:** B-; **2019:** B **2020:** A-

**2018:** Completed Turkey Scope 1 verification by a third party

**2020:** Completed Scope 1 and 2 data verification of Turkey, Indonesia and Chattanooga sites.

**2017:** Integrated all key issues in the system and started collecting thousands of employee feedback regarding sustainability topics.

In the first five years of the roadmap our waste management targets addressed environmental compliance.

Considering the impacts of water usage in our operations and the expectations of our key stakeholders, we did not focus on this action until 2019.

With the new roadmap we prepared in 2019, we set long term water consumption reduction targets of all our global plants starting from 2020.



Obtain 14001: 2015 Environmental Management Standard Certification for all sites



Increase CDP Climate Change score gradually



Increase CDP Water Security score gradually



Complete GHG verifications for Scope 1 and Scope 2 for all sites



Integrate sustainability topics in Employee Idea Platform



Waste Reduction



Start Water Program at all sites.  
*(General information on the water reduction projects planned to be initiated in 2021 are located under **Water Management** section.)*



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# OUR SUSTAINABILITY TARGETS



Related SDG	Explanation of Target	Indicator	Base Year	2020 Performance	2021 Target	2025 Target	Target Responsible
	Using renewable energy	Ratio of renewable energy used in total consumption (%)	2018	2.5% (IREC)*	5%	In progress	Chief Operation Officers (COOs)
	Reducing emissions	Scope 1&2 emissions (CO <sub>2</sub> e)	2018	17.97% reduction	2.5%	2025 / 2030 / 2050 Target 17.5% / 30% / 100%	COOs
Related SDG	Explanation of Target	Indicator	Base Year	2020 Performance	2021 Target	2030 Target	Target Responsible
	Reducing water withdrawal	Withdrawal per unit produced (m <sup>3</sup> )	2019	13.64% reduction	6% (Turkey) 2% (All sites except Turkey)	50%	COOs and Sustainability Leaders
	Reducing waste	Amount of total waste (tons)	2018	17% increase	6%	50%	COOs and Sustainability Leaders
Related SDG	Explanation of Target	Indicator	Base Year	2020 Performance	2021 Target	2025 Target	Target Responsible
	Avoiding accidents	Number of fatal injuries High-consequence injuries Recordable injuries	2019	Fatal injuries: 0 High-consequence injuries: 0 Recordable injuries: 11 (+2 contactors)	Zero accident	Zero accident	COOs and Sustainability Leaders
	Increasing global suppliers' ratio on sustainability survey	Ratio of supplier participation (%)	2019	73%	100%	Maintain 100%	Supply Chain
	Reducing complaints on human rights violations	Number of complaints on human rights violations	2019	Zero complaint	Zero complaint	Zero complaint	Human Resources
	Increasing employee satisfaction	Employee satisfaction rate (%)	2018	68% (2018)	65% and over	65% and over	Human Resources
	Continuing employee development trainings	Sabancı of New Generation competencies	2019	Ratio of occupational and personal development trainings reached 62%.	Continue trainings to complete the competencies	Continuous development	Human Resources
	Increasing women employment (Office staff)	Ratio of women employees (%)	2019	34.7%	36.6%	45%	Human Resources
	Increasing number of teachers attending ÖRAV training	Number of teachers trained annually	2019	14 teachers who reach 500 students "Leader Teacher in Learning" Training	250 Teachers (Duration: 10 week ends)	In progress	Corporate Com. and Sustainability

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

\* IREC: International Renewable Energy Certificate



“ We develop innovative, safer, more efficient and sustainable products for a more convenient life in Kordsa with our constantly growing team at our two R&D centers, 12 plants in four continents where we produce reinforcement technologies.

With our digital transformation investments, we carry out more effective processes and continue to create a difference in all the sectors we serve with our technologies.

We primarily see R&D, innovation and digital transformation as facilitators to our corporate targets within the scope of sustainable production and consumption targets, and we continue our investments and projects in this field. ”

### AWARDS and ACHIEVEMENTS

Kordsa received four winner awards in IDC Turkey Digital Transformation Awards

#### Talent Accelerator

Category Winner with RPA+JOJO Project

#### Digital Transformer

Category Winner with Line1 Data Analytics Project  
Winner with TCF Energy Consumption Data Analytics Project

#### Operating Model Master

Category Winner with Momentum Project



#### Second Place in Innovation Sources Award

Kordsa received 2<sup>nd</sup> runner up Award for the R&D works done in inovalig organized by TIM

## EMPLOYEE FEEDBACK

I think Kordsa is a great company to work for, and while I may not know about each sustainability process or design, I do know about its ethics and integrity to humankind. I hope to continue working here until retirement.

2020 Employee Sustainability Survey



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Sustainability Faciliators at Kordsa

“ Sustainable Development Goal 9 encompasses three important aspects of sustainable development; infrastructure, industrialization and innovation. This SDG seeks to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Infrastructure provides the basic physical systems and structures essential to the operation of a society or enterprise. Industrialization drives economic growth, creates job opportunities. Innovation advances the technological capabilities of industrial sectors and prompts the development of new skills. Inclusive and sustainable industrial development increases living standards for all people, and provides the technological solutions needed for socially and environmentally sound industrialization.

Therefore, at Kordsa, we see R&D, innovation, technology, and digitalization as facilitators of our sustainability targets especially on sustainable consumption and production. ”

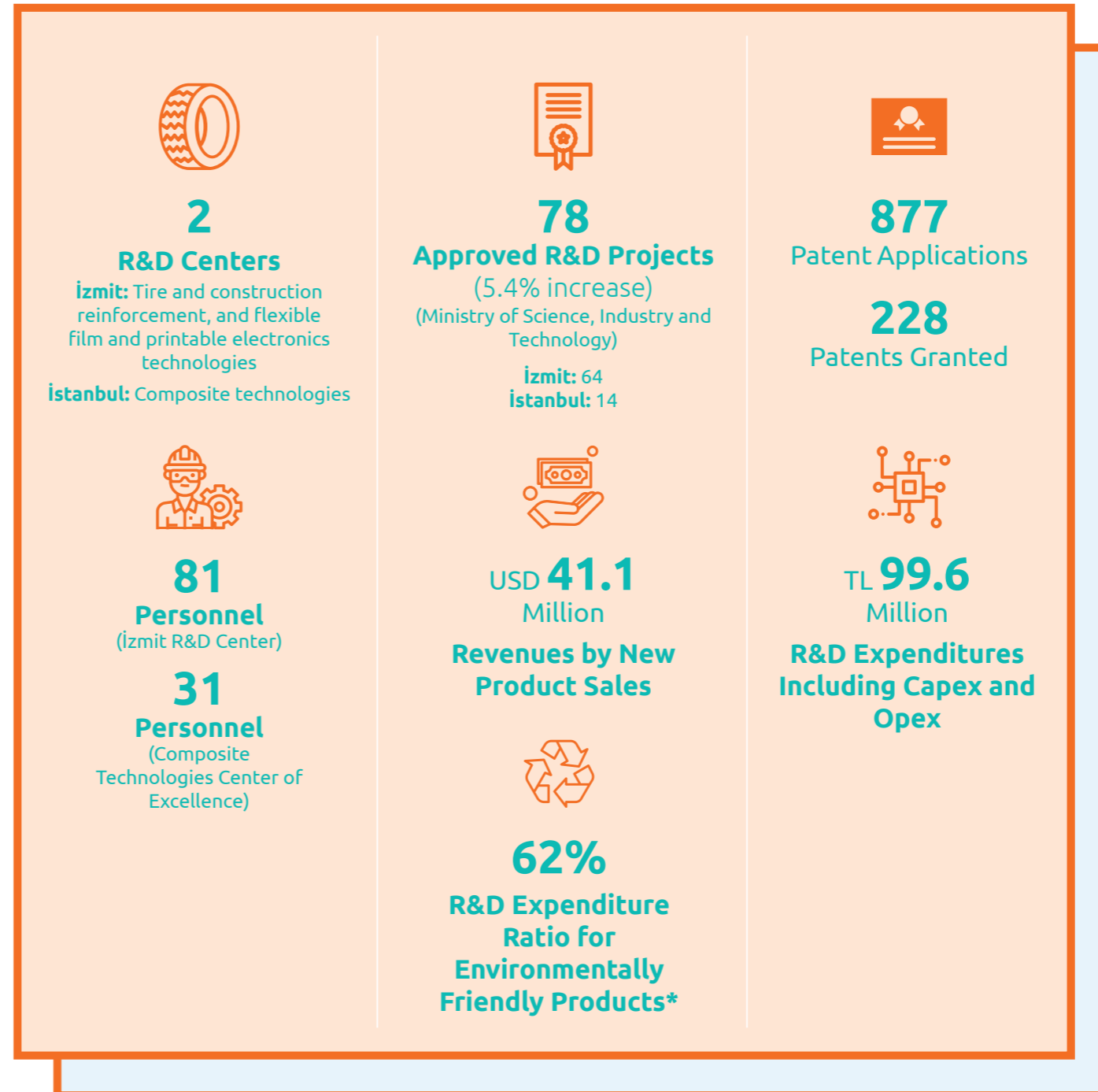


# R&D AND INNOVATION

“ We continue our works at our R&D Centers to differentiate ourselves in our products and services, offer our customers more competitive and innovative products, achieve production efficiency on materials, processes and equipment, and establishing Kordsa as the market leader in composites while preserving our pole position in the tire market. ”



## Facts & Figures on R&D and Innovation



\*Less weight, eco-friendly adhesive technology, lower CO<sub>2</sub>, lower rolling resistance, chemical recycling, eco-design, recycling.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# R&D AND INNOVATION

## Summary of Main R&D Activities of 2020

- We arranged workshops for new ideas.
- Updated our Project Management System.
- Gave Project Management and Intellectual Rights trainings.
- Expanded the scope of our R&D Center even further.
- Applied for nationally and internationally funded projects.

## Open Innovation Collaborations

**CoKoon:** Eco friendly dipping technology project developed by Kordsa and Continental.

**PolynSPIRE:** Horizon 2020 innovative technology development project for efficient and sustainable plastic recycling.

**TRB Collaboration:** Joint work carried out with TRB Lightweight Structures to use Kordsa's carbon fiber fabric in developing batteries for mass production electric vehicles.

**COMACH:** Project to develop clean, high precision and flawless composite cutting robot supported by EUREKA.

## Kordsa -Sabancı University Collaborations

**DiCoMi Project:** System, software and material development project to produce composite materials in 3D printer. The project includes 15 project partners from 11 countries under Horizon 2020 project scheme.

**TÜBİTAK-BMBF 2+2 Turkish-German Project:** Developing prepreg for damaged composite parts in aviation industry waiting to be repaired by utilizing nanotechnology practices. The "Automated Repair Patch Production" is an international project supported by TÜBİTAK and BMBF and involves Turkish and German partners.



## Strategic University Collaborations

We protect all our projects with confidentiality agreements; and we carefully handle ethical aspects and intellectual property issues.

### Tire and Construction Reinforcement R&D Center

### Composites R&D Center

Aachen Institute of Technology	RWTH Aachen University
Boğaziçi University	Boğaziçi University
Çankaya University	İstanbul Technical University
Fatih Sultan Mehmet University	Sabancı University
İstanbul Technical University	Kocaeli University
Kocaeli University	
METU Main Laboratory	
Purdue University	
Rotterdam University	
Sabancı University	
Sakarya University	
Süleyman Demirel University	
University of Texas	
Tokyo Institute of Technology	
Uludağ University	
Yıldız Technical University	
York University	



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# R&D AND INNOVATION

## OUR SUSTAINABLE PRODUCTS

Kordsa product development processes vary between 5 to 10 years due to the mandatory security tests in the sectors where Kordsa's customers operate. We continue our works in developing environmentally friendly new products and technologies free of hazardous chemicals that increase energy efficiency and reduce carbon emissions.

## Brands and Products of Our R&D Centers

**Before 2015:** Twixtra, Monolyx, Capmax, Hartech and Kratos.

**2016:** Registered the industrial design of green cord fabric.

**2017:** Established a concrete laboratory for Construction Reinforcement Business Unit. Succeeded in producing a resin-impregnated fabric (prepreg) by weaving carbon fiber fabric in Composite Technologies Business Unit.

**During and after 2018:** Began to name the products in products codes that we developed and registered for different needs and expectations of our customers.



## CUSTOMER FEEDBACK

We recommend Kordsa for its outstanding achievement in Ecovadis assessment and game changing innovation efforts on the study for sustainable (recycled/renewable) materials.

**Bridgestone EMIA Procurement Department**  
2020 Kordsa Customer Sustainability Survey

## TIRE REINFORCEMENT PRODUCTS

### Capmax®

Capmax® the reinforcement product we developed at Kordsa facilities, is a top belt strip that can be directly applied at the tire building machine without the need for rubber coating. Capmax® decreases the production costs and increases efficiency, by eliminating many stages in tire production such as calendaring and cutting. By reducing rolling resistance which contributes to the reduction in fuel consumption, Capmax® also creates cost advantage for the end users. The potential market for Capmax® is the global light vehicle tires market using top belt strip.



Cord structures formed by twisting two or more different material types together are called hybrid cords. Kordsa launched Twixtra® that can be treated as the world's lightest hybrid cord product, in 2013. The manufacturers' choice in high performance tires is the Aramid-Nylon 6.6 hybrid cord structure. The product is very much lighter compared to its predecessor and it allows the tire to be produced with less raw materials. Lighter tires lead to less fuel consumption.

### Sustainability impacts created by these products:

#### Economic Gains:

- New style ready to use product
- Efficient and faster production process
- Improved total cost of use

#### Social Gains:

- More safety for all rubber goods
- Comfortable driving at high speed

#### Environmental Gains:

- Lighter products thanks to less material usage
- Less pollution because of more durability

#### Corporate Gains:

- High value-added product in portfolio
- Strong knowledge and experience
- Reputation



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



COKOON

## CoKoon Dipping Technology

Kordsa developed CoKoon by joining R&D forces with Continental, a technology which does not contain resorcinol and formaldehyde in bonding textile reinforcing materials to the surrounding rubber matrix, and thus changed the 100-year rubber-based formula with an eco-friendlier one, after a 10-year R&D work. CoKoon is among the most crucial strategic collaborations in the tire sector.

Kordsa provides the CoKoon technology which does not require additional cost and can be applied without changing process equipment to everyone who wants to take part in a free of charge licensing pool established together with Continental and encourages the development of this technology. Hence, CoKoon is positioned to be the new industry standard which offers innovation in both product and business model.

**Economic Gains:** In rubber industry where, sustainable products are more expensive than traditional products, a sustainable solution is provided for rubber-textile dipping systems without an additional cost.

**Social Gains:** This resorcinol-and-formaldehyde-free formula will be the new industry standard, and the developed technology will be licensed to all companies across the sector free of charge as an outcome of the open-innovation approach.

**Environmental Gains:** In the new technology, more environmentally friendly chemicals that are compatible with REACH regulations will be used.

**Corporate Gains:** We have the pride in leading an innovation that will transform the sector we operate in.

### 2020 Developments

- Four new patent applications were made from Kordsa-Continental collaboration.
- Continental manufactured 200,000 tires using COKOON technology.
- 70+ tire and fabric manufacturers got in touch with us to receive more information on COKOON project, samples were shared with around 30 companies.
- Free licensing pool was made active in April 2020, and four more companies joined the pool besides Kordsa and Continental.

## CONSTRUCTION REINFORCEMENT PRODUCTS



### KraTos Macro and Micro

KraTos, an innovative synthetic fiber reinforcement is used in concrete reinforcement implementations of infrastructure and superstructure projects. It makes a difference in the construction market by being preferred in prestigious projects with its high performance since 2014.

**Economic Gains:** Provides labor cost advantages for our applicant customers and contributes to the concrete's durability and longer life thanks to its polymer structure. Offers easy storability and advantageous logistic costs.

**Environmental Gains:** Provides less energy consumption and smaller carbon footprint in its production compared to steel components. Has resistance increasing properties for concrete against freezing and thawing.

**Social Gains:** Provides high labor efficiency with its ease of use. Thanks to its special fiber structure, it mixes evenly into concrete which offers efficient fracture control across the surface, and it has increased load carrying capacity properties.

**Corporate Gains:** Thanks to its non-conductive structure, it is used in special projects, in sections where electromagnetic systems are located and where continuous efficiency is required. It is also preferred because it provides long-term safety and high strength. Our KraTos products were granted Made in Turkey certificate in 2020. We have not only the first domestic fiberized product, but also the domestic product certificate. We foresee the great advantage it will bring especially in government tenders.

## CUSTOMER FEEDBACK

We have been observing Kordsa's contributions to R&D and construction technologies with attention and excitement!

**Istanbul Technical University Civil Engineering Department**  
2020 Kordsa Sustainability Customer Survey



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



# R&D AND INNOVATION



## Project Name

Construction Reinforcement Products (Kratos RM and Kratos PX)

## Location and Date

Kordsa İzmit R&D / 2020

## Objectives and Actions

Main goal of this project is to create new innovative products for industry in application fields such as construction and mining.

Kratos RM reduces concrete rebound in mining and tunnel applications, Kratos PX greatly reduces plaster cracking problems in pool applications caused by adverse environmental effects, poor labor quality or other components.

## Results

We brought these special polymers into various industries as new and innovative products. In brief, we created an added value while keeping sustainability in the forefront in this project by developing material, application field and know-how through laboratory and field tests carried out in cooperation with customer. Kratos RM, minimizes concrete rebound up to three times, thereby creating material savings for our customers.

Kratos RX provides effective control against cracks in pool applications.

This project is directly in harmony with the targets of the Construction Unit thanks to its pioneering and innovative role in its segment, boosting the sales volumes and expanding product range.

## Plans for Future

Both products have been commercialized.

We placed two separate patent applications for both products to protect their intellectual properties.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# R&D AND INNOVATION

## CUSTOMER FEEDBACK

We prefer Kordsa for their openness to new developments in their products with their sustainable point of view and the advantage of having the ability to build a collaborative medium with them.

### Tire Reinforcement Customer

2020 Kordsa Sustainability Customer Survey



## COMPOSITE PRODUCTS

### E-Glass Prepreg (Composite Leaf Springs for Heavy Commercial Vehicles)

As a company that values strategic industrial partnerships, we create solutions for carbon emission reduction for various industries at Kordsa. We signed a contract with Ford Otosan in 2015 to reduce the weight of the steel leaf spring systems used in heavy commercial vehicles by 75%.

In this project under TÜBİTAK 1501 subsidy program, we have been developing a resin and glass-fiber reinforced prepreg material since 2019 to be used in composite leaf springs that will replace the conventional steel leaf springs that are currently in use in transit mixer trucks.

**Economic Gains:** The commercialization process of the product will begin in 2021, which will create a significant saving opportunity for the vehicle owner.

**Environmental Gains:** Due to less fuel consumption, natural resources will be protected, and less emission will be released.

**Social Gains:** It will help reduce air pollution.

**Corporate Gains:** Another high value-added product will be available in the portfolio.

### Special Fabric for Orion Space Capsule

Kordsa is signing an especially important collaboration for the space industry. Kordsa products are reinforcing the composite structures in orange balloons used in the Orion capsule that will be the spacecraft to take the astronauts to the farthest distance to date and bring them back.

One of Kordsa's subsidiaries in the US, Fabric Development started to weave this fabric under Style 2150 name first in 2011, which will now be used in the Orion capsule. Kordsa strengthened its vision extending into the space with this collaboration.

The Kordsa-reinforced orange fabric in the Orion capsule landing balls inflates with

capsule's contact with water and offers high visibility for rescue mission with its orange color while helping capsule stay in the upright position.

## THIN FILMS AND FLEXIBLE ELECTRONICS

### Wearable Healthcare Electronics

New technologies and materials are introduced to make life better and easier in our continuously changing world. Products based on thin films and flexible printed electronics technology are expected to make their way into our lives soon. This new technology, having applications like foldable displays to wearable biosensors, photovoltaic solar cells to flexible RFID's will be more in our daily lives in the near future and will add extra ease and comfort to our daily routines. We will see many innovative thin films and flexible electronics technology-based products in automotive industry, consumer and industrial electronics, and healthcare industry in near future.

As a company with an open innovation approach, Kordsa does major collaborations and now seeks new opportunities in thin film and flexible electronics technology. The Company puts focus on these materials and technology of the future and has launched "Thin Films and Flexible Electronics" R&D platform in partnership with Sabancı University and is engaged with six partners on a new project named "Nanosis-1004" on wearable healthcare electronics for monitoring health data via nano technological sensors. The project application for funding by the leading Turkish research body, TUBİTAK, was completed by Kordsa and SUNUM (Sabancı University Nanotechnology Research and Application Center).

For more details on Kordsa's new R&D Platform, you can reach Global Technology Director Devrim Özyaydın's article on "Thin Films and Flexible Electronics" [here](#).



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# TECHNOLOGY AND DIGITALISATION

“ We continue our investments in many innovative technologic applications that we put in operation across our facilities such as robotic process automation, image processing, mobile technologies, and machine learning. ”

As Kordsa which transformed the concepts of “Digital Transformation and Industry 4.0” into the corporate culture, we continue our efforts to digitalize the new products, processes and methods we are developing globally for all countries we operate in.

Having transformed all countries into a standard production reporting structure by collecting data from production on a global scale since 2012, we have reached to a point at Kordsa today where we get to establish such systems that evaluate and integrate higher level new generation smart technologies with an analytic intelligence.

Following the establishment of the Digital Transformation Committee In 2018 with managers of Production, Supply Chain and Planning, Quality, Maintenance and Information Systems and the works carried out using measurement and evaluation methodology, many processes were reviewed in detail by specialist consultants coming from different countries. The development areas were determined according to corporate priorities, and a three-year digital transformation roadmap was prepared for the period 2018-2021.

We commenced projects to ensure fast end-to-end traceability by moving into a big data platform where production data is centralized; to prevent quality defects promptly by advanced sensory systems and image processing technologies; to enable more effective and flexible planning management via optimizations and smart systems in supply chain and planning and to transform into a structure that will facilitate daily life and allow the parts entire corporate

structure to communicate with each other.

Industry 4.0 is one of the strategic targets at Kordsa and covers three main topics.

- Advanced Data Analytics
- Robotics and Smart Machines
- Digital Practices and Infrastructure

## Advanced Data Analytics Trainings

We began to develop advanced data analytics projects with our 17 staff who participated Sabancı University Advance Data Analytics Program and received Data Scientist, Data Engineer and Data Translator titles.

With the projects started and completed in 2020, we achieved a big success by bringing in a profit of nearly two million dollars. We prepared our plans to include Kordsa analytics team in our new projects and extend the existing projects on to the manufacturing fields abroad in 2021.

## Robotics and Smart Machines

In 2020, we at Kordsa continued to invest into fields of robotic process automation, image processing, mobile technologies, machine learning and IoT. Prioritizing the partnerships with start-up

companies, projects executed within TÜSİAD SD2 program and the RPA projects where we move forward with Sabancı Dx, our company will continue to reach quality, work safety and efficiency targets in digital automation with these projects.

