

# KORDSA SUSTAINABILITY REPORT 2022



**Dear Stakeholders,**

**As a country, we experienced one of the greatest disasters in our country's history in 2023. We are deeply saddened by the destruction in 11 cities caused by two major earthquakes on February 6th, and we commemorate our citizens who lost their lives in the earthquake.**

**As Kordsa, we understand that this recovery process will last until all wounds are healed. We aim to stand by all the local stakeholders in the region and continue to contribute to the region's recovery.**

**We have been supporting Sabancı Group's relief efforts in the earthquake zone since the first day. For this reason, we supported the disaster area by building damage assessment work with our Construction Reinforcement business unit, first aid operations with our Health Unit, and search and rescue efforts with our Emergency Response Team.**

**We are doing our best to support our country in these difficult times and continue to reinforce life.**

# CONTENTS

About the Report **04**

Messages to Our Stakeholders **05**

Message From Our Chairperson.....06

Message From Our CEO.....07

Corporate Profile **08**

Kordsa Facts and Figures.....10

Products, Industries, Markets...11

Kordsa In The World.....12

2022 ESG Performance Scorecard..13

Strategy and Governance **14**

Kordsa Strategy House.....16

Alignment Of Strategies.....17

Our Sustainability Materiality Approach.....18

Kordsa Materiality Matrix.....20

Material Sustainability Topics Along Our Value Chain.....21

Corporate Governance.....22

Business Ethics and Compliance..24

Sectoral and Global Trends.....28

ESG Risk Management.....29

Sustainability Management **32**

The Last Three Years Of Our Sustainability Journey.....34

Sustainability Management Structure.....35

Communication With Our Stakeholders.....37

Material Topics and Un 2030 Global Goals.....43

Compliance With Developing Global Sustainability Standards.....45

Sustainability Facilitators at Kordsa **46**

R&D and Innovation.....48

Technology and Digitalization...62

Economy and Growth **65**

Sustainable Growth.....67

Sustainable Supply Chain Management.....70

Environment and Climate **73**

Raw and Other Materials Management.....75

Energy Management.....78

Emissions (Carbon) Management...81

Waste Management.....83

Water and Wastewater Management.86

Employees and Community **89**

Occupational Health and Safety..91

Human Rights.....94

Employment and Labor Practice...96

Talent Management and Organizational Development.....101

Equal Opportunities and Diversity.....104

Community Development.....109

Performance Indicators **111**

Economic Performance Indicators.....112

Social Performance Indicators.....113

Environmental Performance Indicators.....123

Annexes **135**

Sustainability Materiality Communications.....136

Key Stakeholder Communication Platforms.....137

Employee Sustainability Survey.138

OHS Committees.....140

Memberships.....141

UNGC Content Index.....142

Indirect Impacts For UN 2030 Sustainable Development Goals..143

GRI Content Index.....144

Kordsa 2022 Reporting Guidance.148

Kordsa 2022 External Assurance Report.....154

Kordsa 2022 Scope 3 Ghg Verification Report and Certificate.....156

Contacts.....158

Report Contact.....159

# ABOUT THE REPORT

“With our ninth sustainability report that reflects Kordsa’s economic, environmental, and social performance in 2022, we offer our stakeholders the opportunity to evaluate our impacts resulting from our activities and to evaluate 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, 2022, to December 31, 2022. We also provide 2020 and 2021 data to monitor the trends. In addition to determining the process of the report content, we explain the boundaries of the material topics in the [Our Sustainability Materiality Approach](#) section of this report.

The list of topics that we include in our materiality matrix are all relevant to 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 [Evaluation and Selection of 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](#). In the process of identifying our strategic sustainability topics, we took into consideration Reporting Principles of GRI Standards; materiality, stakeholder inclusiveness, sustainability context and completeness. Our report also covers the 10 principles of the [UN Global Compact](#) that we signed in 2014. [UNGC Content Index](#) is located here.

With our targets on material topics, we directly address eight 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 KPIs of the sectors Kordsa serves and explained how we support our customers’ sustainability targets.

## External Audit and Verification

Selected 2022 performance indicators are audited by [PWC](#).