## Digital Applications and Infrastructure

Kordsa has completed the building of the new digital application infrastructure that will enable more effective and flexible process managements and make daily work life easier. We are keeping the digital product life cycle under control in Kordsa with our skilled managers who prioritize solutions and products that will create benefits for our clients by adapting newly developing technologies into this infrastructure.

## Cyber Security

At Kordsa, we regard cyber security scheme as part of digital transformation and hold practices such as regular vulnerability scans, fishing tests and disaster recovery solutions.

All Kordsa plants around the world have the necessary systems installed to monitor global threats and take preventive timely action by making use of Security Operations Center practices.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020



“ One of the seven values underlying Kordsa’s growth strategy is to ‘protect the environment’. We strive to sustain this value with our ‘make better with less resource’ approach since the day we were established, and we reinforce life while increasing our economic competitive power.

We invest in clean technologies to ensure efficient use of energy, reuse our materials, reduce emissions and other wastes along with reduction in water consumption; and in continuous improvement projects together with our R&D and production teams to increase recycled material usage ratio and to use bio-based materials. In 2020, our total environmental investment and expenditures amount to more than one million dollars. ”

## AWARDS and ACHIEVEMENTS

### Quality Circles Award

Kordsa was presented the GRAND AWARD at the 20th Quality Circles Sharing Conference by Turkey Quality Association (KALDER).



## EMPLOYEE FEEDBACK

Kordsa is an excellent place to work but we can move forward on the issue of sustainability, run larger campaigns on the environmental issues and reduce our impacts on the environment.

2020 Employee Sustainability Survey



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# RAW AND OTHER MATERIALS MANAGEMENT

## INTERNAL STAKEHOLDER VIEW

%68 of our employees who responded to the sustainability assessment survey think that...  
Kordsa's practices for efficient use of raw materials are adequate.

### RAW and OTHER MATERIALS MANAGEMENT

Selection and efficient use of raw materials rank among the top indispensable elements of sustaining our production. Raw and other materials expenditures constitute about 61% of our total procurement.

The policy that we base our materials management is our Environment Policy. Our targets vary depending on different production processes of product groups. We implement improvement projects to reuse materials and to decrease the consumption of raw materials we use in the production.

#### Performance in 2020

Besides our ongoing projects on the reuse and reduction of the use of materials and especially the chemicals, this year we carried out new improvement works such as reduction of chemical bath losses at dipping process and regaining of acetone. The details of these works are available in the following pages.

We manage raw and other materials topic according to our Environmental Policy.

Details of our environmental management approach (Implementations and Control) is [here](#).

The details of our raw and other materials management approach (Implementations and Control) are [here](#).

### Project to Reuse Materials

In order to increase the reuse of yarn tubes; we started this project in Kordsa Turkey site in 2014. Since then, we contribute to the corporate budget and natural resource savings increasingly every year.

We added carton separators, steel shells and wooden pallets to this project alongside the tubes after having extended it gradually to our other sites. We bring the steel shells that go to our customers along with our products back to our plant after delivery and we reuse them. We maintain material efficiency by reusing the tubes, paper separators and wooden pallets that we use to organize the products at the plants.

We utilize these materials until they reach their end of life in the facility, and then sell them as scrap to be used in various other sectors, thereby contributing to circular economy.

In 2020, we saved 2.7 million dollars through reuse of 2.4 million pieces of materials in our facilities. We raised the average reuse rate across all our plants to 28% from 14% in 2019. In the upcoming years we will continue to deploy this project to rest of our sites.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# RAW AND OTHER MATERIALS MANAGEMENT



	Materials	Plants	2019	2020
	<b>Steel Shells</b>	Turkey - İzmit	35%	50%
		USA -Laurel Hill	55%	86%
		Indonesia	31%	41%
		Thailand	86%	84%
		Brazil	86%	93%
	<b>Tubes</b>	Indonesia	8%	28%
		USA - Chattanooga	8%	14%
		Brazil	62%	84%
	<b>Carton Separators</b>	Turkey - İzmit	N/A	16%
		Indonesia	8%	13%
		USA - Chattanooga	38%	38%
	<b>Wooden Pallets</b>	Turkey - İzmit	N/A	33%
		Indonesia	N/A	19%
		USA - Chattanooga	72%	73%

## Reduce Use of Materials

As a result of monitoring our material usage performance and our efficiency efforts, we achieved significant improvements in the use of chemicals and flake rates at our plants between 2014-2017. Despite capacity optimizations in USA, Brazil and Indonesia and R&D programs implemented in Turkey, no significant increase in our chemical usage was detected. In many of our sites, we were able to decrease chemical usage.

The table below shows the materials and chemicals usage data of our plants and the reduction performances in 2020 compared to the base year 2017 where the relevant data of that year is considered as one unit.

## KORDSA MATERIALS MANAGEMENT

Materials	Plants	2018	2019	2020
<b>TCF Chemical Ratio</b>	Dipping NY - Turkey	1.16	0.98	0.92
	Dipping PE - Turkey	1.11	1.02	0.82
	Dipping - USA / Laurel Hill	1.03	1.04	0.93
	Dipping - Brazil	1,04	1.01	0.81
	Dipping TCF1 - Indonesia	1.01	0.99	0.97
	Dipping TCF2 - Indonesia	0.96	0.94	0.93
	Dipping - Thailand	0.98	1.04	0.97
Materials	Plants	2018	2019	2020
<b>NY Salt / Flake Ratio</b>	NY Yarn Line 1 - Turkey	1.03	0.99	0.90
	NY Yarn Line 2 - Turkey	0.99	1.00	1.04
	PE Yarn - Turkey	1.01	1.02	0.98
	NY Yarn - USA / Chattanooga	1.00	0.98	0.58
	Yarn - Brazil	1.77	1.79	0.98
	NY Yarn - Indonesia	1.01	1.01	1.00
	PE Yarn - Indonesia	0.95	1.00	0.96
Materials	Plants	2018	2019	2020
<b>SEC Chemical Ratio</b>	SEC - Turkey	1.21	1.42	0.66
	SEC - Brazil	1.00	0.98	0.92

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# RAW AND OTHER MATERIALS MANAGEMENT



<b>Project Name</b>	Reduction of Chemical Losses at Dipping Process Project
<b>Location and Date</b>	Kordsa İzmit Facilities / 2020
<b>Objectives and Actions</b>	<p>Our project goal is to reduce the ratio of bath chemicals turning into waste, which is used in the cord fabric production treatment and has the highest cost in the process.</p> <p>Firstly, we prevented the distortions in the baths by taking RF maturing process. We then accumulated the excess bath and fed it back to the bath preparation unit for a reuse, which prevented it from becoming waste.</p> <p>We prevented the overflow losses by increasing the bath feeding frequency while reducing per-roll feeding amount from 60 kg down to 10 kg.</p>
<b>Results</b>	<p><b>Corporate:</b> In the first step of our three-step project we achieved a 5.56% improvement by reducing input/output ratio from an average of 1.26 down to 1.18.</p> <p><b>Economic:</b> We saved 667 thousand dollars/kg annually.</p>
<b>Plans for Future</b>	As the second step of the project, we had a prototype built for the online bath consumption tracking. The trials are still going on. In the third step we will attempt to reduce our losses to minimum by operating in optimum process conditions thanks to online bath consumption tracking and data analytics.



<b>Project Name</b>	Reduce Weaving Creel Rest
<b>Location and Date</b>	Kordsa Thailand / 2019-2020
<b>Aim and Actions</b>	Our aim was to reduce creel rest scrap by 30%.
<b>Results</b>	With this project we initiated a method to reduce creel rest waste from approximately 0.62% in 2017 and 0.66% in 2018 to 0.35% in 2020.



<b>Project Name</b>	Recovery of Acetone and Other Solvents Project
<b>Location and Date</b>	Kordsa CTCE Waste Area / 2020-2021
<b>Objectives and Actions</b>	<p>Acetone is a chemical highly consumed in the cleaning processes in CTCE (Composite Technology Center of Excellence) production operations. It not only has a high financial cost, but also has an exceedingly high environmental impact. Besides, its destruction as a waste also incurs extra costs.</p> <p>With the Recovery of Acetone and Other Solvents Project, we aim to both reduce the amount of our chemical waste and have savings on the costs.</p>
<b>Results</b>	<p><b>Environmental:</b> Thanks to an 88% of material recovery ratio, our waste has been reduced by the same amount.</p> <p><b>Economical:</b> We reduced our material and waste disposal costs dramatically.</p>
<b>Plans for Future</b>	We will plan the capacity increase of the system and its deployment to other sites.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# ENERGY MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## INTERNAL STAKEHOLDER VIEW

%66 of our employees who responded to the sustainability assessment survey think that...

**“Kordsa’s investments and projects to assure energy efficiency are adequate.”**

### ENERGY MANAGEMENT

Our goals of energy efficiency and using less energy per unit product we produce has a strategic importance for us. At Kordsa, electricity, natural gas and steam are the main types of energy we use as input for production.

Energy Committee, which consist of white-collar employees and Maintenance and Auxiliary Facilities Group Manager as energy representative, measures and monitors energy use based on ISO 50001 Energy Management System, prepares energy reports and manages energy reduction projects.

We monitor our energy consumption trends by plants and manufacturing processes with 2013 data as the baseline. Energy consumption is not directly affected by the increase or decrease in the amount of production. The energy consumption can remain constant in either case. On the other hand, product mix (content) in production has direct effect on energy consumption. We are tracking the parameters such as Dtex,

speed, scrap and unit rates on a monthly basis, and go over the changes in the BPR meetings with the participation of all related managers.

### Performance in 2020

Following the significant improvements between 2011-2014 period, we reduced natural gas consumption in all our facilities from 2014 to 2017 by 43-51% thanks to our efficiency projects.

In addition to our energy efficiency efforts, with the effect of pandemic our electricity consumption decreased by 15% and our natural gas consumption by 13%.

We manage energy topic under Environmental Policy. Details of our environmental management approach (Implementations and Control) is [here](#).

Details of Energy Management Approach (Implementations and Control) are [here](#).

Energy consumption data is [here](#).

#### Electricity Consumption (MWh)

2019	576,012
2020	490,177

#### Natural Gas Consumption (Million Sm<sup>3</sup>)

2019	62.4
2020	54.3

#### Diesel Oil Consumption (liter)

2019	314,956.57
2020	254,744.83

#### Gasoline Consumption (liter)

2019	125,388.75
2020	109,869.15

#### LPG Consumption (kg)

2019	40,407.38
2020	35,198.85



# ENERGY MANAGEMENT



<b>Project Name</b>	Energy Consumption Modeling and Energy Optimization
<b>Location and Date</b>	Kordsa İzmit Facilities / 2020
<b>Objectives and Actions</b>	<p>With this project, we aimed to optimize energy usage through energy consumption modeling in twisting machinery and treatment units.</p> <p>We modeled the energy consumption of a specified fabric production process through statistics and machine learning. We determined the possible steps in machinery/operation/planning by putting the model and the data collected from the machinery together. Carried out an action and feasibility study for the reduction of energy spent off-production by 30%.</p>
<b>Results</b>	<p><b>Economic:</b> We achieved 8.6 million kWh and 600 thousand dollars per year savings.</p> <p><b>Environmental:</b> We improved twisting machinery energy consumption by 20%. During the preparation phase of the project, we saved energy by 30% at the finishing units.</p>
<b>Plans for Future</b>	We will finalize the actions the feasibility study of which were done and compare their results with the past performances. We will carry out works toward making the operational changes permanent. We will build a library for the data that will be required in this and upcoming projects.



<b>Project Name</b>	Smart Lighting system and LED Conversion
<b>Location and Date</b>	Kordsa İzmit Facilities / 2020
<b>Objectives and Actions</b>	<p>With this project, we aimed to have an OHS-friendly emergency lighting and direction system in K1 area, which would also save energy. We also wanted to have a complete system where the lighting system talked with the machinery, and warned the personnel about process stoppages, hence increased operational efficiency.</p> <p>We used sensor-fitted smart LED lighting modules which automatically dimmed the light and energy consumption down to 10% when there was no motion in the area. We installed an OHS-friendly maintenance-free system which remotely monitors the operational health of the units and charge status of the batteries thanks to the integrated smart emergency lighting system.</p> <p>We also converted the pedestrian area lightings in K2-K3-K4 areas to LED.</p>
<b>Results</b>	<p><b>Economic:</b> We achieved a saving of nearly 17 thousand dollars in K1 area, and 11,500 dollars in the total of remaining areas. The operational life of 200 thousand hours and 25 years on these long-life LED lighting units will also reduce our long-term costs.</p> <p><b>Social:</b> We achieved labor efficiency since self-test emergency lighting and remote monitoring facility does not require periodic control.</p> <p><b>Environmental:</b> We achieved an energy saving of 200 thousand kWh in K1 area, and 135 thousand kWh in the total of remaining areas.</p> <p><b>Corporate:</b> We increased operational efficiency thanks to the stoppage warning system.</p>
<b>Plans for Future</b>	We are planning to deploy this scheme to other areas.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Kordsa Energy Saving Projects of 2020

In Indonesia, our production teams redesigned exhaust oven to decrease heat loss from treating oven to drying oven. They also worked on a project to optimize motor supply pump chiller.

In Thailand, our teams ran a project to improve water cooling of twisting process where they also saved equipment, spare parts and hence, 145,600 dollars/year.

The relevant energy and economic savings of these projects are listed below.



Sites	Energy Type	Investment (USD)	Reduction	Saving (USD/Year)
Indonesia	Natural Gas	25,000	255 m <sup>3</sup> /ton to 230 m <sup>3</sup> /ton	90,000
Indonesia	Electricity	-	317,307 kWh	25,000
Thailand	Electricity	78,500	1.2 million kWh	110,000
Brazil	Electricity	515,948	7.84 million kWh	276,487

# EMISSIONS MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

## INTERNAL STAKEHOLDER VIEW

%61 of our employees who responded to the sustainability assessment survey think that...

**Kordsa's projects and preventive measures to monitor and reduce emissions are adequate.**

## EMISSIONS MANAGEMENT

Reduction of emissions including GHGs and combatting climate change are among Kordsa's priorities. Our primary goal is to act in compliance with local regulations on greenhouse gas emissions in all countries we operate. In line with our net zero carbon by 2050 target, we will increase our monitoring, measuring, and reducing practices in emissions management in the upcoming period.

### The Steps We Took in Combatting Climate Change

**In 2014**, we started calculating our greenhouse gas emissions in Kordsa Turkey, approved by the Ministry of Environment in line with the GHG regulations.

**In 2015**, we commenced Scope 1 direct emission calculations in our Indonesia and Thailand facilities.

**In 2016**, we started Carbon Disclosure Project (CDP) Climate Change reporting.

**In 2017**, we completed Scope 1 direct emission calculations in all our facilities.

**In 2018**, we began Scope 2 emission calculations.

**In 2019**, we completed Scope 1 and Scope 2 emission calculations for 2018-2019 in all our facilities. Three of our facilities, in Turkey, USA-Chattanooga, and Indonesia respectively, were subjected to external audit for our Scope 1 and Scope 2 emissions.

**In 2020**, raising our CDP rating to A- placed us among Turkey's Climate Leaders. We reduced our Scope 1 and Scope 2 total emissions by 14% from the year 2019. Scope 1, 2 and 3 emissions data of our three facilities in Turkey, USA-Chattanooga and Indonesia were subjected to external audit.

Axiom Materials Inc., Kordsa's composite manufacturing subsidiary in Santa Ana California, was certified as the world's first carbon neutral prepreg manufacturer in 2020.

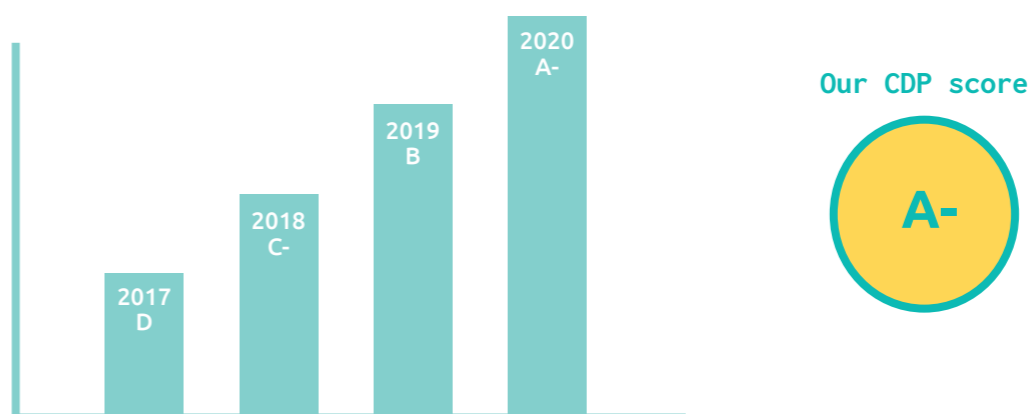
We manage emissions topic under Environmental Policy.

Details of our environmental management approach (Implementations and Control) is [here](#).

Details of our emissions management approach (Implementations and Control) is [here](#).

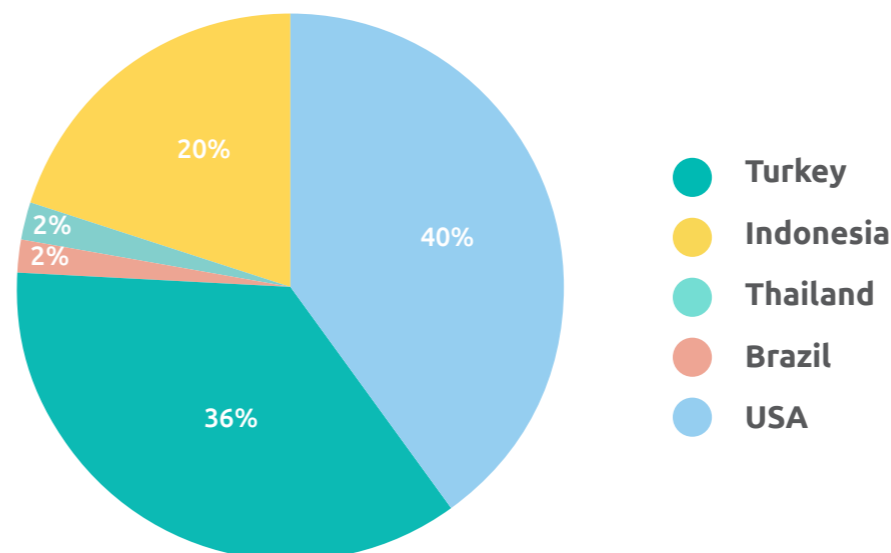
Emissions data is [here](#).

### 2020 CDP Climate Change Leader



Kordsa CDP Climate Change Report is [here](#).

### Total GHG Emissions Regional Split



# EMISSIONS MANAGEMENT



GHG EMISSIONS (tCO <sub>2</sub> e)	2018	2019	2020
Scope 1	128,175.84	128,875.99	113,544.12
Scope 2	307,105.93	294,806.85	249,155.85
Scope 3	n.a.	n.a.	1,153,662.95
<b>TOTAL</b>	<b>435,281.77</b>	<b>423,682.84</b>	<b>1,516,362.92</b>

Scope 1 data includes: Natural gas, generators & pumps, cooling gases, fire extinguishers, company vehicles.

Scope 2 data includes: Electricity

Scope 3 GHG Emissions (tCO <sub>2</sub> e)	2020
Purchased Good and Services	1,049,218.26
Fuel and Energy Related Activities (Not reported under Scope1-2)	63,552.53
Upstream Transportation and Distribution	32,713.51
Others	8,178.65
<b>Total</b>	<b>1,153,662.95</b>

<b>Project Name</b>	Energy Efficiency and Emission Reduction Project
<b>Leader /Application Location</b>	Brazil
<b>Objective</b>	The project that was initiated for energy efficiency and carbon reduction goal in our Brazil site was designed to make cooling, lighting and air conditioning systems smarter, optimized and more efficient. In this project we collaborated with Coelba, the electricity suppliers of our Brazil site.
<b>Targeted Results and Gains</b>	We achieved 7,845 MWh electricity a year saving which is 13% of our Brazil site's annual electricity consumption and also managed to reduce 918 tCO <sub>2</sub> e of emissions.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# WASTE MANAGEMENT

## INTERNAL STAKEHOLDER VIEW

%67 of our employees who responded to the sustainability assessment survey think that...

**Kordsa's practices to manage waste and wastewater to prevent environmental pollution are adequate.**

### WASTE MANAGEMENT

In Kordsa sites, disposal, recycle and reuse of production wastes and wastewater as specified by law are among our regular activities. We dispose 100% of the wastes generated in our facilities by recycling, recovery, landfill and incineration in accordance with national regulations.

#### 2020 Performance

In 2020, we decreased the amount of hazardous waste by approximately 11% compared to baseline 2018. We achieved some of our waste reduction by reusing our product wastes in the production.

In the meantime, our non-hazardous waste increased by 26.5% compared to 2018 and this increase reflected on the total waste amount as a 17% increase.

In this reporting period, by continuing to reuse some of the materials that would have been waste, we achieved to use our corporate resources efficiently and prevented environmental pollution.

As Kordsa, we are targeting to reduce our total waste ratio by 50% in comparison to our 2018 levels by 2030.

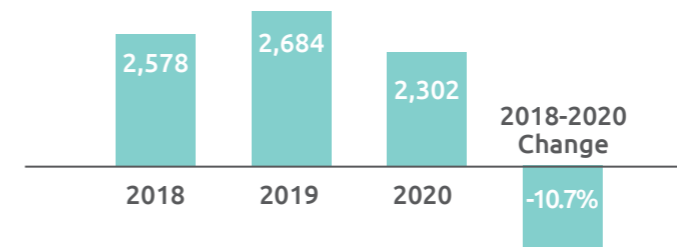
We manage waste topic under Environmental Policy.

Details of our environmental management approach (Implementations and Control) is [here](#).

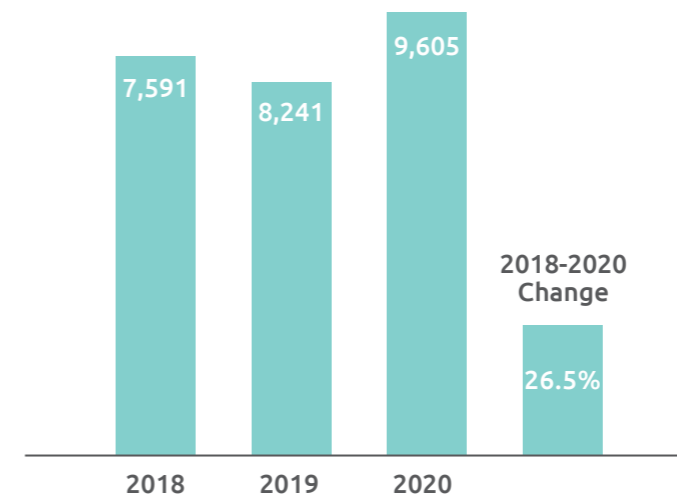
Details of our waste management approach (Implementations and Control) is [here](#).

Our waste data according to disposal methods are [here](#).