Scope 3 calculations are verified by [OSI](#).

## Next Report

We aim to publish the tenth of our sustainability reports, which we plan to prepare annually, in 2024.

### 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.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# MESSAGES TO OUR STAKEHOLDERS

## We Reinforce Life!

Each moment in life is a unique source of happiness. We pioneer advancements in reinforcement technologies, drawing inspiration from the courage of ongoing development and the exhilaration of exploration.

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



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# MESSAGE FROM OUR CHAIRPERSON



## Dear Stakeholders,

Throughout 2022, the global economy encountered an unrelenting sequence of substantial, compounding challenges. Commencing with the COVID-19 pandemic, the turbulence extended with the war in Ukraine, giving rise to subsequent food and energy crises, escalating inflation, and a contracting debt landscape. These hardships were further exacerbated by the pervasive climate emergency felt across every corner of the globe.

Amidst these complex challenges, Kordsa remained resolute in generating enduring value for our economy throughout 2022 while steadfastly adhering to sustainable growth objectives.

We increased our turnover by 134% compared to 2021 and reached TRY 18.4 billion. Our net profit experienced a substantial 76% year-on-year escalation, soaring to TL 1.5 billion. In addition, we continued our significant domestic and international investments.

With these endeavors, we made the strategic decision to invest USD 43 million for our facilities and our products throughout 2022. These investments encompass the augmentation of our polyester yarn production line, introducing an additional dipping line dedicated to manufacturing single cords used in high-performance tires and enhancing Kratos polypropylene fiber synthetic reinforcement production capacity.

We complemented our recent organic expansion with inorganic growth strategies. In pursuit of this goal, we successfully concluded the acquisition of the majority shares of the Italian firm Microtex

“ In February 2023, as our report was being prepared for publication, our nation suffered one of the most significant natural catastrophes it has ever faced. We honor the memory of all the citizens who lost their lives during the two consecutive earthquakes. Since the onset of this tragedy, Kordsa has been committed to extending essential assistance to the affected region, utilizing both tangible resources and moral support to aid in the recovery process. ”

Composites in 2022, following our acquisition of four companies in the United States over the past few years. This strategic move fortified Kordsa's presence within the European market, broadened our robust portfolio of aviation clientele, and extended the scope of our services in the automotive and motorsports sectors.

At Kordsa, our commitment to sustainable mobility drives us to employ recycled nylon and recycled polyester yarns in tire reinforcement technologies; within composite technologies, we manufacture reinforcement materials that make vehicles lighter and reduce fuel consumption. Throughout 2022, we continued to focus on advancing sustainable chemicals, bio-based polymers, and polymer recycling technologies.

Within our construction reinforcement business unit, we are broadening our impact area and product portfolio by developing products that ensure enduring durability in concrete structures. Notably, Kordsa's Kratos Structural Reinforcement product line is pivotal in fortifying structures against earthquakes. Through our expertise in structural reinforcement, we bear the significant responsibility of enhancing the seismic resilience of our nation's building infrastructure.

'Data' stands as our most potent asset in the pursuit of heightened production efficiency, enhanced productivity, and the facilitation of agile and precise decision-making. Therefore, strengthening our digital infrastructure and adopting a data-based business culture is more important than ever. Accordingly, with our new digitalization process, which we call 'Kordsa 5.0', we first started to transform our enterprise resource planning (ERP) systems globally.

Within the framework of our risk analysis studies, we actively monitor climate change-related risks. We systematically evaluate the risks and opportunities that may arise from possible legislative changes during the transition to a low-carbon economy, extreme weather conditions due to climate change, as well as shifts in customers' inclinations.

Aligned with our dedication to the Science-Based Targets Initiative

(SBTi), with which we actively contribute toward preventing global warming from reaching 1.5°C, Kordsa is firmly committed to achieving net zero emissions by 2050. We also ranked in the Global A list in the 2022 CDP 'Supplier Engagement Rating,' illustrating the degree to which companies engage their suppliers in combatting climate change. Our performance with the CDP Climate Change Program merited a 'B' rating. With the 2022 CDP Water Program, we were among 107 companies in the Global A list worldwide.