### Hazardous Waste Management Performance



### Non-Hazardous Waste Management Performance



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# WASTE MANAGEMENT

## Kordsa's Contribution to Circular Economy

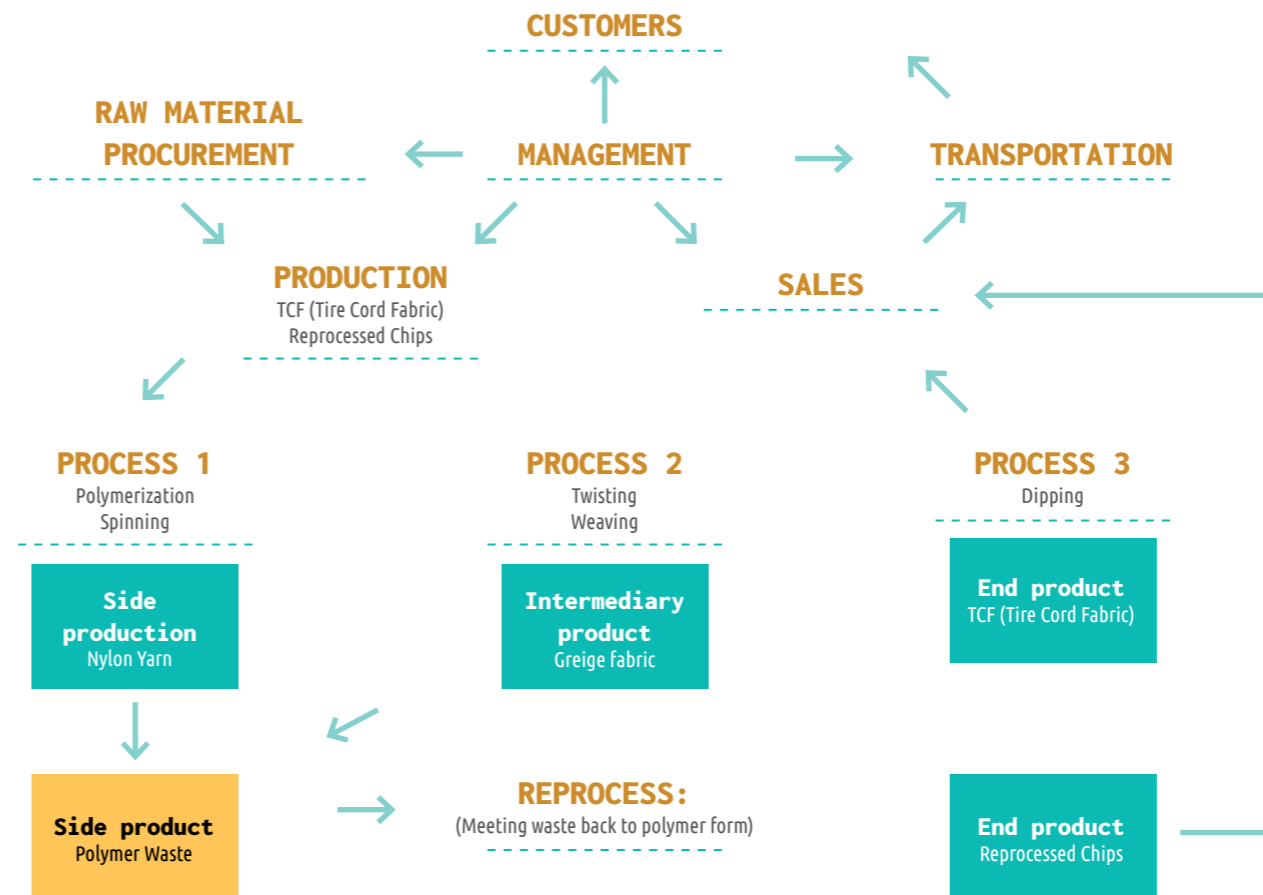
Since 2014, we turn the by-products of Nylon 6.6 yarn production facilities into pellet form at Kordsa Turkey and turn them into a raw material for engineering plastics industry. Those plastic raw materials provide zero-emission raw material input in various sectors and are turned into a variety of products in industries such as automotive and white appliances, thereby regaining them into the economy.

## Results and Gains

**Economic:** We turned Nylon 6.6 yarn by-product into a high value-added product. Our revenue gains from the sales of the products we turned into pellet form reached over 20 million dollars to date.

Most of these products are being used by the manufacturers in Turkey. Since the local engineering plastics manufacturers can obtain these materials locally, there has been a drop in Nylon 6.6 import, which resulted in manufacturers' reduction of costs and increase in profitability. We contributed to our country's economy by being instrumental in this new chain.

**Environmental:** Until 2018, the by-product recycling was available only in our Turkey site. Since then, we included our other facilities in the process, and gained about three thousand tons of polymer waste to the circular economy on a global scale.



## Global Strategic Cooperation for Plastic Recycling

Kordsa became a part of a new project named PolynSPIRE: Demonstration of Innovative Technologies Towards A More Efficient and Sustainable Plastic Recycling, under the European Union's "Horizon 2020" R&D and innovation program along with twenty-two partners. The project is initiated to strengthen research and technology-development capabilities in Europe while encouraging university-industry collaboration.



In the 48-month period of the PolynSPIRE project, it is expected that three innovations covering the TRL7 level are initiated, 60 kilotons of plastic waste is recycled, 300 kilotons equivalent CO<sub>2</sub> emissions are reduced, and 70 kilotons oil equivalent fossil resources are saved. Targeted impacts in 20 years are treating annually 4.5 million tons of residue, reducing 45 million tons of CO<sub>2</sub> emissions per year and recovering 10 million tons of oil equivalent of fossil fuel per year.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# WATER MANAGEMENT

## INTERNAL STAKEHOLDER VIEW

%66 of our employees who responded to the sustainability assessment survey think that...

**Kordsa's practices to manage and efficiently use water resources are adequate.**

### WATER MANAGEMENT

Water use is extremely important for the manufacturing processes at Kordsa plants and auxiliary operations. Water quality, accessibility and preservation of usable water resources are critical for the sustainability of our production and cost control.

In all our operations, we treat all the water we use at water treatment plants before discharging it to river or any local government piping mandated by local authorities. Our investments ensure that our water treatment capacity will meet the demand of future expansions. At all plants and offices, we put efforts to use water more efficiently, we encourage industrial reuse of treated water.

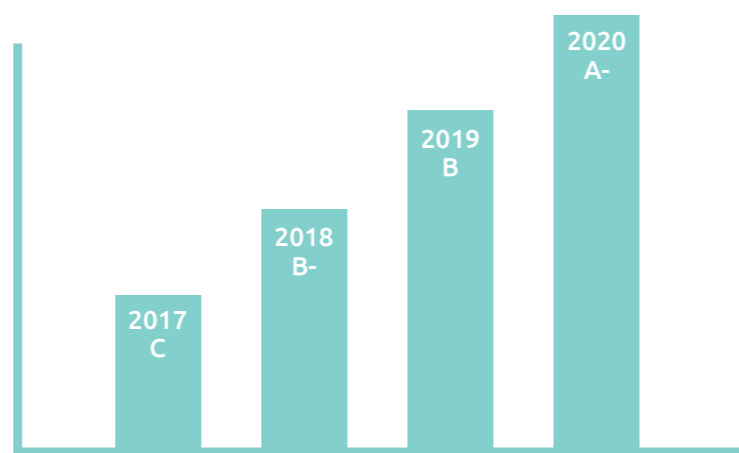
### 2020 Performance

In 2019, we recycled 184,000 m<sup>3</sup> of water in Turkey and Indonesia sites. We reduced water withdrawal per unit produced by 13.6% compared to 2019 baseline.

Details of our water management approach (Implementations and Control) is [here](#).

Our Water Policy is [here](#).

### 2020 CDP Water Program Leader



Our CDP Score



Kordsa CDP 2020 Water Security Report is located [here](#).



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# WATER MANAGEMENT



WATER WITHDRAWALS	2018 (m <sup>3</sup> )	2019 (m <sup>3</sup> )	2020 (m <sup>3</sup> )	2018-2020 (%)
Fresh Surface Water	2,556,608.39	3,166,771.64	2,035,366.39	-20.4%
Groundwater-Renewable	544,604.00	658,350.00	633,601.00	16.3%
Third Party Sources	381,446.25	260,599.75	231,408.91	-39.3%
<b>TOTAL WITHDRAWALS</b>	<b>3,482,658.64</b>	<b>4,085,721.39</b>	<b>2,900,376.30</b>	<b>-16.7%</b>

WATER DISCHARGES	2018 (m <sup>3</sup> )	2019 (m <sup>3</sup> )	2020 (m <sup>3</sup> )	2018-2020 (%)
Fresh Surface Water	782,221.00	1,012,249.63	779,633.93	-0.3%
Third-Party Destinations	1,248,849.78	1,610,231.49	1,229,387.81	-1.6%
<b>TOTAL DISCHARGES</b>	<b>2,031,070.78</b>	<b>2,622,481.12</b>	<b>2,009,021.74</b>	

TOTAL CONSUMPTION	2018 (m <sup>3</sup> )	2019 (m <sup>3</sup> )	2020 (m <sup>3</sup> )	2018-2020 (%)
	1,451,587.86	1,463,240.28	891,354.56	-38.6%

RECYCLED WATER (m <sup>3</sup> )	2018 (m <sup>3</sup> )	2019 (m <sup>3</sup> )	2020 (m <sup>3</sup> )	2018-2020 (%)
	189,437.00	181,671.00	184,101.00	-2.8%

2018 data includes all plants except the four new composite sites. 2019-2020 data includes all plants.

## Kordsa Water Projects Planned for 2021

In order to realize Kordsa's 2030 target to reduce water consumption by 50%, Kordsa sustainability teams worked on improvement opportunities and suggested various projects to reduce water withdrawal at Kordsa sites.

The projects range from flow meter installation to reverse osmosis system integration and from recycling of Ny yarn biological treatment wastewater to collecting rainwater to be used as make-up water.

The ELT approved projects and targeted reductions are given in the following table.

Sites	Number of Projects	Targeted Reduction
Turkey	3	44,000 m <sup>3</sup> / month
Indonesia	2	40 m <sup>3</sup> / day
Thailand	4	175 m <sup>3</sup> / month
USA - Chattanooga	3	Over 170,000 m <sup>3</sup> / year
Brazil	3	12,000 m <sup>3</sup> / year

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020





“ As Kordsa, we continued to offer value to our stakeholders with the local and global economy we created with the solutions and technologies we developed in all three lines of our business under challenging pandemics conditions in 2020.

We continued uninterruptedly to provide for our 4,500 strong human resource in five countries, including our subcontractors, a healthy and safe work environment that supports their productivity, protects their rights as human beings and employees, and invest in talent development as necessary to maintain their long-term employment. ”

## AWARDS and ACHIEVEMENTS

### Ethics Turkey Award

Kordsa became one of the 24 companies that have been awarded by the Ethic Values Center Association (EDMER) in Turkey's most ethical companies evaluation for their ethic practices in compliance with international standards.

### The Most Amazing Place to Work

Kordsa's manufacturing facilities in Brazil received "The Most Amazing Place to Work" from The Business Institute in the medium-sized companies' category.



## EMPLOYEE FEEDBACK

Kordsa always does continuous improvement not only for the production process but also for the human beings too. So, it will make a good harmony to achieve better targets.

### 2020 Employee Sustainability Survey

# OCCUPATIONAL HEALTH AND SAFETY

## INTERNAL STAKEHOLDER VIEW

**%86** of our employees who responded to the sustainability assessment survey think that...

**Kordsa takes necessary measures sufficient to oversee and secure health and safety of its employees.**

### OCCUPATIONAL HEALTH AND SAFETY

Health and safety of our employees comes first among our company's strategic sustainability priorities. The common and only goal of all our people and departments in charge of occupational safety is to attain zero occupational accident and zero occupational disease. We are aiming to hit this target by establishing the behavior centered occupational health and safety consciousness culture in all our employees.

We implement "The 10 Golden Rules of Occupational Safety" to prevent employee injuries across all our sites. We renew the process hazards researches every three years. We have Management-Worker Health and Safety Committees in all our facilities with the same operating structure. 100% of our workforce is represented in these committees.

Majority of project ideas on occupational health and safety improvements originate from our employees. We took precautions against accidents thanks to our employees' ideas.

#### 2020 Performance

During the reporting period, no fatal accident has occurred at Kordsa or at any of its subcontractors. In Turkey, Thailand and Laurel Hill USA we closed the year with zero recorded accident. San Marcos USA and Santa Ana USA had one recorded incident each, Indonesia, Brazil and Anaheim USA had two recorded incidents each, and Chattanooga USA recorded three accidents. Thus, our 11 facilities had 1 incident on average where our employees were involved.

Details of our Occupational Health and Safety Management Approach (Implementations and Control) is [here](#).

Data on Occupational Health and Safety performance by country are [here](#).

Details of Management-Worker Health and Safety Committees are [here](#).

OHS Training Hours/ Employees	Kordsa	Contractor	OHS TRAININGS
Turkey - İzmit	5	5	In 2020, we provided our employees with trainings under about 20 topics in general, health and technical categories, ranging from legal rights and responsibilities to biological and psychosocial risk factors, from first aid to electrical dangers, risks and how to prevent them.
Turkey - CTCE	4	4	
Brazil	21	6	
Indonesia	3	3	
Thailand	4	1	
USA - Chattanooga	8	3	
USA - Laurel Hill	3	1	
USA - Quakertown (FDI)*	8	7	
USA - Anaheim (TPI)*	8	0	
USA - San Marcos (AHT)*	2	N/A	
USA - Santa Ana (Axiom)**	8	6	

CTCE: Composite Technologies Center of Excellence

\* Composite companies joined Kordsa in 2018

\*\* Composite company joined Kordsa in 2019



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# OCCUPATIONAL HEALTH AND SAFETY



<b>Project Name</b>	Monitoring EHS Rule Violations with AI-Assisted Image Processing Technology
<b>Location and Date</b>	Kordsa İzmit Facilities / 2020
<b>Objectives and Actions</b>	<p>As part of TÜSiAD SD<sup>2</sup> Transformation in Industry Program, we started to work on creating warning and reporting of OHSE violations via processing surveillance camera images according to a programmed set of rules and tolerances in artificial intelligence algorithms.</p> <p>We achieved the mapping of rule violation intensity, elimination of the violations via instantaneous warning information and conclusion of the predefined actions, and tracking of the impacts, and evaluation of the effectiveness of corrective actions.</p>
<b>Results</b>	We made the OHSE compliance status in a defined area monitorable and trackable on a 24-hour basis. As well as supervising COVID-19 countermeasures, we prevented the violations of work health and safety and the consequential work accidents.
<b>Plans for Future</b>	We are planning to spread this scheme on other facilities.



<b>Project Name</b>	Constant EHS Risk Evaluation
<b>Location and Date</b>	Kordsa İzmit Facilities / 2019-2020
<b>Objectives and Actions</b>	<p>To keep risk evaluations constantly updated and popularize the learned risk countermeasures, the risk evaluations that were previously prepared in Excel format and reviewed once every three years were moved to an online platform using Fine Kinney methodology.</p> <p>We developed a system that enables the online tracking of the actions set to reduce the level of risk in high-risk tasks down to acceptable levels, establishes the one-to-one link between risk and action connection, keeps track of the automatic post-action risk revision processes and executes the risk evaluations 100% compliant to the legislations.</p> <p>We formed risk evaluation teams for all departments from their own staff and through the risk evaluations they made we increased their awareness.</p>
<b>Results</b>	We looked over the dangers and risks for all fields and tasks from scratch. We prevented possible accidents by reducing high risks down to acceptable risks by actions. We prevented possible post-accident material damages and workforce losses.
<b>Plans for Future</b>	Project is completed.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# OCCUPATIONAL HEALTH AND SAFETY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

## Total Productive Maintenance (TPM) Integration

TPM integration launched in 2015, is regarded as one of the most essential initiatives under sustainability management because of the positive economic, social, environmental and corporate benefits it generates.

### Activities in 2020

Although it got slower in the beginning due to pandemics, the TPM works continued uninterrupted thanks to the online works and consultations.

#### Turkey

As the eight pillars of TPM continued to work actively, we extended the scope by adding the Early Product Management topic under the Early Management column. We completed the fourth step works which aim to keep the machinery in their basic conditions by increasing operator skills for autonomous maintenance by 78%. We continued our TPM works for TPM Excellence Award Category A. As all the committees were being fit into a standard structure, in the meantime we continued to prepare the Kordsa İzmit TPM Book.

#### Indonesia

Seven pillars of TPM continued to work actively. We prepared IndoKordsa TPM Book for TPM Excellence Award Category B.

#### Brazil

Five pillars of TPM continued to work actively. We examined and studied the good practices in other Kordsa facilities. We focused on the autonomous maintenance works in order for the autonomous maintenance teams to complete the third step.

#### Thailand

Six pillars of TPM continued to work actively. We focused on the completion of the fourth step works.

#### ABD-Chattanooga & Laurel Hill

Three fundamental pillars of TPM continued to work actively.

#### Composite (USA)

We continued the 5S works.

#### Composite (EMEA)

We continued the 5S and autonomous maintenance works.

#### Our Future Plans

We will keep up with the trainings where the pillars of the TPM are explained

in detail to broaden the awareness and increase the leadership across all our employees in our facilities. We will activate all TPM pillars where the committee leaders will play influential roles. We will continue to work for TPM Excellence Award application process and to collect the resources for the future Kordsa TPM Activity Book.

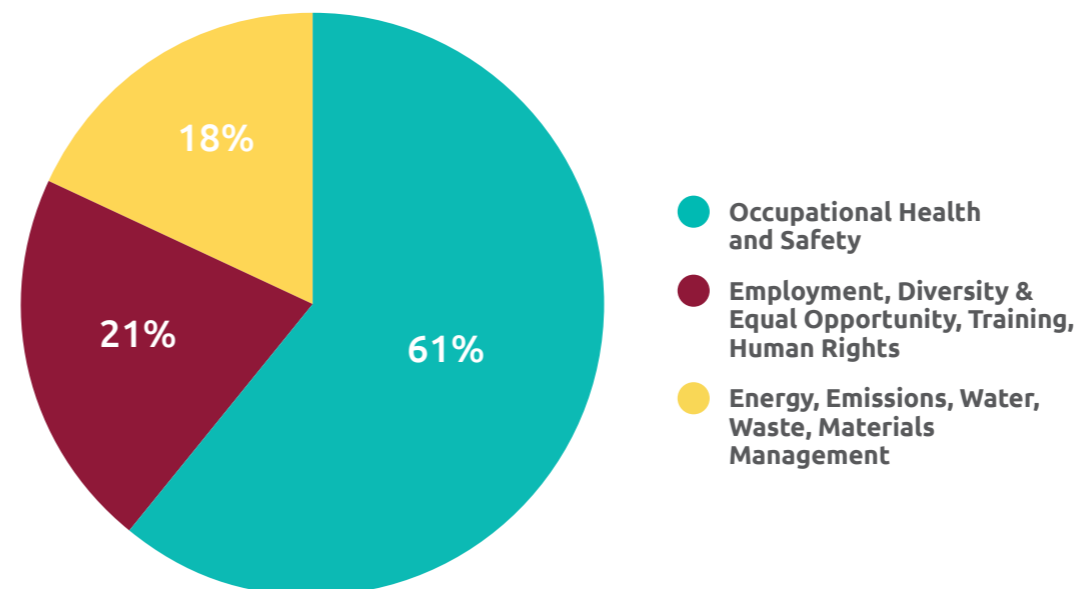
## Employee Suggestions for Operational Excellence

The classical suggestion system which was transformed by TPM integration continued to be available on the Kaizen portal since 2019. We defined constraints and acceptance criteria in the Kaizen suggestion system; and because of this we observed a drop in the number of Kaizens while the quality is improved. We formed a new marking systematics by preparing a points matrix.

We had planned to begin reviewing all the improvement suggestions all employees across Kordsa's premises would submit including our sustainability priorities on this global portal from 2020, but we could not put this plan in practice due to pandemics.

In 2020, we received 3,239 improvement suggestions from our employees in Turkey. While 1,480 of the suggestions were about 5S, TPM, product quality, equipment efficiency, 61% of the 1,835 suggestions regarding our direct sustainability priorities were about occupational health and safety. We put 85% of all suggestions into practice.

The Indonesia TPM teams won two **All Stars** awards with two projects on operational effectiveness and waste reduction.



# SUSTAINABLE GROWTH

## INTERNAL STAKEHOLDER VIEW

**%79** of our employees who responded to the sustainability assessment survey think that...

**Kordsa creates significant economic value for its key stakeholders.**

### SUSTAINABLE GROWTH

As Kordsa, we transformed ourselves into a company that innovates, produces, and offers advance technology to the whole world. We continued to take leaps forward to contribute to our country's development in 2020 by successfully managing the pandemic our modern world has experienced for the first time on such scale. Thanks to the advantages of being a global company with establishments in five different countries, we served our customers with speed and agility, and maintained continuity in business.

We continued to create profitability in all the geographies we were operational in with our strategic decisions and reinforcement technologies. Thanks to our strategic investments and industry-leading technologies, we closed the year 2020 with 4.5 billion TL turnovers. Our period profit has been TRY 150 million, and our main operational profit has been 384 million TL.

#### We Put Our Name on Global Projects in Composites Technologies!

In 2020, we continued to expand our field of impact and deepen our abilities along with four major companies we added to our group from the composite's world through acquisition in the preceding period. With Fabric Development we reached out to the sky and provided NASA with the fabric they used in the Orion Capsule, and with Axiom Materials we extended our high-temperature resistant Oxide-Oxide ceramic composite materials portfolio to applications reaching up to 1,400°C. We also had our signature on another important success by having the battery cell caps made in England use the fiber fabrics we produce with our extensive experience and know-how in advanced material technologies, which will be revolutionary in making the future of mobility electric vehicles even lighter.

In 2020, the subsidy we received from the government as part of Turquality Scheme decreased by 42% down to 345,000 TL.

### The Value We Distribute to Our Stakeholders

In 2020, our suppliers which also cover our operational expenses had the highest share, 82% of the economic value we distributed to our stakeholders followed by our employees with 14%.



● **82%** Suppliers

● **14%** Employees

● **1%** Government & Communities

● **0%** Shareholders

● **3%** Profit



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

**SDG 8. Decent Work and Economic Growth**

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# SUSTAINABLE GROWTH



<b>Project Name</b>	Development of A New Generation Polyester Yarn and Cord Fabric with High Elasticity and Modulus
<b>Location and Date</b>	Kordsa İzmit R&D / 2020
<b>Objectives and Actions</b>	<p>Carcass layer of a tire impacts safety immensely and reinforcement of it plays an important role in a tire's quality and hence, its performance and durability. Dimensional stability is one of the basic requirements for a carcass reinforcement material.</p> <p>This project's goal is to develop a new generation polyester yarn and cord fabric with high elasticity and modulus. We designed a new twisting, weaving and treatment solution and process environment to develop a product that could deliver the high curing performance in demanded specifications.</p>
<b>Results</b>	<p><b>Corporate:</b> The product is commercialized and is already selling.  <b>This product provides our customers:</b></p> <ul style="list-style-type: none"> <li>- Less rolling resistance, less fuel consumption and in conjunction to these, less CO2 emission with homogeneous elasticity</li> <li>- Better toughness for tire bursting resistance</li> <li>- Better fatigue performance for longer tire life</li> <li>- Better tire use performance</li> </ul> <p>We achieve better adhesion in large tires with a longer curing process.</p>
<b>Plans for Future</b>	We will expand our customer portfolio with global expansion activities considering these works, thereby achieving an increase in the new product sales revenues.