Through our consistent dedication to sustainability year after year, we have earned recognition in the inaugural 'BIST Sustainability 25 Index,' a newly established benchmark, as well as in the 'BIST Participation 30 Index'.

At Kordsa, sustainability is deeply ingrained in our purpose and strategy. We collaborate closely with both our suppliers and customers to uphold social and environmental sustainability across the entire lifecycle – from sourcing raw materials to delivering products to our customers. Throughout 2022, our dedication to supporting diversity and inclusion at all levels of company management continued. We also remained committed to safeguarding human rights within our supplier network and our entire value chain. We unveiled our vision for Diversity, Equality, and Inclusion in alignment with these principles.

In the 100th anniversary of our Republic, we will continue to generate economic, social, and environmental benefits for the ecosystem, including our business partners and customers, with our future projects and future-empowering technologies.

I would like to express my heartfelt gratitude to all our stakeholders with whom we cooperate in delivering Kordsa's vision of reinforcing life and all our employees who contributed massively to our success.

Kind Regards,

**CEVDET ALEMDAR**  
Chairman



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# MESSAGE FROM OUR CEO



İBRAHİM ÖZGÜR YILDIRIM  
CEO

## Dear Stakeholders,

2022 was a deeply challenging year, prompting a reevaluation of the economy, social dynamics, business approaches, and all overarching priorities on the global agenda. Businesses have transitioned towards cultivating flexibility and agility, devising effective solutions for challenges related to energy, supply chains, and raw materials. Sustainability and digitalization have retained their significance in shaping the foundation of the emerging world.

At Kordsa, 2022 marked a profound year of change and evolution. As a result of our comprehensive analyses, we have created a new strategy that is 'growth-oriented' and centered on innovation, digitalization, sustainability, and the customers.

Our new strategy involves extending our R&D strength from Türkiye to other operational domains globally and establishing technical centers to cater to local needs in the forthcoming phases. We are cultivating ecosystems that harness the collective intellect of our over 5,000 employees, suppliers, and all stakeholders to generate value for our esteemed customers.

By investing in our composites business line, we successfully concluded the acquisition of the majority shares in the Italian firm Microtex Composites. By establishing a new facility in Europe, we have significantly broadened our global footprint in the composites domain while introducing the super luxury automotive sector and motorsport

“ In February 2023, at the time of our report’s publication, our nation suffered one of the most significant natural disasters in its history. We are deeply saddened by the catastrophic effects of the massive twin earthquakes that impacted 11 provinces, causing injuries or loss of life to thousands of our citizens. Our hearts go out to those who lost their lives, and we extend our condolences to their families and our entire nation. At Kordsa, we have been actively providing support to the affected region since the very beginning, and we remain steadfast in our commitment to stand beside our fellow citizens throughout the entire reconstruction process until all wounds are healed. ”

entities into our customer portfolio.

At Kordsa, which is widely regarded as a global reinforcement brand, we manage our performance in line with our sustainability goals with respect and responsibility for the society and environment we live in. Expansion through R&D and technology investments in our three main business areas, supporting the continuous development of our talented human resources, responsible use of natural resources, and creating sustainable value for all our key stakeholders and society through social development projects form the basis of our sustainability approach.

Our journey has been about reinforcing life while enhancing our economic competitiveness through the principle of 'achieving more with fewer resources' ever since our inception. We have decreased fuel consumption by reducing tire rolling resistance, contributing to the creation of lightweight vehicles using our composite technologies, and facilitating sustainable construction initiatives through construction reinforcement technologies. Our enduring commitment to science and innovation continues to represent the core of our business model.

We invest in clean technologies to ensure efficient energy use, reuse our materials, as well as reduce emissions, waste, and water consumption. Moreover, together with our R&D and production teams, we develop continuous improvement projects to increase the use of bio-based and recycled materials as well as the rate of renewable energy.