<b>Project Name</b>	Flame Retardant Epoxy Resin Formulation Development for Aerospace Interior and Public Transportation Applications
<b>Location and Date</b>	Composite Technologies Center of Excellence and Sabancı University / 04.2017-08.2021
<b>Objective and Actions</b>	<p>The primary concerns with aircraft fires are flame, smoke, and toxics. In a severe aircraft fire, more lives are lost by smoke than heat or toxics. Fire resistant resin matrices in glass/carbon fiber composites could significantly reduce the hazards resulting from an aircraft fire. Phenolic resin impregnated prepregs provide the optimum level of fire resistance in Aerospace Industry.</p> <p>In scope of the project, it is aimed to formulate a new hot melt, processable, halogen-free, flame retardant epoxy system that can replace phenolics in terms of its FST properties. The new resin system to be formulated will be tested according to ISO 45545 and FAR.853 Standards.</p>
<b>Results</b>	With the new flame retardant prepregs, Kordsa will have a stronger product portfolio. Kordsa will find opportunity to service below markets where flame retardancy is an important requirement, that are: aviation and aerospace industries, machine industries, marine and automotive applications and sporting goods.
<b>Future Plans</b>	We continue commercialization works.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# SUPPLY CHAIN MANAGEMENT

## INTERNAL STAKEHOLDER VIEW

**%72** of our employees who responded to the sustainability assessment survey think that...  
**Kordsa's policies, trainings and audits on human rights concerning its suppliers's operations are adequate.**

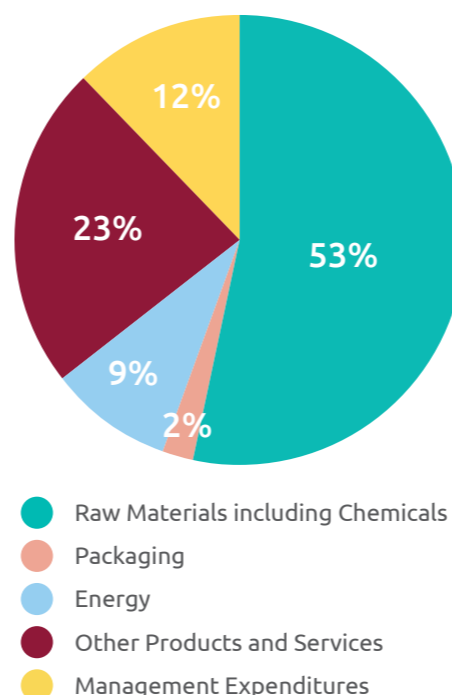
## PROCUREMENT PRACTICES

The global purchasing function, located at our headquarters in Istanbul, is responsible for the procurement of the raw materials used in 12 plants in five countries and/or whose supply is considered strategic, in addition to capex and service procurements above a specific budget.

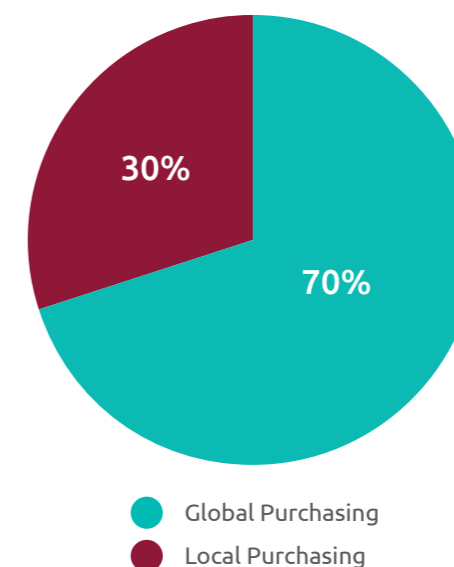
Local purchasing departments are responsible for the supply and follow up of all services and raw materials other than the above-mentioned items. The suppliers of which the trading terms are specified by Global Purchasing Department are also managed by local purchasing departments in terms of operational order processes. The consolidated import ratio of all Kordsa operations is 70%.

Our main procurement item is raw materials to produce nylon and polyester yarns, cord fabric, single end cord, concrete reinforcement fiber and composites.

Breakdown of Purchasing Expenditures



Shares of Purchasing Functions



## SELECTING AND ASSESSING SUPPLIERS

We require our suppliers and business partners to operate in accordance with the principles in the Statement on Code of Business Ethics we prepared based on Kordsa Code of Business Ethics. This code outlines our company's expectations for the undersigned conduct regarding labor and human rights, health and safety, environmental protection, ethics, and management practices.

The details on processes of supplier selection are [here](#).

Following the 2020 performance reviews and system audits, none of our suppliers scored less than 60 points.

## Supplier Sustainability Assessment Survey

We included the implementation of a more comprehensive sustainability impact

assessment in addition to our current processes in 2019. We started to directly integrate our suppliers' sustainability scores to our current assessment system.

In 2020, 73% of our global suppliers participated in the survey. The share of the suppliers we could reach in our global raw materials procurement is 79.5%, which excludes the suppliers we get packaging, transportation, and similar services from. (Our global procurement team carries out the purchasing of 90% of the raw materials that all our plants require.)

With the survey, we evaluate the performances of our suppliers on topics of Reporting, Ethics Policies and Practices, Occupational Health and Safety, Human Rights, Supplier Screening, Labor, and Environmental Management.

The survey that we will continue in 2021, we aim to reach and evaluate sustainability performance of 100% of our suppliers who represent 86% of our procurement budget, either through Ecovadis or another special online survey.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

**SDG 8. Decent Work and Economic Growth**

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# SUPPLY CHAIN MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

**SDG 8. Decent Work and Economic Growth**

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Project Name

Registration, Evaluation, Permission and Restriction of Chemicals (KKDIK)

## Location and Date

All Kordsa Plants / 2020-2023

## Objectives and Actions

We started this project with a team of nine from Procurement and R&D departments to register all chemical compounds we use to the Ministry of Environment System, and our eventual goal is to register every product of ours to KKDIK. The most important challenge we may face in this process is the lack of content information from our suppliers on their products.

In the 2020 phase of this project, we carried out Preregistration Processes, C&L (Classification and Labelling) notification, and SDS (Safety Data Sheet) preparation and revision.

## Results

In light of our Sustainable Responsible Procurement principles, the registration, evaluation, permission and restriction of all hazardous and non-hazardous chemicals will be kept under control.

## Plans for Future

Completion target for the project is 12.31.2023



# HUMAN RIGHTS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

## INTERNAL STAKEHOLDER VIEW

%81 of our employees who responded to the sustainability assessment survey think that...

**Kordsa's policies, trainings and audits on human rights in its locations are adequate.**

### HUMAN RIGHTS

At Kordsa, we aim to comply with Universal Declaration of Human Rights and all regulations in the countries of operation and look after all rights of our employees by adopting the international declarations, conventions, and principles that our country is a party to.

Our approach towards our people is honest and fair. We commit to a non-discriminative working environment for all, making sure our people enjoy their employee rights fully and properly. We also monitor and maintain protection of human rights for our sub-contractors and suppliers in the value chain through Supplier Sustainability Evaluation Survey and the supplier contracts.

Details of our Human Rights Management Approach (Implementations and Control) is [here](#).

Please click [here](#) for Kordsa Human Rights Policy.

### 2020 Performance

We did not receive any complaints regarding human rights violations or discriminative practices at any of our locations in the reporting period. 1,462 employees took ethics trainings which include human rights content.

In Turkey, Indonesia and Brazil, the ratio of total number of employees under any type of collective agreement with respect to total number of blue-collar workers has reached 55% in 2020, totaling to 2,018 employees. Our employees in USA, Thailand and China are not unionized. There has been no incidence of violation for freedom of association in 2019. Our operations do not bear any apparent and significant risk concerning these issues.

Topics Covered by Collective Labor Agreement	Turkey	Indonesia	Brazil
Occupational Health and Safety	✓	✓	✓
Working Conditions (work-rest hours, leaves)	✓	✓	✓
Training	✓	✓	-
Career Management	-	✓	-
Employee Representatives' Tasks and Responsibilities	✓	✓	-
Additional Work Payments	✓	✓	✓

Location	Indonesia
Name	Bipartite Discussion
Frequency	Monthly
Target Group	Labor Union
Participation	About 200 people
Purpose	To sustain the collaborative and smooth relationship between the Management and Union.
Location	Thailand
Name	Welfare Committee
Frequency	Bimonthly
Target Group	Representatives of each department
Participation	15-20 people
Purpose	To discuss issues on employees' work-related welfare and benefits, satisfaction from internal services To act as a communication bridge with top management



## INTERNAL STAKEHOLDER VIEW

**%78** of our employees who responded to the sustainability assessment survey think that...

**At Kordsa, the communication channels for employees to share their ideas and opinions with the management are adequate.**

### EMPLOYMENT

We see our human resources as the most valuable capital of Kordsa. From recruitment to retirement our priorities are to secure their health and safety, to enhance personal and occupational development and to provide them with a pleasant work environment where their employee and human rights are fully assured.

#### Sustainable Recruitment Policy

Having considered the requests and feedback from our stakeholders, our HR department reviewed and edited the Kordsa HR Policy in 2020.

The new policy covers the following topics:

- ▶ Comparable Terms and Conditions
- ▶ Working and Living Conditions
- ▶ Freedom of Association
- ▶ Reasonable Working Hours
- ▶ Grievance Mechanisms
- ▶ Local Legal Compliance & Kordsa Requirements
- ▶ Capability Building
- ▶ Equal Opportunities and Ensuring Gender Equality
- ▶ Prohibitions Forced and Child Labor

#### Employee Satisfaction

We monitor our employee satisfaction through employee engagement surveys, roundtable meetings with the CEO and ELT where they listen

to employees' opinions and receive their feedback and with white-collar / blue-collar interaction meetings. We conduct employee satisfaction surveys biennially and the most recent one was in 2018. The engagement ratio in 2014 raised from 44% to 62% in 2016 and to %68 in 2018. 2020 survey is postponed to 2021 due to pandemic. Our target is to maintain an engagement ratio over 65%.

#### Long Term Tenures

The average employee tenure across Kordsa plants is 12 years. As of 2020, the longest period is 15 years in Brazil and 14 years in Indonesia. Our employee turnover rate dropped by two points and turned 9.3% in 2020.

#### Performance Evaluation

All Kordsa employees are subject to regular performance and career development evaluations.

#### Recognition and Rewarding

At Kordsa we implement a fair and inspiring **recognition and rewarding strategy** to help retain the skilled, talented employees at all responsibility levels.

#### Internal Career Opportunities

We provide overseas assignments to ensure the personal development of employees, and to develop a common culture across all Kordsa sites. Currently, 17 of our employees are positioned abroad for long term assignments.

Our Performance on Equal Opportunities and Diversity is [here](#).

Detailed data on employment and diversity is [here](#).



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

**SDG 8. Decent Work and Economic Growth**

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Future of Work

In this journey of transformation, we started with the vision of becoming an advanced material technology company, we started to integrate Sabancı Holding's "Future of The Business" Project in Kordsa rapidly. We are handling the Future of Business from many aspects beyond remote work. From agile working systems to work, life and health balance, from remote work to leadership, skill, and performance development, we are preparing our employees and Kordsa for the future with actions that will impact and transform our work culture in different dimensions.

With the works we carried out with Boston Consulting Group, we gathered these initiatives under seven titles (1-Smart working, 2-Physical and Mental Health, 3-Flexible and High-Performance Workforce, 4-New Talent and Skill Transformation, 5-Leadership That Touches Mind, Feelings, and the Worker, 6-Agile and Digital Transformation, 7-Culture That Creates Common Purpose) and we will put our actions in practice in Turkey, Brazil and USA and then in the APAC territories. With this Project initiated during the pandemics period, we have taken a step to become one of the example establishments in the sector and around the globe.

We prepared and took our Remote Work Procedures into action in May 2020 in accordance with these works besides pandemics circumstances.

## All Stars Awards

Since 2006 at Kordsa, we reward successful projects, employees who take part in these projects, and high performing Kordsa plants globally and annually under 'All Stars Awards' scheme.

All Stars is a Global Recognition and Rewarding practice run by Global Human Resources on top of local recognition and rewarding processes managed by each county's human resources teams.

Each employee is encouraged to participate with any project of her taste. The process starts at the end of each year. After evaluation by judging team, ELT reviews the results. Submission of projects and evaluation take approximately four months.

All employees are invited to awards ceremony that takes place in the following year and the ceremony is broadcasted live through video conference.

In "All Stars 2019 Awards" that took place in January 2020, 263 out of 805 participants won an award in 36 projects out of a total of 106 projects in nine different categories. The prizes given to the winners summed to approximately 100 thousand dollars. Sustainability was also added to the prize categories in 2020.





About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

**SDG 8. Decent Work and Economic Growth**

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Young Advisory Board

Young Advisory Reinforcers (YAR), as we call it in Kordsa, is a program we initiated in the last quarter of 2019 to be able to add the young generation's phenomenal energy and fresh point of view in our Executive Leadership Team (ELT)'s agenda and integrate their approach in ELT's strategic decision-making processes.

While acting like ELT's shadow with its diversity moving as one body and functioning as a cultural bridge between young colleagues and top management, YAR project will create a future value for the company while supporting in-company harmony and loyalty.

The team in this platform can suggest value creating projects where they can reflect their young points of view and continue their work. Besides, they can take part in projects recommended to them by our CEO.

With its supportive and galvanizing approach in line with Kordsa's entrepreneurial, courageous, passionate, and constantly progressing values, YAR is an important vehicle for the popularization of the methodology of agility Kordsa takes as fundamental, which creates a win-win situation for Kordsa, the Leadership Team, and the young employees.

While contributing to the strategic decision-making processes, YAR takes place within important projects for Kordsa and has opportunities to develop themselves by working like a shadow of the ELT for a year and tap into their experiences and points of view in the process. This makes them a part of the management and the decision mechanism. In return, the ELT can feel the pulse of young generation by benefiting from their unorthodox points of view and create long-term value for the entire Kordsa employees.

Turkey is applying this project as the pilot country in 2019-2021. Normally it was planned as a one-year work process but due to pandemics we decided to extend it by an additional year.

Young Advisory Reinforcers team will set their own working principles, form their own agenda, bring project suggestions for the company or their own functionality, and will materialize them with addition of new members every year. In the meantime, the company management may come up to the YAR team with their own projects and share with them the subjects they will be asked to work on.

This project will be put in practice in all our locations globally in the upcoming years.





## Flexxa (Kordsa Flexible Work Model)

Our flexible work model that we initiated to contribute to work life balance of our employees and support them to gain more control over work schedule was also very impactful in aligning with expectations of generations Y & Z and to enhance employee engagement.

Flexxa is a program that we aim to contribute to business and private life balance, to increase employee happiness and support our employees to take more control over their work program. We expect to measure the effectiveness of the program after pandemic period.

### Results and Gains:

- Plays an important part in increasing employee motivation and facilitating their decisions to continue working for Kordsa.
- Enhances efficiency and competitive power, impacts positively to employer brand.
- Decreases late show up and absence ratios as a result of employee control over work schedule.
- Increases our service quality and eliminates stress and tension in the case when all positive factors go astray.
- Increases employee happiness and desire to go to work with a more content and healthier mindset.
- Shines out as an impactful working system in terms hiring and retention of skilled employees.
- We believe it will contribute positively to results regarding employee satisfaction and engagement.

**MOTIVATION**  
*Why Do We Need It*

- 😊 *Work life balance*
- 😊 *Increasing employees wellbeing*
- 😊 *Gaining more control over time schedules*
- 😊 *Aligning with the expectations of Y and Z generation*
- 😊 *Positive employee experience*
- 😊 *Increasing employee engagement*

**Kordsa Model: Flexxa**

**WORK HOUR**   **WORK PLACE**

**BIRTHDAY OFF**   **FIRST DAY @SCHOOL & REPORT CARD DAY**

**According to the last employee surveys: FLEXXA ROCKS!**

- The rate of satisfaction of users from **Flexxa Flexible Working Hours** Implementation is **94%**.
- Out of Office Work was selected as the **most desirable** implementation.
- 90%** of employees are generally satisfied from Flexxa and desire to increase in Flexible Working Time.
- The rate of satisfaction of users from Out of Office Work is **99%**.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

**SDG 8. Decent Work and Economic Growth**

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# EMPLOYMENT

## Kordsa Reinforeset

In 2016, we grouped processes of climate, culture, and engagement surveys under the roof of Reinforeset brand and began to conduct our human resources activities with this internal brand's framework.

The Reinforeset concept is derived from the words rainforest which regulates earth's climate, and our market placement Reinforcer, which represents Kordsa's reinforcement products. Reinforeset is promptly embraced by our staff. We intend to empower our employees via Reinforeset brand, which we developed by integrating Kordsa's reinforcer positioning with climate, culture and engagement components that interact and trigger each other, and with our practices that support it. The 2020 activities of Reinforeset in our five countries of operation are given in the following pages.



<b>Location</b>	Turkey
<b>Name</b>	A Step Forward with HR (Structured meetings series)
<b>Frequency</b>	20+ interviews in 50 hours
<b>Target Group</b>	All white-collar employees under manager role
<b>Participation</b>	220 people
<b>Purpose</b>	To create a two-way communication channel for employees, to help build strong employee relations, share information on inquired HR issues and get feedback

<b>Location</b>	Brazil
<b>Name</b>	Engagement Focus Groups
<b>Frequency</b>	Biennially
<b>Target Group</b>	Representatives of each department
<b>Participation</b>	About 70 people
<b>Purpose</b>	Share the engagement results and build together an action plan to get better results.

<b>Location</b>	Thailand
<b>Name</b>	Employee Engagement Driver
<b>Frequency</b>	Monthly meeting
<b>Target Group</b>	All employees
<b>Participation</b>	50-70 people
<b>Purpose</b>	To share employees' opinions about any issue in the company and find solutions together.

<b>Location</b>	Indonesia
<b>Name</b>	Communication Forum
<b>Frequency</b>	Annually (1-2 days)
<b>Target Group</b>	All Employees
<b>Participation</b>	Over 1,000 people
<b>Purpose</b>	To keep employees informed on current condition/action plans and on future plans of company in the next one year. To gather top management and employees in workshops and QA sessions.

<b>Location</b>	USA
<b>Name</b>	Off-site Quality Meeting
<b>Frequency</b>	Annually
<b>Target Group</b>	All employees
<b>Participation</b>	331
<b>Purpose</b>	Business Information and team building



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

**Sustainability Management**

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

**SDG 8. Decent Work and Economic Growth**

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# EMPLOYMENT



<b>Project Name</b>	CEO Talks & ELT Talks Online Meeting Series
<b>Location and Date</b>	All Kordsa Plants Online / 2020
<b>Objectives and Actions</b>	<p>This is a series of online meetings moderated by our CEO or the ELT member participant of the month. These meetings have a different theme every month, where participants stakeholders are chosen from top management in some months, and from employees in others.</p> <p>We discuss Kordsa values and competencies with our employees on online platforms and listen to our leaders share their experiences. We encourage learning from each other. In some months we have speakers among our employees where we listen to their local professional or personal experiences.</p>
<b>Results</b>	Our employees had the opportunity to witness real life examples about our values in the CEO Talks and ELT Talks series which are open to all employees. We helped our employees internalize our values and competencies with examples regarding how to match competencies with behaviors and examples on which behavior is expected from employees under what circumstances. This type of sharing maintained a continuity in communication with our employees during pandemics.
<b>Plans for Future</b>	While project can be enriched in terms of participant profile and content, we planned to continue the process as “People Talks” and select the speakers from among employees of different functions and according to their expertise.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

**SDG 8. Decent Work and Economic Growth**

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

<b>Project Name</b>	Our Hobbies Our Values
<b>Location and Date</b>	All Plants / 2020
<b>Objectives and Actions</b>	<p>In this project Kordsa employees from all around the world took the time and voluntarily shared their pastime passions by matching them to our corporate values in short videos with their colleagues.</p> <p>As the values and competencies change with Sabancı of the New Generation, we wanted to promote them, have them heard in the organization and internalized in the corporate culture, and by doing so, enable the changing values to live on.</p>
<b>Results</b>	We reached out to the Kordsa employees from all around the world with other Kordsa employees from all around the world. Contents were produced in five different languages and shared from all platforms within the company in a way that completed each other. We reached 6,500 clicks.

# TRAINING AND DEVELOPMENT

## INTERNAL STAKEHOLDER VIEW

**%65** of our employees who responded to the sustainability assessment survey think that...

**Kordsa's personal development and training programs provided for its employees are adequate.**

## TRAINING AND DEVELOPMENT

As Human Resources Department, with our training and development teams at all Kordsa facilities, we implement various practices to align training and education activities, to meet local requirements and needs, and to support employees in realizing their career goals as they perform their duties safely and effectively.

Apart from the training programs within the company, we can direct our employees to other development programs organized by Sabancı Holding such as T-PX that is aimed at senior engineer level and X-Posure Sabancı Program for medium level managers.

### 2020 Performance

The total hours of training our employees received in 2020 reached 214 thousand hours. We provided 56 hours of training per person on average. The trainings focused on career development topics by 62%.

In 2020, 39 employees participated in Kordsa Global Mentoring Program.

Please click [here](#) for our Training and Development Management Approach (Implementations and Control) and Global Development Programs.

Detailed training data is located [here](#).

### Average Training Hours By Gender

Men	72
Women	52



## KEEP (KORDSA E-Learning & Empowerment Platform)

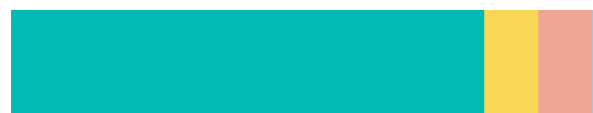
Since 2010, KEEP serves as an easily accessible and individualized training program tailored to our company, and to cascade the technical expertise of the world leader in the industry to all our employees in a more efficient method.

All employees with a corporate e-mail address can access the e-learning sessions delivered over the KEEP system in local languages on various categories anytime they want, in or outside company premises, on all our locations. Our employees can join personal development, technical development, corporate integrity, and other development trainings over the KEEP system, as well as managing their training plans, apply for classroom trainings, and suggest new trainings. As the classroom training-planning module has been designed to run over the KEEP system, employees can manage all training and development activities over the system in a 'self-service' mode.

We regularly share all updates and notices with our employees since the launch of the system through e-mails, videos, and posters hung up in our sites, screensavers, intranet announcements, and various rewarding activities.

In 2020, the amount of training our employees received on KEEP multiplied by 2.5 and reached 3,695 hours.

## Trainings



- **62%** Career Development
- **17%** Safety and Environment
- **17%** Personal Development
- **4%** Other



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

**SDG 8. Decent Work and Economic Growth**

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020





# SDG 5: GENDER EQUALITY



At Kordsa, we practice equal opportunities from recruitment to retirement policy, providing equal work environment for all. We support our approach by complying with the principles of international initiatives.

Diversity and cultural differences in our global human resources constitute the foundation of our corporate culture in Kordsa. We manage all human resources issues by taking the local approaches and practices and global trends into consideration.



## EMPLOYEE FEEDBACK

I care about sustainability as a whole and the fact that my company prioritizes the environment, business ethics and social justice issues as much as I do, definitely makes me want to keep working at Kordsa.

2020 Employee Sustainability Survey



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# EQUAL OPPORTUNITIES AND DIVERSITY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

## INTERNAL STAKEHOLDER VIEW

%74 of our employees who responded to the sustainability assessment survey think that...

**Kordsa's recruitment, placement and waging practices to support equal opportunities for women & men, and employee diversity are sufficient.**

### EQUAL OPPORTUNITY AND DIVERSITY

Besides the fair working environment for hiring and career planning for women, we also offer private health insurance that covers childbirth, and lactation rooms for their convenience. We provide health services, health insurances and retirement plan for all our full-time employees.

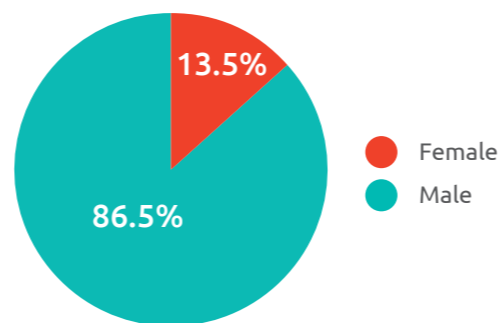
In 2019-2020 period 6 female and 58 male employees used their maternity leaves and 100% of them returned their job to work at least another 12 months in our company.

We planned to initiate '**Engineering Reinforcer Women**' and 'Diversity and Inclusiveness' projects by establishing their infrastructure in 2020.

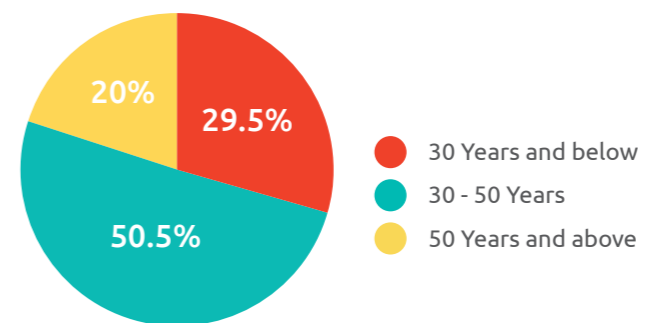
Details of our Management Approach on Equal Opportunities and Diversity (Implementations and Control) is located [here](#).



Employees by Gender



Employees by Age Group



#### Number of Employees

EMEA	1,539
Asia Pacific	1,477
South America	398
North America	622

#### Average Tenure (Years)

All Kordsa	11.64
Thailand	9.74
Indonesia	14.33
Brazil	14.92
USA	10.66
Turkey	10.21

#### Average Tenure (Years)

Female	11.0
Male	11.7

# EQUAL OPPORTUNITIES AND DIVERSITY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

**SDG 5. Gender Equality**

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Women's Co. (Equality at Work Project)

In 2016, our Human Resources Department launched Women's Co. Project for women employees at Kordsa plants across the globe. The primary concern of the project is to raise awareness and consciousness on gender equality among employees, starting from the top management. Our objective is to design a systematic approach in equality at work and integrate all our efforts under this framework.

The actions we took to incorporate these practices in our processes are identification of local and global targets, detailed analysis of female-male employees, observation of women's expectations through surveys and their satisfaction level regarding the current situation and designing development programs in line with the survey results. We determined 5 years objectives for the project that cover numerous cultures in four continents.

### Targeted Social Gains

Empower women employees to become more competent in their work and private lives.

### Targeted Economic Gains

Increase women employment where the ratio is low.

### Targeted Corporate Gains

Create opportunities for women employees to be more effective in decision making mechanisms that will lead us to reach our corporate objectives.



<b>Place</b>	Brazil
<b>Name</b>	Being Plural Program
<b>Frequency</b>	During the whole year (Twice a month)
<b>Target Group</b>	All employees
<b>Participation</b>	Over 600 (including contractors)
<b>Purpose</b>	To enhance people's awareness about Inclusion and diversity

<b>Place</b>	Turkey
<b>Name</b>	Women's Club
<b>Frequency</b>	A few times a year
<b>Target Group</b>	All female employees
<b>Participation</b>	120 people all year around
<b>Purpose</b>	To support our women employees in social life as well; to contribute to their creativity, concentration, communication skills

# EQUAL OPPORTUNITIES AND DIVERSITY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## New Grad's Program

In order to meet young talents, feed our talent pool, and support our organizational enhancement, we collaborated with student clubs of elite universities in Turkey for the New Grad's Program that we rolled out from January 2019 to September 2020.

Within the project scope, we have done needs assessment, career day organizations for technical and support departments and organized diversified selection processes. We organized their rotation and development program after they were hired. By the end of sixth month, they presented their projects and by the end of their first year at Kordsa, they were graduated from the program. We also assessed whether our interns can be suitable to nominate for open positions after graduation by letting them take project-based responsibilities during training.

### Results and Gains:

- We provided both workforce and intern resource for operations, technical and support departments.
- Since the start of the program, five young talents began to work as interns and seven participants began to work full time.
- We fulfilled the requirements of Sabancı of New Generation.
- Our brand awareness as an employer enhanced.

### Our Future Plans:

Through visits and activities at local and international universities, we intend to raise brand awareness as an employer among the talents in potential target audience, to attract talents, diversify assessment stages, and to provide participants with an extraordinary experience.

## G.O. Reinforcers

In 2020, we started a particularly important project to corroborate our employer brand. Kordsa. Global Online Internship Program is targeted at the 3rd and 4th year students at universities, aiming to have the interns gain experience by working in project teams and experience Kordsa's global position.

In the meantime, we aim at reaching high potential youth and offer them employment.

We received 3,363 applications in total from all countries. Selected students worked online in Kordsa's premises in different countries for a month over July and August.

## Women Who Reinforce Engineering

We initiated this project specially to inspire and pave a way for young female engineers from Anatolian universities with limited resources.

We wanted to create an opportunity for young female engineer candidates in our country to join a six-month mentorship program. 451 female engineers who applied online over LinkedIn were invited to the panel we organized.

Kordsa's female reinforcers shared their stories with 272 engineering students in this online panel.

Then the candidates shared their own stories with Kordsa in one-page essays for the mentorship program. Seven of the 35 applicants will be selected and included in the program as mentees of the seven reinforcers.

4 QUALITY EDUCATION



# SDG 4: QUALITY EDUCATION



“ At Kordsa, we focus on Quality Education in all our social responsibility projects we perform with our volunteer employees’ participation. We believe all-encompassing quality education is a vital tool for sustainable development.

With this understanding, we undertake projects that support the education of children and youth irrespective of their gender or their income level, and therefore reinforce their future in regions where our facilities are located. ”



## EMPLOYEE FEEDBACK

Kordsa is a company that values human, employees, public, environment and future. I think it is very generous in giving back to the society as it earns.

2020 Employee Sustainability Survey



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2020

# COMMUNITY DEVELOPMENT

## INTERNAL STAKEHOLDER VIEW

%67 of our employees who responded to the sustainability assessment survey think that...

**Kordsa has sufficient social development investments for the local community.**

“ Our “We are inspired to Reinforce Life” vision drives our social responsibility projects in all geographies we operate. We initiated the “Reinforcing Future Project” which sets the framework for our education support projects based on United Nations Sustainable Development Goals quality and equality in education article in 2016 at İzmit where our main plant is and began deploying it in Turkey and other countries. ”

## Reinforcing the Future Project

### School of Reinforcers 2016-2020 Highlights



**5** Years

**5** Schools

**1,040** Students We Touched

**1,000** Kordsa Volunteers

TL **840K** Investments

Cooperation with Kocaeli City and İzmit National Education Administrations, and Local Administrations

### 2020 Highlights of ÖRAV Cooperation



**1** Year

**109** Teachers

**3** Trainings

**44** Kordsa Volunteers (Runners)

TL **33K** Investment

ÖRAV: Teachers Academy Foundation



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

SDG 9. Industry, Innovation and Infrastructure

SDG 12. Responsible Consumption and Production

SDG 8. Decent Work and Economic Growth

SDG 5. Gender Equality

SDG 4. Quality Education

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## Reinforcing the Future Project

### Project Scope

Through our regular visits we make every year, we identify the schools which require the most support in terms of infrastructure and educational equipment, and we provide them with heating system, sports arena, educational equipment, science lab, library, dining hall, and nursery classroom and so forth. We make renovations each year in January in which our volunteer staff are actively involved in all stages of projects from idea, project setup, equipment purchasing and setup, logistics to physical activities on the renovation day such as painting.

### Volunteer Involvement

Each year, we implement "School Renovation Project" just after Kordsa's "Global Leaders' Summit" to ensure that all volunteers from premises around the world can participate in the project. With this project while supporting our staff around the world to collaborate, we also provide opportunities for the students and teachers to meet various cultures. Around 250 Kordsa employees voluntarily participate in the project every year. Besides providing education and learning in better physical conditions for students at renovated schools, we also ensure our volunteers to deepen their loyalty and engagement in our company. Thus, employee satisfaction enhances due to their volunteer contributions in society.

## Teacher Trainings in Collaboration with ÖRAV

### Learning Leader Teacher Training

In 2020, we collaborated with the Teacher's Academy Foundation (ÖRAV) for the development of the teachers at a primary school we had renovated. ÖRAV is a foundation which develops training programs to support

teachers' personal and professional developments and takes its programs to teachers free of charge with its team of 250 educators. The "Learning Leader Teacher" program aims to develop teachers into teachers who teach not the information, but teach how to learn, through a set of group studies and application workshops where teachers are shown methods and techniques they can take back to their classrooms. This training program supports the development of teachers and school administrators who shoulder the responsibility in training individuals who possess the mental, social, emotional and digital skills 21<sup>st</sup> century demands. We helped this program reach 25 teachers in total, 17 of which were from the renovated school, and 8 from the schools nearby.

### Thinking Skills Training

In this year's "Runatolia" which Kordsa's Social Responsibility Club organizes since 2015, our employees ran to raise donations for ÖRAV. With the collected revenue we made 14 teachers receive "Thinking Skills" training.

### Interactive Course in Online Education Design Training

We collaborated with ÖRAV once again in supporting our teachers in the education system that digitalized with the introduction of Covid-19 pandemics in our lives.

For our teachers to adapt to new circumstances and continue to reinforce our children's future, we contributed to the "Interactive Course in Online Education Design" training of 70 teachers from Izmit where our main plant is located.

# PERFORMANCE INDICATORS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



# ECONOMIC PERFORMANCE INDICATORS



[About the Report](#)

[Messages to Our Stakeholders](#)

[Corporate Profile](#)

[Strategy and Governance](#)

[Sustainability Management](#)

[Performance Indicators](#)

[Annexes](#)

KORDSA  
SUSTAINABILITY REPORT  
2020

<b>Economic Value Created &amp; Distributed ('000 TL)</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Economic Value Generated (Net Revenues)	4,059,715	5,304,724	4,685,766
<b>Economic Value Distributed to Stakeholders</b>			
Operating Expenses	3,160,181	4,184,107	3,999,121
Benefit to Employees	463,502	636,172	687,877
Benefit to Government	73,265	85,701	22,427
Benefit to Providers of Capital	68,085	48,632	0
Benefit to Community	24,222	20,103	0
Economic Value Retained (Profit)	270,459	329,856	150,394
<b>Financial Assistance Received From Government</b>			
Turquality	2,505	595	345
Tax Reliefs	37,458	19,164	0
Incentives	35,637	40,915	0

# SOCIAL PERFORMANCE INDICATORS



EMPLOYEES			
By Gender	2018	2019	2020
Female	414	564	544 ✓
Male	3,314	3,486	3,492 ✓
<b>TOTAL</b>	<b>3,728</b>	<b>4,050</b>	<b>4,036</b> ✓

By Type of Employment and Gender	2018	2019	2020
White-collar - Female	237	287	293
White-collar - Male	488	558	549
Blue-collar - Female	177	277	251
Blue-collar - Male	2,826	2,928	2,943
<b>TOTAL</b>	<b>3,728</b>	<b>4,050</b>	<b>4,036</b>

By Location and Gender	2018	2019	2020
Turkey - Female	116	143	144
Turkey - Male	1,323	1,329	1,395
Indonesia - Female	73	74	71
Indonesia - Male	1,123	1,075	1,050
Thailand - Female	112	107	104
Thailand - Male	276	266	251
Brazil - Female	35	36	51
Brazil - Male	342	321	347
USA - Female	78	204	174
USA - Male	249	494	448
China - Female	0	0	0
China - Male	1	1	1
<b>TOTAL</b>	<b>3,728</b>	<b>4,050</b>	<b>4,036</b>

By Age Group and Gender	2018	2019	2020
30 Years and below - Female	91	110	97
30 Years and below - Male	1,115	1,148	1,097
30 - 50 Years - Female	245	266	285
30 - 50 Years - Male	1,711	1,790	1,755
50 Years and above - Female	86	117	162
50 Years and above - Male	480	619	640
<b>TOTAL</b>	<b>3,728</b>	<b>4,050</b>	<b>4,036</b>

EMPLOYEES			
By Management Category and Gender	2018	2019	2020 ✓
Executives (ELT) - Female	1	2	2
Executives (ELT) - Male	9	8	8
Director - Female	6	2	1
Director - Male	14	12	8
Manager - Female	36	39	44
Manager - Male	102	108	116
Engineer & Specialist - Female	132	156	154
Engineer & Specialist - Male	211	209	206
Supervisor & Technician - Female	9	10	13
Supervisor & Technician - Male	145	183	157
Officer (White-collar) - Female	89	94	95
Officer (White-collar) - Male	97	102	100
Operator - Female	166	222	235
Operator - Male	2,711	2,903	2,897
<b>TOTAL</b>	<b>3,728</b>	<b>4,050</b>	<b>4,036</b>

By Other Groups	2018	2019	2020
Expat - Female	0	1	1
Expat - Male	15	16	16
Disabled - Female	0	0	0
Disabled - Male	40	59	38

Governance Bodies	Ratio	
(Board of Directors and ELT)	2019	2020
Women	18.75%	17.65%
30 Years and below	0.00%	0.00%
30 - 50 Years	43.75%	47.06%
50 Years and above	56.25%	52.94%
Expats	18.75%	23.53%
Employees with disabilities	0.00%	0.00%

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# SOCIAL PERFORMANCE INDICATORS



KORDSA EMPLOYEE TURNOVER			
New Hires vs Dismissals	2018	2019	2020
New hires - Female	88	92	54
Dismissals - Female	56	74	56
New hires - Male	529	324	260
Dismissals - Male	366	443	319
<b>Total - New hires</b>	<b>617</b>	<b>416</b>	<b>314</b>
<b>Total - Dismissals</b>	<b>422</b>	<b>517</b>	<b>375</b>

Turnover Rate	2018	2019	2020
Employee Turnover*	10.1	11.5	9.3

\* Number of employees that quit work/ total number of employees\*100

EMPLOYEE TENURES			
Average Length of Service (Years)	2018	2019	2020
All Kordsa	12	11.7	11.6
Turkey	10	9.5	9.7
Indonesia	14.3	14.1	14.3
Thailand	13.9	14.2	14.9
Brazil	11.4	11.1	10.7
USA	11.5	11.1	10.2

Average Length of Service (Years)	2018	2019	2020
W. Collar	10.5	11.3	10.9
B. Collar	12.2	11.9	11.8

Average Length of Service (Years)	2018	2019	2020
Female	10.2	11.5	11.0
Male	12.3	11.8	11.7

KORDSA TRAINING INVESTMENTS			
	2018	2019	2020
Total Number of Trained Employees	3,335	3,349	3,284
Total Training Expenses (TL)*	3,168,280	3,148,671	3,551,653

Average Training (By Employee Category)	2018	2019	2020
Executives (ELT)	17.13	24.50	18.15
Director	38.24	35.71	70.00
Manager	67.85	67.98	54.67
Engineer & Specialist & Officer (White-collar)	64.72	63.74	50.20
Supervisor	53.83	61.65	47.11
Operator & Technician	113.01	72.77	53.65

Average Training Hour (By Gender)	2018	2019	2020
Male	89.73	72.43	59.84
Female	50.13	51.86	35.28

Average Training Hour (By Training Type)	2018	2019	2020
Career Development	46.98	40.04	35.45
Personal Development	8.48	7.43	11.11
Health, Safety and Environment	18.78	15.19	9.41

Average Training Hours (All Trainings)	2018	2019	2020
Total Training Hours Per Person	74.24	62.67	55.97

TOTAL TRAINING HOURS			
	2018	2019	2020
Career Development	181,281	150,516	133,050
Personal Development	24,858	26,667	36,300
Health, Safety and Environment	72,456	57,116	36,969
Other	7,884	1,261	7,634
<b>Total Training Hours</b>	<b>286,478</b>	<b>235,559</b>	<b>213,953 </b>

Contractor Trainings			
	2018	2019	2020
Total Number of Trained Contractors	n.a.	228	216
Total Training Hours	1,614	1,782	1,436

\* Contractor trainings are included.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT



## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (1)

Plants	Group	Unit	Turkey			Thailand			
			2018	2019	2020	2018	2019	2020	
The number and rate of fatalities as a result of work-related injury	Kordsa Employee	Number	0.00	0.00	0.00	✓	0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00		0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
The number and rate of high-consequence work-related injuries (excluding fatalities)	Kordsa Employee	Number	0.00	0.00	0.00	✓	0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00		0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
The number and rate of recordable work-related injuries	Kordsa Employee	Number	3 LWC	3 LWC - 2 MTC	0.00	✓	0.00	0.00	0.00
		Rate	0.21	0.31	0.00		0.00	0.00	0.00
	Contractor	Number	1 LWC	3 LWC	0.00		0.00	0.00	0.00
		Rate	0.63	0.55	0.00		0.00	0.00	0.00
The number of hours worked	Kordsa Employee	Number	3,024,446	3,242,891	2,602,925	✓	811,056	783,834	760,080
		Rate	0.68	0.66	0.68		0.82	0.81	0.87
	Contractor	Number	952,889	1,096,769	822,619		149,013	146,648	127,096
		Rate	0.32	0.34	0.32		0.18	0.19	0.17

## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (2)

Plants	Group	Unit	Indonesia			Brazil			
			2018	2019	2020	2018	2019	2020	
The number and rate of fatalities as a result of work-related injury	Kordsa Employee	Number	0.00	0.00	0.00	✓	0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00		0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
The number and rate of high-consequence work-related injuries (excluding fatalities)	Kordsa Employee	Number	0.00	0.00	0.00	✓	0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00		0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
The number and rate of recordable work-related injuries	Kordsa Employee	Number	4 LWC	1 LWC	2 LWC	✓	1 RWC	1 LWC	2 LWC
		Rate	0.40	0.08	0.24		0.31	0.28	0.70
	Contractor	Number	0.00	0.00	1 LWC		0.00	0.00	0.00
		Rate	0.00	0.00	1.13		0.00	0.00	0.00
The number of hours worked	Kordsa Employee	Number	2,008,260	2,392,802	1,692,608	✓	647,819	713,432	573,426
		Rate	0.63	0.67	0.89		0.66	0.66	0.55
	Contractor	Number	738,112	783,733	177,399		221,752	240,555	260,383
		Rate	0.37	0.33	0.11		0.34	0.34	0.45

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT



## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (3)

Plants			USA - Chattanooga			USA - Laurel Hill			
Accidents	Group	Unit	2018	2019	2020	2018	2019	2020	
The number and rate of fatalities as a result of work-related injury	Kordsa Employee	Number	0.00	0.00	0.00	✓	0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00		0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
The number and rate of high-consequence work-related injuries (excluding fatalities)	Kordsa Employee	Number	0.00	0.00	0.00	✓	0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00		0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
The number and rate of recordable work-related injuries	Kordsa Employee	Number	0.00	0.00	2 RWC – 1 LW	✓	0.00	0.00	0.00
		Rate	0.00	0.00	1.31		0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00		0.00	0.00	0.00
		Rate	0.00	0.00	0.00		0.00	0.00	0.00
The number of hours worked	Kordsa Employee	Number	472,508	485,940	457,956	✓	183,376	202,421	185,545
		Rate	0.82	0.81	0.81		0.88	0.83	0.80
	Contractor	Number	87,058	90,572	85,315		21,323	34,957	37,094
		Rate	0.18	0.19	0.19		0.12	0.17	0.20

## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (4)

Plants			Composite Technologies Center of Excellence (CTCE)			USA - Anaheim (TPI)*	
Accidents	Group	Unit	2018	2019	2020	2019	2020
The number and rate of fatalities as a result of work-related injury	Kordsa Employee	Number	0.00	0.00	0.00	0.00	0.00
		Rate	0.00	0.00	0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00	0.00	0.00
		Rate	0.00	0.00	0.00	0.00	0.00
The number and rate of high-consequence work-related injuries (excluding fatalities)	Kordsa Employee	Number	0.00	0.00	0.00	0.00	0.00
		Rate	0.00	0.00	0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00	0.00	0.00
		Rate	0.00	0.00	0.00	0.00	0.00
The number and rate of recordable work-related injuries	Kordsa Employee	Number	0.00	0.00	0.00	0.00	2 LCW
		Rate	0.00	0.00	0.00	0.00	2,72
	Contractor	Number	2 LWC	0.00	0.00	0.00	1 MTC
		Rate	6.47	0.00	0.00	0.00	17.56
The number of hours worked	Kordsa Employee	Number	131,731	173,765	172,847	245,905	147,183
		Rate	0.68	0.48	0.59	100.00	0.92
	Contractor	Number	61,843	190,664	71,480	0.00	11,388
		Rate	0.32	0.22	0.41	0.00	0.08

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (5)

Plants	Group	Unit	USA - Quakertown (FDI)*		USA - San Marcos (AHT)*		USA - Santa Ana (Axiom)**
			2019	2020	2019	2020	
The number and rate of fatalities as a result of work-related injury	Kordsa Employee	Number	0.00	0.00	0.00	0.00	0.00
		Rate	0.00	0.00	0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00	0.00	0.00
		Rate	0.00	0.00	0.00	0.00	0.00
The number and rate of high-consequence work-related injuries (excluding fatalities)	Kordsa Employee	Number	0.00	0.00	0.00	0.00	0.00
		Rate	0.00	0.00	0.00	0.00	0.00
	Contractor	Number	0.00	0.00	0.00	0.00	0.00
		Rate	0.00	0.00	0.00	0.00	0.00
The number and rate of recordable work-related injuries	Kordsa Employee	Number	1 MTC - 1 RWC	1 LWC	0.00	0.00	1 LWC
		Rate	1.44	1.00	0.00	0.00	1.00
	Contractor	Number	0.00	0.00	0.00	0.00	0.00
		Rate	0.00	0.00	0.00	0.00	0.00
The number of hours worked	Kordsa Employee	Number	277,763	227,739	44,100	42,263	207,673
		Rate	99.97	0.97	100.00	1.00	0.97
	Contractor	Number	8,133	6,314	0.00	0.00	6,202
		Rate	0.03	0.03	0.00	0.00	0.03

## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (6)

OHS TRAINING HOURS (Employees)	2018	2019	2020	OHS TRAINING HOURS (Contractors)	2020
Turkey - İzmit	10	13	5	Turkey - İzmit	5
Turkey - CTCE	4	6	4	Turkey - CTCE	4
Brazil	10	27	21	Brazil	6
Indonesia	12	8	3	Indonesia	3
Thailand	11	9	4	Thailand	1
USA - Chattanooga	8	17	8	USA - Chattanooga	3
USA - Laurel Hill	8	6	3	USA - Laurel Hill	1
USA - Quakertown (FDI)*	N/A	11	8	USA - Quakertown (FDI)*	7
USA - Anaheim (TPI)*	N/A	2	8	USA - Anaheim (TPI)*	0
USA - San Marcos (AHT)*	N/A	2	2	USA - San Marcos (AHT)*	N/A
USA - Santa Ana (Axiom)**	N/A	N/A	8	USA - Santa Ana (Axiom)**	6

### Explanations for OHS Data:

\* Composite companies joined Kordsa in 2018

\*\* Composite company joined Kordsa in 2019

**Lost Workday Case (LWC):** When the worker cannot return to work the first workday following an occupational accident resulting in injury.