In 2022, 31% of the electricity we consumed at Kordsa was sourced from renewable energy. Our dedicated investments and expenditures for environmental initiatives surpassed USD 6.1 million. With the objective of contributing toward preventing global warming from rising above 1.5°C, we strive to realize net zero emissions by no later than 2050. We are committed to the Science-Based Targets Initiative, and our target approval process was completed before our report was published. Furthermore, by 2030, our resolute aim encompasses a 46.2% reduction in emissions compared to the levels of 2019. Our

ultimate goal is to transition into a net zero company by 2050.

Within the scope of the CDP Program, which we have been reporting since 2016, we have steadily increased our rating since the first year. In the 2022 CDP Climate Change Program, we secured a rating of 'B.' Amidst the evaluation of 15 thousand companies in the 2022 CDP Water Program, Kordsa emerged as one of the 107 leading companies in the 'A' list with high performance worldwide. In addition to our success in the water program, we were also included in the Global A list in the 2022 CDP' Supplier Engagement Rating'.

Concurrently, with our practices focusing on benefiting future mankind, we were awarded the 'Best Employer Certificate' by the independent research institution Great Place to Work® in 2022 in the four countries where we operate, namely Brazil, Indonesia, Thailand, and Türkiye. Guided by our commitment to empowering our workforce, we continuously conceive and execute innovative strategies within our expanding global organizational framework.

Today, one out of every three automobile tires and two out of every three aircraft tires produced worldwide are reinforced by Kordsa. Beyond tires, our products are also used to reinforce the fuselages and cabins of new-generation airplanes and airport runways. Furthermore, we are one of the companies reinforcing NASA's Orion moon space capsule. All these achievements encapsulate the essence of our motto: 'We Reinforce Life.'

I extend my sincere gratitude to all our exceptional employees whose tireless dedication has been the cornerstone of our 50-year journey, our shareholders for their steadfast support, our invaluable suppliers, and our esteemed customers. With unwavering confidence, I look forward to our continued journey in reinforcing life together.

Sincerely,

İBRAHİM ÖZGÜR YILDIRIM  
CEO



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# CORPORATE PROFILE

In all areas of operation, we develop our products with the intention of fostering sustainability, while our growth is driven by the pursuit of generating value across social, environmental, and economic dimensions.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022





About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

“ 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 aircraft while reinforcing infrastructure and superstructures by means of our construction reinforcement technologies.

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

## AWARDS and ACHIEVEMENTS

### Kordsa Honored with the 2022 Pirelli Supplier Award!

Pirelli, the tire manufacturer industry leader with over 15,000 global suppliers, annually recognizes and commends 9 outstanding suppliers based on product quality, service excellence, performance, innovation, and sustainability criteria. Following the assessments conducted in 2022, Kordsa proudly received the prestigious 2022 Pirelli Supplier Award in recognition of its exceptional textile reinforcement contributions within the Service Level category.

### Kordsa Triumphs at the Sabancı Golden Collar Awards, Securing First Place in Two Categories!

At the 13th Sabancı Golden Awards, Kordsa achieved a remarkable feat by securing the prize in not just one but two distinct categories, innovation and sustainability.

# KORDSA FACTS AND FIGURES



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

## Corporate Profile

**18.44 BILLION TL**  
TURNOVER

ECONOMIC	<b>4</b> CONTINENTS	<b>6</b> COUNTRIES	<b>13</b> FACTORIES	<b>2</b> R&D CENTERS
	GLOBAL FOOTPRINT			

**5,092**  
EMPLOYEES (INCLUDING SUB-CONTRACTORS)

**49** YEARS

**281,409** Hours  
TOTAL TRAINING

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

**6,178,383** USD  
The total amount of our environmental investments and expenditures

## Sustainability Profile

**1.65 BILLION TL**  
REAL OPERATING PROFIT

<b>34%</b> EMEA	<b>26%</b> ASIA PACIFIC	<b>29%</b> NORTH AMERICA	<b>11%</b> SOUTH AMERICA
REGIONAL REVENUE SPLIT			

**37.4%** FEMALE\*      **62.6%** MALE\*

**0** FATAL OCCUPATIONAL ACCIDENTS AND DISEASES

**58,15** Hours  
AVERAGE TRAINING

**2.73** MILLION PIECES  
Number of reused materials

**%29**  
Global reuse ratio

<b>2%</b> EMISSION MANAGEMENT	<b>6%</b> WASTE RECYCLING	<b>59.3%</b> WASTE DISPOSAL	<b>4.7%</b> CONSULTANCY	<b>27.6%</b> PROJECT INVESTMENTS	<b>0.4%</b> TRAINING
----------------------------------	------------------------------	--------------------------------	----------------------------	-------------------------------------	-------------------------

\* Data represents white-collar employees. Among all employees, the rate of female employees is 16.05%.