**Medical Treatment Case (MTC):** When an accident occurs that require medical treatment and the injured person can return to work the first workday following injury.

**Restricted Workday Case (RWC):** When the injured can return to work the first workday after injury, but is asked to work on another task, as he cannot perform his/her regular task.

**Rate of fatalities as a result of work-related injury:** (Number of fatalities as a result of work-related injury/Number of hours worked) x 200,000

**Rate of high-consequence work-related injuries (excluding fatalities):**

(Number of high-consequence work-related injuries (excluding fatalities) / Number of hours worked) x 200,000

**Rate of recordable work-related injuries:** (Number of recordable work-related injuries/Number of hours worked) x 200,000

# ENVIRONMENTAL PERFORMANCE INDICATORS



KORDSA MATERIALS MANAGEMENT				
Materials	Plants	2018	2019	2020
TCF Chemical Ratio	Dipping NY - Turkey	1.16	0.98	0.92
	Dipping PE - Turkey	1.11	1.02	0.82
	Dipping - USA / Laurel Hill	1.03	1.04	0.93
	Dipping - Brazil	1,04	1.01	0.81
	Dipping TCF1 - Indonesia	1.01	0.99	0.97
	Dipping TCF2 - Indonesia	0.96	0.94	0.93
	Dipping - Thailand	0.98	1.04	0.97
Materials	Plants	2018	2019	2020
NY Salt / Flake Ratio	NY Yarn Line 1 - Turkey	1.03	0.99	0.90
	NY Yarn Line 2 - Turkey	0.99	1.00	1.04
	PE Yarn - Turkey	1.01	1.02	0.98
	NY Yarn - USA / Chattanooga	1.00	0.98	0.58
	Yarn - Brazil	1.77	1.79	0.98
	NY Yarn - Indonesia	1.01	1.01	1.00
	PE Yarn - Indonesia	0.95	1.00	0.96
Materials	Plants	2018	2019	2020
SEC Chemical Ratio	SEC - Turkey	1.21	1.42	0.66
	SEC - Brazil	1.00	0.98	0.92

REUSED MATERIALS (Reuse Ratio)				
Materials	Plants	2019	2020	
Steel Shells	Turkey - İzmit	35%	50%	✓
	USA -Laurel Hill	55%	86%	
	Indonesia	31%	41%	✓
	Thailand	86%	84%	
	Brazil	86%	93%	
Tubes	Indonesia	8%	28%	✓
	USA - Chattanooga	8%	14%	✓
	Brazil	62%	84%	
Carton Separators	Turkey - İzmit	N/A	16%	✓
	Indonesia	8%	13%	✓
	USA - Chattanooga	38%	38%	✓
Wooden Pallets	Turkey - İzmit	N/A	33%	✓
	Indonesia	N/A	19%	✓
	USA - Chattanooga	72%	73%	✓

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# ENVIRONMENTAL PERFORMANCE INDICATORS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

KORDSA ENERGY CONSUMPTION			
Electricity (kWh)	2018	2019	2020
Turkey - İzmit	189,127,000	191,481,392	160,629,631 ✓
Turkey - İstanbul (CTCE)	2,133,022	2,682,228	2,323,572
Indonesia	201,966,389	175,133,832	151,965,785 ✓
Thailand	45,583,191	41,919,497	36,338,516
Brazil	81,367,492	79,163,328	62,143,543
USA - Chattanooga	59,569,706	60,262,715	53,510,420 ✓
USA - Laurel Hill	19,745,140	20,776,885	18,887,897
USA - Quakertown (FDI)	n.a.	1,360,320	1,201,550
USA - Anaheim (TPI)	n.a.	903,000	858,180
USA - San Marcos (AHT)	n.a.	258,609	274,405
USA - Santa Ana (Axiom)	n.a.	2,070,588	2,043,468
<b>TOTAL</b>	<b>599,491,940</b>	<b>576,012,394</b>	<b>490,176,967</b>

We purchased **International Renewable Energy Certificate (I-REC)** from Enerjisa for our Turkey İzmit plant and so used **12,255 MWh** of our electricity consumption from renewable resources.

KORDSA ENERGY CONSUMPTION			
Natural Gas (Sm <sup>3</sup> )	2018	2019	2020
Turkey - İzmit	21,271,945	22,676,543	21,096,261 ✓
Turkey - İstanbul (CTCE)	102,950	145,913	147,995
Indonesia	9,949,774	8,284,715	6,559,498 ✓
Thailand	3,777,459	3,802,126	3,147,424
Brazil	3,131,902	2,884,710	2,409,499
USA - Chattanooga (Scf)	21,411,641	22,178,329	18,462,584 ✓
USA - Laurel Hill (Scf)	1,718,664	1,832,822	1,990,048
USA - Quakertown (FDI)	n.a.	25,312	57,526
USA - Anaheim (TPI)	n.a.	399	586
USA - San Marcos (AHT)	n.a.	73,718	73,414
USA - Santa Ana (Axiom)	n.a.	444,298	328,037
<b>TOTAL</b>	<b>61,364,335</b>	<b>62,348,885</b>	<b>54,272,871</b>

KORDSA ENERGY CONSUMPTION			
Other Fuels (2020)	Diesel Oil (liter)	Gasoline (liter)	LPG (kg)
Turkey - İzmit	68,733 ✓	0 ✓	0 ✓
Turkey - İstanbul (CTCE)	1,385	0	0
Indonesia	33,769 ✓	20,583 ✓	0 ✓
Thailand	16,033	10,984	9,960
Brazil	70,810	12,093	21,700
USA - Chattanooga	47,870 ✓	16,922 ✓	2,177 ✓
USA - Laurel Hill	0	8,058	0
USA - Quakertown (FDI)	0	9,464	0
USA - Anaheim (TPI)	3,104	1,783	0
USA - San Marcos (AHT)	13,041	13,628	27
USA - Santa Ana (Axiom)	0	16,356	1,334
<b>TOTAL</b>	<b>254,745</b>	<b>109,869</b>	<b>35,199</b>

**Explanations for Data:**  
**CTCE:** Composite Technologies Center of Excellence  
**n.a.:** data not available  
 2019 Total **Diesel Oil** Consumption (liter): 314,956.57  
 2019 Total **Gasoline** Consumption (liter): 125,388.75  
 2019 Total **LPG** Consumption (kg): 40,407.38



# ENVIRONMENTAL PERFORMANCE INDICATORS



## KORDSA EMISSIONS (Scope 1)

Kordsa Plants (tCO <sub>2</sub> e)	2018	2019	2020
Turkey - İzmit	44,843.57	47,500.87	43,035.49 ✓
Turkey - İstanbul (CTCE)	412.39	495.87	359.64
Indonesia	21,062.63	17,538.43	15,040.53 ✓
Thailand	7,903.34	7,929.30	7,182.53
Brazil	6,862.89	6,231.94	6,926.72
USA - Chattanooga	43,712.33	44,369.71	36,026.13 ✓
USA - Laurel Hill	3,378.69	3,552.70	3,851.64
USA - Quakertown (FDI)*	n.a.	59.12	134.97
USA - Anaheim (TPI)*	n.a.	23.72	13.60
USA - San Marcos (AHT)*	n.a.	221.26	207.99
USA - Santa Ana (Axiom)**	n.a.	953.07	764.88
<b>TOTAL</b>	<b>128,175.84</b>	<b>128,875.99</b>	<b>113,544.12</b>

## KORDSA EMISSIONS (Scope 2)

Kordsa Plants (tCO <sub>2</sub> e)	2018	2019	2020
Turkey - İzmit*	87,944.06	88,272.92	68,400.70 ✓
Turkey - İstanbul (CTCE)	991.86	1,236.51	1,071.17
Indonesia*	147,233.50	134,677.92	116,861.69 ✓
Thailand	21,743.18	19,827.92	17,188.12
Brazil	9,764.10	9,262.11	7,270.79
USA - Chattanooga*	29,613.48	29,957.99	25,197.49 ✓
USA - Laurel Hill	9,815.76	10,328.67	6,405.72
USA - Quakertown (FDI)	n.a.	469.41	392.34
USA - Anaheim (TPI)	n.a.	216.07	194.08
USA - San Marcos (AHT)	n.a.	61.88	62.06
USA - Santa Ana (Axiom)	n.a.	495.46	462.13
<b>TOTAL</b>	<b>307,105.93</b>	<b>294,806.85</b>	<b>243,506.29</b>

We purchased **International Renewable Energy Certificate (I-REC)** from Enerjisa for our Turkey İzmit plant and so used 12.255 MWh of our electricity consumption from renewable resources. Parallel to this, we calculated our Scope 2 emissions over 148,374,631 kWh instead of 160,629,631 kWh, which is our total electricity consumption of 2020. Consequently, our 74,050.26 tCO<sub>2</sub>e of Scope 2 emissions in Turkey plant dropped by 5,649.56 tCO<sub>2</sub>e and reached 68,400.70 tCO<sub>2</sub>e; and our total Scope 2 emissions of 249,155.85 tCO<sub>2</sub>e dropped to 243,506.29 tCO<sub>2</sub>e.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# ENVIRONMENTAL PERFORMANCE INDICATORS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

## KORDSA EMISSIONS (Scope 3)

Kordsa Plants (tCO <sub>2</sub> e)	2018	2019	2020
Turkey - İzmit*	n.a.	n.a.	427,965.90
Turkey - İstanbul (CTCE)	n.a.	n.a.	941.79
Indonesia*	n.a.	n.a.	170,748.38
Thailand	n.a.	n.a.	11,873.07
Brazil	n.a.	n.a.	16,998.80
USA - Chattanooga*	n.a.	n.a.	517,515.25
USA - Laurel Hill	n.a.	n.a.	5,070.56
USA - Quakertown (FDI)	n.a.	n.a.	837.94
USA - Anaheim (TPI)	n.a.	n.a.	778.14
USA - San Marcos (AHT)	n.a.	n.a.	311.05
USA - Santa Ana (Axiom)	n.a.	n.a.	622.07
<b>TOTAL</b>	<b>n.a.</b>	<b>n.a.</b>	<b>1,153,662.95</b>

## KORDSA EMISSIONS (Total)

Kordsa Plants (tCO <sub>2</sub> e)	Scope 1&2 2018	Scope 1&2 2019	Scope 1&2 2020	Scope 1&2&3 2020
Turkey - İzmit*	132,787.62	135,773.79	111,436.20	539,402.10
Turkey - İstanbul (CTCE)	1,404.25	1,732.37	1,430.81	2,372.59
Indonesia*	168,296.12	152,216.35	131,902.21	302,650.62
Thailand	29,646.53	27,757.23	24,370.65	36,243.72
Brazil	16,626.99	15,494.05	14,197.52	31,196.31
USA - Chattanooga*	73,325.81	74,327.69	61,223.62	578,738.92
USA - Laurel Hill	13,194.45	13,881.37	10,257.36	15,327.92
USA - Quakertown (FDI)	n.a.	528.52	527.31	1,365.25
USA - Anaheim (TPI)	n.a.	239.80	207.68	985.82
USA - San Marcos (AHT)	n.a.	283.14	270.05	581.10
USA - Santa Ana (Axiom)	n.a.	1,448.53	1,227.01	1,849.08
<b>TOTAL</b>	<b>435,281.77</b>	<b>423,682.84</b>	<b>357,050.41</b>	<b>1,510,713.43</b>

### Explanations for Data:

**Scope 1 Data Includes:** Natural gas, generators & pumps, cooling gases, fire extinguishers, company vehicles

**Scope 2 Data Includes:** Electricity

**Scope 3 Data Includes:** Purchased goods and services, fuel and energy related activities not reported under Scope 1-2, upstream transportation and distribution (purchasing), and others

\*Turkey İzmit, Indonesia and USA Chattanooga sites' 2019 Scope 1 and Scope 2 emission data are verified by QSI.

\*Turkey İzmit, Indonesia and USA Chattanooga sites' 2020 Scope 1 and Scope 2 emission data are verified by PWC.

\*Turkey İzmit, Indonesia and USA Chattanooga sites' 2020 Scope 3 emission data is verified by QSI.

**CTCE:** Composite Technologies Center of Excellence

**n.a.:** data not available

# ENVIRONMENTAL PERFORMANCE INDICATORS



KORDSA WASTE MANAGEMENT DATA											
Waste By Type (tonnes)		Hazardous Waste	Non-Hazardous Waste	Total Waste	Waste By Disposal Method (tonnes)		Recycle	Landfill	Energy Recovery	Incineration	Total Disposed Waste
Turkey - İzmit	2018	1,293	2,557	3,850	Turkey - İzmit	2018	3,671	1	73	1	3,745
	2019	1,459	2,505	3,964		2019	2,110	2	1,270	2	3,384
	2020	1,483 ✓	2,174 ✓	3,658 ✓		2020	1,902 ✓	585 ✓	1,170 ✓	0 ✓	3,658 ✓
Turkey - İstanbul (CTCE)	2017	3	6	9	Turkey - İstanbul (CTCE)	2017	8	0	0	0	9
	2018	2	6	8		2018	8	0	0	0	8
	2019	60	0	60		2019	0	0	0	60	60
	2020	63	9	71		2020	9	11	0	62	82
Indonesia	2017	925	3,265	4,190	Indonesia	2017	3,648	0	529	12	4,190
	2018	1,033	1,988	3,021		2018	2,439	0	539	43	3,021
	2019	858	1,684	2,542		2019	2,084	0	448	10	2,542
	2020	648 ✓	1,997 ✓	2,645 ✓		2020	2,184 ✓	0 ✓	458 ✓	3 ✓	2,645 ✓
Thailand	2017	57	1,952	2,009	Thailand	2017	1,869	134	6	0	2,009
	2018	50	1,891	1,940		2018	1,814	109	17	0	1,940
	2019	37	1,705	1,742		2019	1,612	109	21	0	1,742
	2020	50	1,428	1,478		2020	1,355	92	31	0	1,478
Brazil	2017	14	1,116	1,131	Brazil	2017	1,035	5	90	0	1,131
	2018	0	1,144	1,144		2018	1,085	3	56	0	1,144
	2019	40	1,216	1,256		2019	1,073	85	98	0	1,256
	2020	0	949	949		2020	824	69	55	0	949

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# ENVIRONMENTAL PERFORMANCE INDICATORS



## KORDSA WASTE MANAGEMENT DATA

Waste By Type (tonnes)		Hazardous Waste	Non-Hazardous Waste	Total Waste	Waste By Disposal Method (tonnes)		Recycle	Landfill	Energy Recovery	Incineration	Total Disposed Waste
ABD - Chattanooga	2017	14	6	20	USA - Chattanooga	2017	19	0	0	0	20
	2018	12	5	17		2018	18	0	0	0	18
	2019	1	21	22		2019	21	0	0	1	22
	2020	2 ✓	225 ✓	226 ✓		2020	25 ✓	165 ✓	0 ✓	1 ✓	191 ✓
ABD - Laurel Hill	2017	171	0	171	USA - Laurel Hill	2017	171	0	0	0	171
	2018	189	0	189		2018	189	0	0	0	189
	2019	198	0	198		2019	198	0	0	0	198
	2020	1	312	313		2020	268	45	0	0	313
ABD - Quakertown (FDI)	2018	n.a.	n.a.	n.a.	USA - Quakertown (FDI)	2018	n.a.	n.a.	n.a.	n.a.	n.a.
	2019	0	1,094.52	1,094.52		2019	19,38	1,094.52	0	0	1,113.91
	2020	0	1,245.32	1,245.32		2020	32,45	1,245,32	0	0	1,277.77
ABD - Anaheim (TPI)	2018	n.a.	n.a.	n.a.	USA - Anaheim (TPI)	2018	n.a.	n.a.	n.a.	n.a.	n.a.
	2019	n.a.	n.a.	n.a.		2019	n.a.	n.a.	n.a.	n.a.	n.a.
	2020	5	756	761		2020	5	756	0	0	761
ABD - San Marcos (AHT)	2018			0	USA - San Marcos (AHT)	2018	n.a.	n.a.	n.a.	n.a.	n.a.
	2019	3	14	16		2019	3	11	0	3	16
	2020	0	13	13		2020	3	10	0	0	13
ABD - Santa Ana (Axiom)	2018	n.a.	n.a.	n.a.	USA - Santa Ana (Axiom)	2018	n.a.	n.a.	n.a.	n.a.	n.a.
	2019	27	1	29		2019	28	0	0	0	29
	2020	50	497	547		2020	150	277	0	69	497

## KORDSA TOTAL GLOBAL WASTE DATA

Waste By Type (tonnes)	2018	2019	2020
Hazardous Waste	2,578	2,684	2,302
Non-Hazardous Waste	7,591	8,241	9,605
<b>Total Waste</b>	<b>10,169</b>	<b>10,924</b>	<b>11,907</b>
Waste By Disposal Method (tonnes)	2018	2019	2020
Recycle	9,223	7,150	6,758
Landfill	113	1,301	3,256
Energy Recovery	685	1,836	1,715
Incineration	44	76	136
<b>Total Disposed Waste</b>	<b>10,065</b>	<b>10,363</b>	<b>11,865</b>

### Explanations Regarding Data:

2018 data includes all sites except the four new composite sites.  
 2019 data includes all sites except TPI and 2020 data includes all sites.  
 \*2020 data is verified by PWC.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# ENVIRONMENTAL PERFORMANCE INDICATORS



KORDSA WATER MANAGEMENT DATA					
Water Withdrawals (m³)	Years	Fresh Surface Water	Groundwater-Renewable	Third Party Sources	Total Withdrawals
Turkey - İzmit	2018	0	440,297	141,845	582,142
	2019	0	562,784	48,319	611,103
	2020	0 ✓	522,358 ✓	34,206 ✓	556,564 ✓
Turkey - İstanbul (CTCE)	2018	0	0	3,081	3,081
	2019	0	0	4,347	4,347
	2020	0	0	7,799	7,799
Indonesia	2018	358,599	2,029	0	360,628
	2019	350,234	0	0	350,234
	2020	351,733 ✓	0 ✓	0 ✓	351,733 ✓
Thailand	2018	0	0	100,593	100,593
	2019	0	0	102,228	102,228
	2020	0	0	84,162	84,162
Brazil	2018	0	102,278	6,332	108,610
	2019	0	95,566	9,612	105,178
	2020	0	111,243	6,631	117,874
USA - Chattanooga	2018	2,198,009	0	125,363	2,323,373
	2019	2,816,538	0	83,558	2,900,096
	2020	1,683,631 ✓	0 ✓	79,674 ✓	1,763,305 ✓
USA - Laurel Hill	2018	0	0	4,232	4,232
	2019	0	0	4,391	4,391
	2020	0	0	5,860	5,860
USA - Quakertown (FDI)	2019	0	0	4,666	4,666
	2020	0	0	6,677	6,677
USA - Anaheim (TPI)	2019	0	0	1,222	1,222
	2020	0	0	1,315	1,315
USA - San Marcos (AHT)	2019	0	0	1,826	1,826
	2020	0	0	4,434	4,434
USA - Santa Ana (Axiom)	2019	0	0	430	430
	2020	2	0	651	653

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# ENVIRONMENTAL PERFORMANCE INDICATORS



KORDSA WATER MANAGEMENT DATA					
Water Discharges (m <sup>3</sup> )	Yıl	Fresh Surface Water	Third-Party Destinations	Other	Total Discharges
Turkey - İzmit*	2018	0	313,680	0	313,680
	2019	0	297,255	0	297,255
	2020	0	295,322	0	295,322
Turkey - İstanbul (CTCE)	2018	0	2,773	0	2,773
	2019	0	3,913	0	3,913
	2020	0	7,019	0	7,019
Indonesia*	2018	51,023	0	0	51,023
	2019	45,625	0	0	45,624
	2020	45,624	0	0	32,048
Thailand	2018	0	80,474	0	80,474
	2019	0	81,782	0	81,782
	2020	0	67,330	0	67,330
Brazil	2018	0	32,389	0	32,389
	2019	0	34,134	0	34,134
	2020	0	28,164	0	28,164
USA - Chattanooga*	2018	731,198	815,772	0	1,546,970
	2019	966,625	1,182,894	0	2,149,518
	2020	734,010	817,209	0	1,551,219
USA - Laurel Hill	2018	0	3,762	0	3,762
	2019	0	2,802	0	2,802
	2020	0	2,442	0	2,442
USA - Quakertown (FDI)	2019	0	4,200	0	4,200
	2020	0	6,009	0	6,009
USA - Anaheim (TPI)	2019	0	1,222	0	1,222
	2020	0	1,315	0	1,315
USA - San Marcos (AHT)	2019	0	1,643	0	1,643
	2020	0	3,991	0	3,991
USA - Santa Ana (Axiom)	2019	0	387	0	387
	2020	0	586	0	586

KORDSA WATER MANAGEMENT DATA					
Recycled Water (m <sup>3</sup> )			2018	2019	2020
Turkey - İzmit	2018	150,830	189,437	181,671	184,101
	2019	142,965			
	2020	145,671			
Indonesia	2018	38,607	189,437	181,671	184,101
	2019	38,706			
	2020	38,430			

#### Explanations Regarding Data:

2018 data includes all sites except the four new composite sites.

2019 and 2020 data include all sites.

\*2020 data is verified by PWC.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# KEY STAKEHOLDER COMMUNICATION PLATFORMS



## Communication Platforms with Our Key Stakeholders

Stakeholders	Communication Platforms	Objective / Content of Communication	Communication Frequency
<b>Employees</b>	Sustainability Evaluation Survey	Materiality and Performance	Once a year
	Sustainability Report	Sustainability Performance	Once a year
	Plant newsletters such as the Kordsa Magazine	To announce important developments about the company	Several times a year
	People Clip	To make notifications about the company	Continuous
	E-mails by CEO	To share important developments	As needed
	Yammer	To enhance CEO communication and sharing developments about the Kordsa with employees	As needed
	Intouch	To enhance CEO communication	Three times a year
	All Stars	To select the best projects and most successful activities within the company	Once a year
	Global Leadership Summit (Kordsa GLS)	To review the previous year and share the vision of the next year	Once a year
	Social media	To share news about the company, products, and developments	Continuous
<b>Customers</b>	Sustainability Survey	Sustainability Strategy	Once a year
	Sustainability Report	Sustainability Performance	Once a year
	Reinforcer Magazine	To share developments about the company, sector and technology	Twice a year
	Annual Report	To review the performance of the company in the previous year	Once a year
	Press Section on Website	To announce new developments about the company through press releases	Continuous
	Magazines and Newspapers	To announce new developments about the company through press releases and interviews in both national and international publications	Continuous
	Social Media	To share news about the company, products and developments	Continuous
	E-mailing	To share developments about the company or collaborations exclusive to stakeholders	As needed
	Trade Fairs	To establish contact with existing and new customers	Several times a year
<b>Shareholders</b>	Earning Calls	To announce mid-year results	Two times a year
	General Assembly	To announce annual results	Once a year
	E-mail by request	To convey information on e-mail for those shareholders who request	Several times a year
<b>Investors</b>	Analyst Meeting	To share important developments about the company in a face-to-face meeting with the participation of top management	Once a year
	Newsletters	To announce important developments about the company through the media	Continuous
	TV Programs	To announce important developments about the company	Several times a year
	Magazines and Newspapers	To announce important developments about the company	Several times a year
	Web Site	To announce important information	Continuous
	Public Disclosure Platform	To publish the report of the Capital Markets Board To announce special situations	Four times a year As needed
	Telephone/E-mails	To respond to investors' request for information about the company	Upon request from the investors
	Social Media	To share news about the company, products and developments	Continuous

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



# EMPLOYEE SUSTAINABILITY SURVEY



## Employee Sustainability Survey Performance Section Results

Performance Topic	2019 (%)	2020 (%)	Change (%)	No Idea (%)	Comments and Actions
Manages of business processes in line with corporate governance principles which are transparency, fairness, accountability and responsibility	87	79	-8	5	<p>In the sustainability surveys we have been conducting uninterruptedly since 2015, we have been observing a plus or minus 1% to 3% change in the general perception. Since those changes were marginal, we did not take a special action on that issue so far.</p> <p>Because of the pandemics experienced in 2020 we had dramatic changes in the way we worked and communicated compared to previous years.</p> <p>We believe, the prominence of corporate governance perception as the significant area for improvement in this year's survey is particular to this period. Therefore, we will plan an action for this topic after seeing the results of a new perception check that will be carried out in an upcoming period where we are acclimatized to the new normal if it dictates so.</p> <p>We think that our employees in general may not have an idea about the social and environmental audits regarding the suppliers. Those who replied "no idea" form 11% of the total.</p> <p>In 2020 we carried out all trainings and other meetings via online platforms. In parallel to this, the length of the trainings we provided to our employees got shorter.</p> <p>The most important action that we will take in the light of these results is to increase the internal communication on sustainability works that are carried out across the company and the successes gained and encouraging our employees to take part in these efforts.</p>
Adequacy of policies, trainings and audits on compliance including anti-bribery, anti-corruption and anti-competitive behavior	84	85	+1	3	
Practices efficient use of raw materials	69	68	-1	10	
Adequacy of investments and projects to assure energy efficiency	68	66	-2	11	
Adequacy of projects and preventive measures to monitor and reduce emissions	65	61	-4	15	
Adequacy of practices to manage waste and wastewater to prevent environmental pollution	70	67	-3	12	
Adequacy of practices to manage and efficiently use water resources	64	66	+2	14	
Adequacy of measures sufficient to oversee and secure health and safety of its employees	87	86	-1	1	
Significancy of economic value creation for its key stakeholders	81	79	-2	6	
Adequacy of policies, trainings and audits on human rights concerning its suppliers' operations	79	72	-7	11	
Adequacy of policies, trainings and audits on human rights in its locations	84	81	-4	6	
Adequacy of employee communication channels to share their ideas and opinions with the management	78	78	0	2	
Adequacy of personal development and training programs provided for its employees	70	65	-5	3	
Adequacy of recruitment, placement and waging practices to support equal opportunities for women & men, and employee diversity	76	74	-2	3	
Adequacy of social development investments for the local community	71	67	-4	8	

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

● Significant improvement area on perception  
 ● Minimal improvement area on perception  
 ● Realized improvement on perception

# OHS COMMITTEES



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

Management-Worker Health and Safety Committees			
Name of Committee	Definition	Legal / Voluntary	Participants
<b>OHS Committee</b>	Official meeting of the representatives of the employer and employees. All legal decisions are made by this committee.	Legally required	Employer representatives, union representatives, managers, subcontractor representatives
<b>Emergency Response Team</b>	Organized for all shifts in the plant.	Legally required	Blue and white-collar employees
<b>Electrical Safety Committee</b>	Lays down all rules and standards on electricity hazards in the plant; makes inspections and provides training.	Company initiative	Mostly white-collar and also blue-collar employees
<b>Process Safety Management</b>	Carries out activities and inspections for explosions, fires, leaks and occupational accidents that may arise from the production process. Have annual targets.	Company initiative	White-collar employees
<b>Hazardous Chemicals Committee</b>	Identifies hazards wherever chemicals are used, conducts risk analyses, sets safety markings properly and provides trainings on chemical hazards.	Company initiative	White and blue-collar employees
<b>Ergonomics Committee</b>	Oversees the identification of ergonomic risks and improvement works.	Company initiative	White-collar employees
<b>Occupational Health &amp; Safety Management Committee</b>	Works to improve OHS performance, disseminate OHS culture, manage improvement and development activities, and review performance.	Company initiative	All department managers and representatives, and Operations Director as Chairman
<b>SHE TPM Committee</b>	Oversees the work on developing SHE consciousness and culture and performance improvement.	Company initiative	White and blue-collar employees

# MEMBERSHIPS

## CEO in Management of Memberships (Turkey)

DEİK Foreign Economic Relations Board / Member of General Board

DEİK Turkey - USA Business Council / Member of Executive Council

DEİK Turkey - Indonesia Business Council / Member of Executive Council

DEİK Turkey - Thailand Business Council / Member of Executive Council

## Other ELT Members in Management of Memberships (Turkey)

DEİK Turkey - Brazil Business Council / Member of Executive Council

TURKCHAM - Turkish Chamber of Commerce / Board Member - Indonesia

## TURKEY

ACC Legal Consultants Association

Equality at Work Platform

İSO Istanbul Chamber of Industry

İTO Istanbul Chamber of Commerce

İTKİB The General Secretariat of Istanbul Textile & Apparel Exporter's Associations

İTHİB Turkish Textile Employer's Associations

KALDER Quality Association

Rubber Association

KİD Corporate Communication Professionals Society

Kocaeli Chamber of Industry

Kocaeli Chamber of Commerce

Turkish Composites Manufacturers Association

LES Turkey Technology and License Executives Society

PERYÖN Personnel Management Association of Turkey

SAHA Istanbul - Defense, Aviation and Space Cluster

TBCSD Turkish Business Council of Sustainable Development

TİDE The Institute of Internal Auditing Turkey

TMMOB Turkish Chamber of Mechanical Engineers

TTSİS Turkish Textile Industry Employers' Union

TÜSİAD Turkish Industry & Businessmen Association

TÜYİD Turkish Investor Relations Society

UN Global Compact

## INDONESIA

AmCham Indonesia American Chamber of Commerce in Indonesia

APINDO The Employers' Association of Indonesia

HIBERKIBRA - Neighborhood Corporate Association

Indonesian Public Listed Companies Association

Indonesian Corporate Secretary Association

## THAILAND

AEO Thai Authorized Economic Operator Importer & Exporter Association

FTI The Federation of Thai Industries

TNSC The Thai National Shippers' Council

DFT Department of Foreign Trade, Ministry of Commerce

Ayutthaya Personnel Management Group

## BRAZIL

Bahia's Spinning and Weaving industries Union

COFIC - Industrial Foment Committee of Camaçari

FIEB/CIEB

ABRAFAS - Brazilian Association of Producers of Artificial and Synthetic Fibers

American Chamber of Commerce

## USA

AFMA - American Fibers Manufacturers Association

ISIFM - International Society of Industrial Fabric Manufacturers

Turkish American Coalition

LBG Scotland County Chamber of Commerce



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# UNGC CONTENT INDEX



UN Global Compact Principles		
<b>Human Rights</b>	<b>Principle 1:</b> Businesses should support and respect the protection of internationally proclaimed human rights.	<b><u>Supply Chain Management</u></b>
	<b>Principle 2:</b> Businesses should make sure that they are not complicit in human rights abuses.	<b><u>Supply Chain Management</u></b>
<b>Labor</b>	<b>Principle 3:</b> Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	<b><u>Human Rights</u></b>
	<b>Principle 4:</b> Businesses should uphold the elimination of all forms of forced and compulsory labor.	<b><u>Human Rights</u></b>
	<b>Principle 5:</b> Businesses should uphold the effective abolition of child labor.	<b><u>Human Rights</u></b>
	<b>Principle 6:</b> Businesses should uphold the elimination of discrimination in respect of employment and occupation.	<b><u>Gender Equality</u></b>
<b>Environment</b>	<b>Principle 7:</b> Businesses should support a precautionary approach and environmental challenges;	<b><u>Responsible Consumption and Production</u></b>
	<b>Principle 8:</b> Businesses should undertake initiatives to promote greater environmental responsibility.	<b><u>Responsible Consumption and Production</u></b>
	<b>Principle 9:</b> Businesses should encourage the development and diffusion of environmentally friendly technologies.	<b><u>Industry, Innovation and Infrastructure</u></b>
<b>Anti- Corruption</b>	<b>Principle 10:</b> Businesses should work against corruption in all its forms, including extortion and bribery.	<b><u>Business Ethics</u></b>

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# GRI CONTENT INDEX



**MATERIALITY DISCLOSURES SERVICE**

2021

For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report. The service was performed on the Turkish version of the report.

## GRI 101: FOUNDATION 2016

### GRI 102: GENERAL DISCLOSURES 2016 Location of Disclosure

#### ORGANIZATIONAL PROFILE

102-1	Name of the organization	Page 118
102-2	Activities, brands, products, and services	Page 9-10
102-3	Location of headquarters	Page 118
102-4	Location of operations	Page 11
102-5	Ownership and legal form	Corporation
102-6	Markets served	Page 10-11
102-7	Scale of the organization	Page 9
102-8	Information on employees and other workers	Page 90
102-9	Supply chain	Page 71
102-10	Significant changes to the organization and its supply chain	No significant changes
102-11	Precautionary Principle or approach	Page 52
102-12	External initiatives	Page 3
102-13	Membership of associations	Page 107

#### STRATEGY

102-14	Statement from senior decision-maker	Page 5-6
102-15	Key impacts, risks, and opportunities	Page 19-21

#### ETHICS AND INTEGRITY

102-16	Values, principles, standards, and norms of behavior	Page 14-15
102-17	Mechanisms for advice and concerns about ethics	Page 17-18

#### GOVERNANCE

102-18	Governance structure	Page 16
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#### STAKEHOLDER ENGAGEMENT

102-40	List of stakeholder groups	Page 29
102-41	Collective bargaining agreements	Page 73
102-42	Identifying and selecting stakeholders	Page 28-29
102-43	Approach to stakeholder engagement	Page 29-30
102-44	Key topics and concerns raised	Page 29, 31-35

#### REPORTING PRACTICE

102-45	Entities included in the consolidated financial statements	Page 118
102-46	Defining report content and topic boundaries	Page 38
102-47	List of material topics	Page 37
102-48	Restatements of information	No restatements
102-49	Changes in reporting	No changes
102-50	Reporting period	Page 3
102-51	Date of most recent report	2019
102-52	Reporting cycle	Annual
102-53	Contact point for questions regarding the report	Page 119
102-54	Claims of reporting in accordance with the GRI Standards	Page 3
102-55	GRI content index	Page 109-110
102-56	External assurance	Page 114-117



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

**GRI 200-300-400 TOPIC SPECIFIC STANDARDS 2016**

**GRI 200 ECONOMIC STANDARDS SERIES**

**Location of Disclosure**

**GRI 201 ECONOMIC PERFORMANCE 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 69-70
	<b>103-3</b> Evaluation of the management approach	Page 69-70
GRI 201 Economic Performance 2016	<b>201-1</b> Direct economic value generated and distributed	Page 89
	<b>201-4</b> Financial assistance received from government	Page 89

**GRI 204 PROCUREMENT PRACTICES 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 71-72
	<b>103-3</b> Evaluation of the management approach	Page 71-72
GRI 204 Procurement Practices 2016	<b>204-1</b> Proportion of spending on local suppliers	Page 71-72

**GRI 205 ANTI-CORRUPTION 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 17-18
	<b>103-3</b> Evaluation of the management approach	Page 17-18
GRI 205 Anti-Corruption 2016	<b>205-2</b> Communication & training about anti-corruption policies and procedures	Page 17-18

**GRI 300 ENVIRONMENTAL STANDARDS SERIES**

**Location of Disclosure**

**GRI 301 MATERIALS 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 53-55
	<b>103-3</b> Evaluation of the management approach	Page 53-55
GRI 301 Materials 2016	<b>301-1</b> Materials used by weight or volume	Page 53-55, 95
	<b>301-2</b> Recycled input materials used	Page 53-55, 95
	<b>301-3</b> Reclaimed products and their packaging materials	Page 53-55, 95

**GRI 302 ENERGY 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 56-58
	<b>103-3</b> Evaluation of the management approach	Page 56-58
GRI 302 Energy 2016	<b>302-1</b> Energy consumption within the organization	Page 56-58, 96
	<b>302-4</b> Reduction of energy consumption	Page 56-58, 96
	<b>302-5</b> Reductions in energy requirements of products and services	Page 56-58, 96

**GRI 303 WATER AND EFFLUENTS 2018**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 61, 63-64
	<b>103-3</b> Evaluation of the management approach	Page 61, 63-64
GRI 303 Water and Effluents 2018	<b>303-1</b> Interactions with water as a shared resource	Page 61, 63-64
	<b>303-2</b> Management of water discharge-related impacts	Page 61, 63-64
	<b>303-3</b> Water withdrawal	Page 101-102
	<b>303-4</b> Water discharge	Page 101-102
	<b>303-5</b> Water consumption	Page 101-102

**GRI 305 EMISSIONS 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 59-60
	<b>103-3</b> Evaluation of the management approach	Page 59-60
GRI 305 Emissions 2016	<b>305-1</b> Direct (Scope 1) GHG emissions	Page 59-60, 97-98
	<b>305-2</b> Energy indirect (Scope 2) GHG emissions	Page 59-60, 97-98
	<b>305-3</b> Other indirect (Scope 3) GHG emissions	Page 59-60, 97-98
	<b>305-5</b> Reduction of GHG emissions	Page 59-60

**GRI 306 WASTE 2020**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 61-62
	<b>103-3</b> Evaluation of the management approach	Page 61-62
GRI 306 Waste 2020	<b>306-1</b> Waste generation and significant waste-related impacts	Page 61-62
	<b>306-2</b> Management of significant waste-related impacts	Page 61-62
	<b>306-3</b> Waste generated	Page 99-100
	<b>306-4</b> Waste diverted from disposal (reuse, recycle etc.)	Page 99-100
	<b>306-5</b> Waste directed to disposal (incineration, landfilling etc.)	Page 99-100

**GRI 308 SUPPLIER ENVIRONMENTAL ASSESSMENT 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 71
	<b>103-3</b> Evaluation of the management approach	Page 71
GRI 308 Supplier Environmental Assessment 2016	<b>308-1</b> New suppliers that were screened using environmental criteria	Page 71

**GRI 400 SOCIAL STANDARDS SERIES**

**Location of Disclosure**

**GRI 401 EMPLOYMENT 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 74-79
	<b>103-3</b> Evaluation of the management approach	Page 74-79
GRI 401 Employment 2016	<b>401-1</b> New employee hires and employee turnover	Page 91
	<b>401-2</b> Benefits provided to full-time employees that are not provided to part-time employees	Page 74
	<b>401-3</b> Parental leave	Page 82

**GRI 403 OCCUPATIONAL HEALTH AND SAFETY 2018**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 66-68
	<b>103-3</b> Evaluation of the management approach	Page 66-68
GRI 403 Occupational Health and Safety 2018	<b>403-1</b> Occupational health and safety management system	Page 66-68
	<b>403-2</b> Hazard identification, risk assessment, and incident investigation	Page 66-68
	<b>403-4</b> Worker participation, consultation, and communication on occupational health and safety	Page 66-68
	<b>403-5</b> Worker training on occupational health and safety	Page 66
	<b>403-6</b> Promotion of worker health	Page 68
	<b>403-7</b> Prevention and mitigation of occupational health and safety impacts linked directly by business relationships	Page 66-68
	<b>403-8</b> Workers covered by an occupational health and safety management system	Page 66-68
	<b>403-9</b> Work-related injuries	Page 92-94
	<b>403-10</b> Work-related ill health	Page 92-94

**GRI 404 TRAINING AND EDUCATION 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 80
	<b>103-3</b> Evaluation of the management approach	Page 80
GRI 404 Training and Education 2016	<b>404-1</b> Average hours of training per year per employee	Page 80, 91
	<b>404-2</b> Programs for upgrading employee skills and transition assistance programs	Page 80, 91
	<b>404-3</b> Percentage of employees receiving regular performance and career development reviews	Page 80

**GRI 405 DIVERSITY AND EQUAL OPPORTUNITY 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 82-84
	<b>103-3</b> Evaluation of the management approach	Page 82-84
GRI 405 Diversity and Equal Opportunity 2016	<b>405-1</b> Diversity of governance bodies and employees	Page 82-84, 90
	<b>405-2</b> Ratio of basic salary and remuneration of women to men	Page 82-84

**GRI 412 HUMAN RIGHTS ASSESSMENT 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 73
	<b>103-3</b> Evaluation of the management approach	Page 73
GRI 412 Human Rights Assessment 2016	<b>412-1</b> Operations that have been subject to human rights reviews or impact assessments	Page 73
	<b>412-2</b> Employee training on human rights policies or procedures	Page 73

**GRI 413 LOCAL COMMUNITIES 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 86-87
	<b>103-3</b> Evaluation of the management approach	Page 86-87
GRI 413 Local Communities 2016	<b>413-1</b> Operations with local community engagement, impact assessments, and development programs	Page 86-87

**GRI 414 SUPPLIER SOCIAL ASSESSMENT 2016**

GRI 103 MANAGEMENT APPROACH DISCLOSURES 2016	<b>103-1</b> Explanation of the material topics and its boundary	Page 38
	<b>103-2</b> The management approach and its components	Page 71
	<b>103-3</b> Evaluation of the management approach	Page 71
GRI 414 Supplier Social Assessment 2016	<b>414-1</b> New suppliers that were screened using social criteria	Page 71



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# KORDSA 2020 REPORTING GUIDANCE



## Kordsa 2020 Sustainability Report – Reporting Guidance

This reporting guidance (“Guidance”) provides information on the data preparation and reporting methodologies of indicators within the scope of the independent audit in the 2020 Kordsa Sustainability Report. Indicators within the scope of the audit include data from Turkey-Izmit, Indonesia and U.S.-Chattanooga locations, unless otherwise stated. The indicators include **social indicators** (number of employees by gender, gender distribution of employees in managing bodies (manager and higher level), employee turnover rate, number of employees given ethics training, occupational health and safety (OHS) training hours, training hours, occupational health and safety) and **environmental indicators** (energy consumption, water withdrawal, waste management, re-used material rate, scope 1 and 2 emissions). It is the responsibility of the Company’s management to ensure that appropriate procedures are in place to prepare the indicators mentioned above in line with, in all material respects, the Guidance.

The data included in this guideline is for the FY 20 (1 January – 31 December 2020), fiscal year ended December 31, 2020, and as detailed in the “Key Definitions and Reporting Scope” section comprises only the relevant operations in Turkey and in the World that are the responsibility of the Company by excluding information about group companies, affiliates, and subcontractors.

### General Reporting Principles

In preparing this guidance document, consideration has been given to following principles:

- Information Preparation – to highlight to users of the information the primary principles of relevance and reliability of information; and
- Information Reporting – to highlight the primary principles of comparability / consistency with other data including prior year and understandability / transparency providing clarity to users.

### Key Definitions and Reporting Scope

For the purpose of this report, the Company defines:

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

Type	Indicator	Scope
Social Indicators	Number of Employees by Gender	This indicator reflects the total number of employees and gender distribution of employees of the Company during the reporting period. This indicator covers all global locations of Kordsa.
	Gender Distribution of Employees in Managing Bodies (Manager and Higher Level)	This indicator reflects the distribution of employees of the Company in managing bodies (manager and higher level) by gender. Managing bodies are categorized as senior management (ELT), director, manager, engineers and experts, supervisor, officer (white collar), operator and technician at Kordsa. This indicator covers all global locations of Kordsa.
	Employee Turnover Rate	This indicator reflects the ratio of resignation and termination of employment to the total number of employees in the reporting period. This indicator covers all global locations of Kordsa.
	Number of Employees Given Ethics Training	This indicator reflects the number of employees who received business ethics training in the reporting period. This indicator covers all global locations of Kordsa.
	Training Hours	This indicator reflects the total duration of the training given to the Company employees during the reporting period. Trainings reported in 4 main categories as: Professional Development, Personal Development, Occupational Health and Safety, and Other Trainings. This indicator covers all global locations of Kordsa.
	Occupational Health and Safety	This indicator reflects fatal accidents, accidents of high importance (excluding fatal accidents and registered accidents), recorded accidents and total working hours of the reporting period for both Kordsa and sub-contractor employees.
Environmental Indicators	<b>Energy Consumption</b>	This indicator reflects the amount of energy directly and indirectly consumed during the Company’s operations at locations within the scope of the audit (Turkey-Izmit, Indonesia, U.S.-Chattanooga), during the reporting period.
	Electricity Consumption (kWh)	This indicator reflects the total purchased electricity consumption used for air conditioning, lighting, electrical equipment uses and other business operations that require electricity at the relevant locations of the Company during the reporting period.
	Natural Gas Consumption (m3)	This indicator means the total purchased natural gas (volume - m3) consumption used for heating, cooking and other business operations that require natural gas at the relevant locations of the Company during the reporting period.
	LPG Consumption (gallon)	This indicator reflects the total amount of LPG (volume - gallon) purchased and used in the relevant locations during the reporting period.
	Diesel Consumption (l)	This indicator reflects the total purchased diesel (volume - l) consumption used for generators and company-owned cars at the relevant locations of the Company during the reporting period.
	Gasoline Consumption (l)	This indicator reflects the total purchased gasoline (volume - l) consumption used for company-owned cars at all the relevant locations of the Company during the reporting period.
	<b>Other Environmental Performance Data</b>	
	Water Withdrawal (m³)	This indicator reflects the total water withdrawal (volume- m3) at the relevant locations of the Company during the reporting period.
	Waste Management (ton)	This indicator reflects the total waste (by weight – ton) according to the type and disposal method where the Company operates, at the relevant locations of the Company during the reporting period.
	Re-Used Material Rate	It reflects the rate of materials reused at the relevant locations of the Company during the reporting period.
	Scope 1 and 2 Emissions (Ton CO <sub>2</sub> -e)	
	Scope 1	This indicator means the emission of greenhouse gases due to the use of natural gas, LPG, diesel, gasoline consumption and refrigerants and fire extinguishers at the relevant locations of the Company during the reporting period.
	Scope 2	This indicator means the emission of greenhouse gases due to the use of purchased electricity at the relevant locations of the Company during the reporting period.



## DATA PREPARATION

### Social Indicators

#### Employee Turnover Rate

The following formula is used to calculate the employee turnover rate. The average number of employees in the reporting period is taken into account when calculating the total employee hours.

Employee Turnover Rate:  $\frac{\text{Total Number of Employees Resigned and Employment Contract Terminated}}{\text{Total Number of Personnel}} * 100$

#### Occupational Health and Safety (OHS) Indicators

The following definitions and formulas are used in the calculation of OHS data. The average number of employees in the reporting period is taken into account when calculating the total employee hours.

Major accidents (excluding fatal accidents and registered accidents): Registered accidents resulting in permanent disability or amputation

Registered occupational accidents: Total of the accidents classified as Lost Workday Case (LWC), Medical Treatment Case (MTC), and Restricted Workday Case (RWC)

Lost Workday Case (LWC): When the worker cannot return to work the first workday following an occupational accident resulting in injury,

Medical Treatment Case (MTC): When an accident occurs that require medical treatment and the injured person can return to work the first workday following injury,

Restricted Workday Case (RWC): When the injured can return to work the first workday after injury, but is asked to work on another task, as he cannot perform his/her regular task.

#### Formulas:

Number of Registered Work Accidents: Number of accidents with lost workday + Number of accidents requiring medical treatment + Number of accidents causing restricted work

Rate of fatalities as a result of work-related injury:  $\frac{\text{Number of fatalities as a result of work-related injury}}{\text{Total working hours}} * 200,000$

Rate of high-consequence work-related injuries (excluding accidents resulting fatalities and registered accidents):  $\frac{\text{Number of high-consequence work-related injuries (excluding accidents resulting fatalities and registered accidents)}}{\text{Total working hours}} * 200,000$

Rate of recorded work-related injuries:  $\frac{\text{Number of recorded work-related injuries}}{\text{Total working hours}} * 200,000$

### Environmental Indicators

#### Energy Consumption

Energy consumption data are reported for electricity and primary fuel sources, which comprise natural gas, LPG, diesel, and gasoline.

Electricity and natural gas consumption data are obtained from supplier meters and service provider invoices. LPG and diesel consumption for the use of generators and company owned vehicles are obtained from service provider invoices. Gasoline consumption for the use of company owned cars data are obtained from service provider invoices.

Since common area consumption is also included in the total amount in invoices shared for Turkey-İzmit electricity consumption, common area consumption is excluded from Kordsa electricity consumption.

In the invoices shared for the electricity consumption of U.S.-Chattanooga, electricity consumption of other businesses is excluded from Kordsa electricity consumption, since there are businesses other than Kordsa in the location.

In Turkey-İzmit location, since vehicle fuel consumption is mainly diesel fuel, all vehicle fuels used are calculated as diesel fuel.

The Company has used the following published conversion factors:

- In Indonesia, since the diesel supply unit is reported in gallons, the conversion factor of [1 gallon \* (3.7854) \* liter / gallon] is used for conversion to liters.
- In Indonesia, since the refrigerant weight unit is reported in pounds, the conversion factor of [1 lb. \* (0.4536) \* kg / lb.] is used in the conversion into kg.
- At Chattanooga (US), since diesel and gasoline supply units are reported in gallons, the conversion factor of [1 gallon \* (3.7854) \* liter / gallon] is used for conversion to liters.
- At the Chattanooga (US), since the refrigerant weight unit is reported in pounds, the conversion factor of [1 lb. \* (0.4536) \* kg / lb] is used in the conversion into kg.

#### Other Environmental Performance Data

The water withdrawal within the scope of other environmental performance data includes groundwater and mains water in Turkey-İzmit, surface water in Indonesia, surface water and mains water in U.S.-Chattanooga.

#### Scope 1 and 2 Emissions

Scope 1 and scope 2 carbon emissions are calculated in accordance with ISO 14064-1 and with the operational control principle within the framework of the "GHG Protocol Corporate Accounting and Reporting Standard".

CO2 equivalent factors for emissions CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs (refrigerant gas) were used in calculations. The emission factors used are detailed in the table below. The Global Warming Potential (GWP) coefficients were taken from "DEFRA (Department for Environment, Food and Rural Affairs) 2020 Emission Factors" published by UK Government (<https://www.gov.uk/government/publications/greenhouse-gasreporting-conversion-factors-2020>). The electrical energy emissions consumed from the grid are calculated using the CO<sub>2</sub> emission factors published by the International Energy Agency in 2019 for the relevant locations.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020





Emission Factors - Scope 1	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Total ton CO <sub>2</sub> -e
Diesel (kg/lt)	2.65242	0.00025	0.03520	2.68787
Gasoline (kg/lt)	2.30176	0.00680	0.00611	2.31467
Natural Gas (kg/m3)	2.02640	0.00271	0.00107	2.03017
LPG (kg/lt)	1.55325	0.00113	0.00099	1.55537
Refrigerant gases - R22	1.760			1.760
Refrigerant gases – R32	677			677
Refrigerant gases – R134A	1.300			1.300
Refrigerant gases - R407C	1.624			1.624
Refrigerant gases – R410A	1.923			1.923

Emission Factors – Scope 2 (kg/kWh)	kgCO <sub>2</sub> -e/kWh
Electricity (renewables)	0.0000
Turkey Electrical energy (grid)	0.461
Indonesia Electrical energy (grid)	0.769
US Electrical energy (grid)	0.421

## Restatement

The measuring and reporting of sustainability-related data inevitably involves a degree of estimation. Restatements are considered where there is a change in the data of greater than 5 percent at the Company level.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020



## Limited Assurance Report To the Board of Directors of Kordsa Teknik Tekstil A.Ş.

We have been engaged by the Board of Directors of Kordsa Teknik Tekstil A.Ş. ("Kordsa" or the "Company") to perform an independent limited assurance engagement in respect of the Selected Sustainability Information ("Selected Information") stated in the Kordsa Sustainability Report 2020 ("the 2020 sustainability report") for the year ended 31 December 2020 and listed below.

### Selected Information

The scope of the Selected Information for the year ended 31 December 2020, which is subject to our independent limited assurance work, set out in the 17, 90, 91, 92, 93, 95, 96, 97, 99, 100 ve 101. pages of the 2020 sustainability report with the sign is summarised below:

- Employees by Gender
- Employees by Management Category and Gender
- Employee Turnover Rate
- Total Training Hours
  - Career Development
  - Personal Development
  - Health, Safety and Environment
  - Other
- Occupational health and Safety
- Reused Materials
- Energy consumption
  - Electricity Consumption (kWh)
  - Natural Gas Consumption (m3)
  - LPG Consumption (gallon)
  - Diesel Consumption (l)
  - Gas Consumption (l)
- Waste Management
  - Waste by Type
  - Waste by Disposal Method
- Water Withdrawals

Our assurance was with respect to the year ended 31 December 2020 information only and we have not performed any procedures with respect to earlier periods, any information other than Selected Information marked with in the 2020 Sustainability Report, any other elements included in the 2020 Sustainability Report and, therefore, do not express any conclusion thereon.

PwC Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik A.Ş.  
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### Criteria

The criteria used by the Company to prepare the Selected Information is set out in section 'Kordsa 2020 Reporting Guidance' (the 'Reporting Guidance') on pages 111 - 113 of the 2020 Sustainability Report.

### The Company's Responsibility

The Company is responsible for the content of the Sustainability Report and the preparation of the Selected Information in accordance with the Reporting Guidance. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of Selected Information that is free from material misstatement, whether due to fraud or error.

### Inherent Limitations

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the subject matter and the methods used for determining such information. The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measures and measurement techniques and can affect comparability between entities. The precision of different measurement techniques may also vary. Furthermore, the nature and methods used to determine such information, as well as the measurement criteria and the precision thereof, may change over time. It is important to read the Selected Information in the context of the Reporting Guidance.

In particular, for carbon emissions from energy used is based upon, inter alia, information and factors generated internally and/or derived by independent third parties as explained in the Reporting Guidance. Our assurance work has not included examination of the derivation of those factors and other third-party information.

### Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes



## Our Responsibility

Our responsibility is to form a conclusion, based on limited assurance procedures, on whether anything has come to our attention that causes us to believe that the Selected Information has not been properly prepared in all material respects in accordance with the Reporting Guidance. We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised), *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, and, in respect of greenhouse gas emissions, International Standard on Assurance Engagements 3410, *Assurance Engagements on Greenhouse Gas Statements*, issued by the International Auditing and Assurance Standards Board.

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement under ISAE 3000 and ISAE 3410. Consequently, the nature, timing and extent of procedures for gathering sufficient appropriate evidence are deliberately limited relative to a reasonable assurance engagement.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

Given the circumstances of the engagement, in performing the procedures listed above we:

- Made inquiries of the persons responsible for the Selected Information;
- Understood the process for collecting and reporting the Selected Information. This included analysing the key processes and controls for managing and reporting the Selected Information;
- Evaluated the source data used to prepare the Selected Information and re-performed selected examples of calculation;
- Performed limited substantive testing on a selective basis of the preparation and collation of the Selected Information prepared by the Company and;
- Undertook analytical procedures over the reported data.



## Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Company's Selected Information for the year ended 31 December 2020, is not properly prepared, in all material respects, in accordance with the Reporting Guidance.

This report, including the conclusion, has been prepared for the Directors of the Company as a body, to assist the Directors in reporting Kordsa Teknik Tekstil A.Ş.'s performance and activities related to the Selected Information. We permit the disclosure of this report within the 2020 Sustainability Report for the year ended 31 December 2020, to enable the Directors to demonstrate they have discharged their governance responsibilities by commissioning a limited assurance report in connection with the Selected Information. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Directors of Kordsa Teknik Tekstil A.Ş. as a body and Kordsa Teknik Tekstil A.Ş. for our work or this report save where terms are expressly agreed and with our prior consent in writing.

PwC Bağımsız Denetim ve  
Serbest Muhasebeci Mali Müşavirlik A.Ş.

Cenk Uslu, SMMM  
Partner

Istanbul, 6 August 2021

# KORDSA 2020 SCOPE 3 GHG VERIFICATION REPORT AND CERTIFICATE



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

QSI GREENHOUSE GAS VERIFICATION REPORT		www.qsiconsult.com info@qsiconsult.com T: 0312 472 60 67 F: 0312 472 60 68	
<b>BUSINESS INFORMATION</b>			
<b>COMPANY TITLE</b>	KORDSA TEKNIK TEKSTIL A.Ş.		
<b>COMPANY ADDRESS</b>	Alkaya Fatih Mah. Sanayci Cad. No:90 41310 İmit / Kocaeli / Turkey		
<b>Customer No</b>	SG-GNL-106	<b>Report Date</b>	16.06.2021
<b>Authorized Person</b>	Nevra AYDOĞAN	<b>Position</b>	Corporate and Brand Communication & Sustainability Manager
<b>Web</b>	www.kordsa.com	<b>E-Mail</b>	nevra.aydogan@kordsa.com
<b>VERIFYING BODY INFORMATION</b>			
<b>Company Title</b>	QSI Belgelendirme, Muayene ve Test Hizmetleri Ltd. Şti		
<b>Company Address</b>	Büyükdere Mah. 5397 Sokak, Mira Ofis B1 Blok D:2, Çankaya - Ankara - Turkey		
<b>Phone</b>	+90 312 472 60 67	<b>Fax</b>	+90 312 472 60 68
<b>Web</b>	www.qsi.com.tr	<b>E-Mail</b>	info@qsi.com.tr
<b>VERIFYING PERSONNEL</b>			
<b>Lead Verifier</b>	Mustafa Sarıkoç		
<b>Verifier</b>	Dilan Bağdatoğlu Şenn		
<b>INDEPENDENT REVIEWER</b>			
<b>Name</b>	Okay Kayhanlı	<b>E-mail</b>	okayhanli@qsi.com.tr
<b>REPORT APPROVING AUTHORITY ON BEHALF OF QSI</b>			
<b>Name</b>	Okay KAYHANLI	<b>Title</b>	Managing Director
<b>Report Verification Number</b>	SG-010-2021		
Page 1 <span style="float: right;">QSI-PRO-13F04REV.00/16.01.2017</span>			

QSI GREENHOUSE GAS VERIFICATION REPORT		www.qsiconsult.com info@qsiconsult.com T: 0312 472 60 67 F: 0312 472 60 68	
<b>Purpose &amp; Scope of Verification</b>	An impartial and objective review of the compliance of the emissions the company indirectly controls to the TS EN ISO 14064-1 standard conditions of the greenhouse gas report		
<b>Verification Period</b>	01.01.2020-31.12.2020		
<b>Base Year</b>	2020		
<b>Emission Report Date (Final emission report submitted to verifying body)</b>	11.06.2021		
<b>Direct GHG Emissions – Scope 1 (tCO2e)</b>	-		
<b>Energy Related Indirect GHG Emissions – Scope 2 (tCO2e)</b>	-		
<b>Other Indirect GHG Emissions – Scope 3 (tCO2e)</b>	1,122,689		
<b>Total (Scope 1&amp;2) GHG Emissions (tCO2e)</b>	-		
<b>GHG Emissions from Biological Burning (tCO2e)</b>	-		
<b>Method Used</b>	Calculation based		
<b>Level of Assurance &amp; Materiality</b>	Limited Level of Assurance for Scope 3		
<b>Man-day spent during the field visit</b>	2 (Online meeting)		
<b>Dates the field visits were made</b>	12.06.2021 (online meeting)		
<b>Verification Team</b>	Mustafa Sarıkoç, Dilan Bağdatoğlu Şenn		
<b>Date interval the verification process was executed within</b>	11.06.2021 – 16.06.2021		
<b>Total man-days spent on verification process</b>	4		
<b>Verification Result</b>	QSI has verified greenhouse gas report according to the TS EN ISO 14064-3 standard that the report for the period declared above is prepared in line with the conditions of the TS EN ISO 14064-1 standard.		
<b>Evaluation according to the verification criteria</b>	The evaluation of the verification team is in favor of the view that the greenhouse gas report was prepared in compliance to the verification criteria.		
Page 2 <span style="float: right;">QSI-PRO-13F04REV.00/16.01.2017</span>			

QSI GREENHOUSE GAS VERIFICATION REPORT		www.qsiconsult.com info@qsiconsult.com T: 0312 472 60 67 F: 0312 472 60 68	
<b>1- VERIFICATION STATEMENT</b>			
The verified greenhouse gas statements are as follows:			
<ul style="list-style-type: none"> <li>&gt; The greenhouse gas report for the year 2020 is prepared according to the TS EN ISO 14064-1 standard.</li> <li>&gt; The Scope 3 greenhouse gas emissions calculated for the year 2020 are 427,072. 53 tons of CO<sub>2</sub>e for the İzmit facility, 170,748.38 tons of CO<sub>2</sub>e for the Indonesia facility and 524,867.3 tons of CO<sub>2</sub>e for the Chattanooga facility, summing up to a total of 1,122,688.21 tons of CO<sub>2</sub>e. (Information regarding each facility and source of emission is available in this report.)</li> </ul>			
The purpose of this verification is to put forth a view with a limited reliability level about the greenhouse gas statements mentioned above based on the following criteria:			
<ul style="list-style-type: none"> <li>a) Compliance to the conditions of the TS EN ISO 14064-1 standard,</li> <li>b) Acceptability of the emissions calculated for the year 2020.</li> </ul>			
The performed verification processes take TS EN ISO 14064-3 as the base. Within that scope, the following verification processes were performed:			
<ul style="list-style-type: none"> <li>&gt; Documentation of the observations and findings of the verification in the verification report,</li> <li>&gt; Evaluation and documentation of the observations and reconciliations regarding the violations in the verification report,</li> <li>&gt; Preparation of the verification statement and completion of the verification.</li> </ul>			
<b>2- PREFACE</b>			
Verification process is in line with the conditions of TS EN ISO 14064-1 and TS EN ISO 14064-3.			
A risk evaluation was made, and a sampling plan and a verification plan were constructed during the verification process, and the documentations were reviewed, and online meetings were performed according to this planning for the following purposes:			
<ul style="list-style-type: none"> <li>- Selection and management of the greenhouse gas information and data,</li> <li>- The processes for the collection, processing, merging and reporting of the greenhouse gas information and data,</li> <li>- The processes and systems constructed for the verification of the greenhouse gas information and data,</li> <li>- The works done for the design of the greenhouse gas information system and the maintenance of its continuity,</li> <li>- The systems and processes that maintain the continuity of the greenhouse gas information system,</li> <li>- Other systems that support the greenhouse gas information system,</li> <li>- The results of previous evaluations if available and appropriate</li> </ul>			
The findings of the documentation reviews and examinations were shared with the company on a Greenhouse Gas Verification Correction Explanatory Chart in the Zoom meeting dated 12.06.2021 where further elaborations on calculations, estimated values and the selection of calculation factors were also requested from the company.			
The replies that were provided by the company regarding the elaborations and amendments were reviewed, deemed complete and accepted.			
Page 3 <span style="float: right;">QSI-PRO-13F04REV.00/16.01.2017</span>			

KORDSA  
SUSTAINABILITY REPORT  
2020

# KORDSA 2020 SCOPE 3 GHG VERIFICATION REPORT AND CERTIFICATE



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

**GREENHOUSE GAS VERIFICATION REPORT**

The results of the verification process and the verification report were technically reviewed and approved by the authorized technical examiner.

**3- THE PURPOSE, SCOPE AND ASSURANCE LEVEL OF THE VERIFICATION, AND MATERIALITY**

**3.1. Purpose and Scope**

The purpose of verification is to examine the compliance of the company's greenhouse gas statement to the conditions of TS EN ISO 14064-1 standard.

The company's field of activity consists of 3 Kordsa establishments; Kordsa İzmit Factory, Kordsa Indonesia Factory and Kordsa Chattanooga Factory. In all facilities the Scope 3 emissions were calculated using operational control approach in order to make sure of the GHG emissions.

Greenhouse gas report includes following emissions;

**Indirect Emissions (Scope 3):**

- Outsourced Goods and Services
- Activities related to Fuel and Energy
- Outsourced Transportation Services and the Transportation of the Outsourced Goods
- The Waste Produced in the Facilities
- Business Travels
- Personnel Commute
- Transportation of the Goods Sold
- Assets rented out to Other Companies

**3.2. The Year the GHG Statement Is Valid For**

The Greenhouse Gas Statement covers the period from 01.01.2020 to 31.12.2020.

**3.3. Establishment Boundaries**

The establishment boundaries are defined as 3 facilities under Kordsa Teknik Tekstil AŞ öbe using operational control approach; İzmit, Indonesia and Chattanooga facilities. The greenhouse gas emissions arising from the vast majority of activities across the establishment are included in the calculation.

**3.4. Operational Boundaries**

It was verified during the field visits (online inspection) performed by the verification team that the establishment's operational boundaries matched the operational boundaries declared in the greenhouse gas report.

**3.5. Assurance Level**

The assurance level of the verification is set as limited for the Scope 3.

Page 4

QSI-PRG-13P24-REV-2019.01.2017

**GREENHOUSE GAS VERIFICATION REPORT**

**4. EXAMINATION OF GREENHOUSE GAS INFORMATION SYSTEM AND ITS CONTROLS**

CATEGORY	İzmit	Indonesia	Chattanooga	Total
Outsourced Goods and Services	389.350.94	142.385.78	495.564.55	1,027,099.27
Activities related to Fuel and Energy	16.409.44	19.272.77	19.006.03	54,696.24
Outsourced Transportation Services and the Transportation of the Outsourced Goods				36,304.54
The Waste Produced in the Facilities	19.070.54	8.817.22	8.616.79	1,253.83
Business Travels	542.81	56.42	854.61	209.90
Personnel Commute	209.90	-	-	1,161.32
Transportation of the Goods Sold	400.34	175.20	635.78	1,246.96
Assets Rented out to Other Companies	374.42	492.99	379.50	716.14
<b>TOTAL</b>	<b>617.872.03</b>	<b>170.748.38</b>	<b>574.867.3</b>	<b>1,122,688.21</b>

Report Approved on behalf of QSI  
Okay KAYHANLI

Page 7

QSI-PRG-13P24-REV-2019.01.2017

**Greenhouse Gas Verification Statement**

The inventory of Greenhouse Gas emissions of  
**KORDSA TEKNİK TEKSTİL A.Ş.**

Atkaya Fatih Mah. Sanayi Cad. No 90 41310 İzmit / Kocaeli / Türkiye

has been verified in accordance with ISO 14064-2:2006 as meeting the requirements of  
**ISO 14064-1:2006**

Indirect Emissions: 1,122,688 tonnes of CO<sub>2</sub> eq  
Level of assurance: Limited  
Scope of Indirect Emissions: Purchased Goods and Services, Fuel and Energy Related Activities, Upstream Transportation and Distribution, Waste Generated in Operations, Business Travel, Employee Commuting, Downstream Transportation and Distribution

Reporting Period: 01.01.2020-31.12.2020  
Date and Version: 16.06.2021 / Version 1  
Statement No: SGCN.111-0621-001

Authorized by  
Okay Kayhanlı - Director

QSI: Belgelendirme, Müayene ve Test Hizmetleri Ltd. Şti.  
Sakarya Yolu, 2207 Sokak, No: 1/2-3 81100 E-5, Çekirge - Sakarya - Türkiye  
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Carbon  
Verified  
Company

KORDSA  
SUSTAINABILITY REPORT  
2020

# CONTACTS

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### Composite Technologies Center of Excellence

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## EUROPE, MIDDLE EAST, AND AFRICA

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About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020

# REPORT CONTACT

## REPORT CONTACT

**Nevra Aydoğan**

Brand and Corporate Communication & Sustainability Manager

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Twitter: @KordsaOfficial



<https://www.instagram.com/kordsaofficial/>

Instagram: @kordsaofficial



<https://www.youtube.com/channel/UCsQNfTuEdUNYgNh0OFGbYrw>

Youtube: @kordsa



<https://www.linkedin.com/company/kordsa/>

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The information and analyses contained in the KORDSA sustainability report (hereinafter “report”) have been compiled from resources and information deemed as accurate and reliable within the timeframe the report was prepared for informative purposes only, and not to be used as a basis for any investment decision.

The company, its managers, employees, and other persons and organizations who contributed to the drafting of this report cannot be held responsible for the damages that may arise from the use of the information contained herein. All rights of this report belong to KORDSA.

Our report is prepared in the digital environment and is not published.

## SUSTAINABILITY AND REPORTING CONSULTANT

**SERCOM Consulting**

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## DESIGN

**Tazefikir**

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About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2020