# PRODUCTS, INDUSTRIES, MARKETS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

### Tire Reinforcement Technologies

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

### Composite Technologies

FABRICS AND PREPREGS\*  
SLITTAPE, TOWPREG,  
HONEYCOMB, SANDWICH PANEL

 AEROSPACE AND AVIATION	 AUTOMOTIVE
 INDUSTRIAL APPLICATIONS	 MARINE
 SPORTS EQUIPMENT	 RAILWAY
 HEALTH CARE	

\* 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. 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 products and practices for aerospace and aviation, automotive, industrial applications, marine, sports equipment, railway, and health care industries. In our plants in Türkiye, USA, and Italy we provide design, analysis, material library, prototype production services and develop fabric, resin and prepreg, slit tape, toper, honeycomb and sandwich panel 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 infrastructure, superstructure, and mining in concrete reinforcement projects. Construction Reinforcement Technologies added structural reinforcement products to its Kratos product portfolio, for which it continues its R&D studies. This product group consists of carbon fabric, carbon plate and epoxy resins. Reinforcing with Kratos Structural Reinforcement products provides both time and cost savings compared to demolition and reconstruction; in this respect, it stands out as an environmentally friendly and sustainable solution.



# KORDSA IN THE WORLD



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



## NORTH AMERICA

**BUSINESS AREAS**  
Tire Reinforcement  
Composite

TURNOVER

**TL 5,309  
MILLION**

PRODUCTS

NY6.6, TCF, Fabric, Prepreg, Honeycomb Core

## SOUTH AMERICA

**BUSINESS AREAS**  
Tire Reinforcement

TURNOVER

**TL 1,983  
MILLION**

PRODUCTS

PET, SEC, TCF

## EMEA

**BUSINESS AREAS**  
Tire Reinforcement  
Composite  
Construction Reinforcement  
R&D Centers

TURNOVER

**TL 6,330  
MILLION**

PRODUCTS

NY6.6, PET, SEC, TCF, Kratos, Fabric, Prepreg, Slittape, Towpreg, Sandwich Panel

## ASIA PACIFIC

**BUSINESS AREAS**  
Tire Reinforcement

TURNOVER

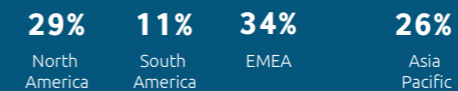
**TL 4,818  
MILLION**

PRODUCTS

NY6.6, PET, TCF



### TURNOVER DISTRIBUTION BY REGIONS



# 2022 ESG PERFORMANCE SCORECARD



Related SDG	Explanation of Target	Indicator	2022 Performance	2023 Target	2030 / 2050 Target	Target Owner
	Reducing GHG emissions (Base year: 2019)**	Percentage of scope 1&2 GHG emissions reduction compared to the base year (%)	12.9%	16.8%	46.2% / 100%	Chief Operation Officers (COOs)
Related SDG	Explanation of Target	Indicator	2022 Performance	2023 Target	2030 Target	Target Owner
	Reducing water withdrawal (Base year: 2019)**	Percentage of water withdrawal reduction per sales tonnage (%)	5.6% reduction (compared to the previous year) 24.6% reduction (compared to the base year)	6% (compared to the previous year)	50% (compared to the base year)	COOs and Sustainability
Related SDG	Explanation of Target	Indicator	2022 Performance	2023 Target	2030 Target	Target Owner
	Reducing waste (Base year: 2018)**	Percentage of total waste reduction per sales tonnage (%)	2% reduction (compared to the previous year) 15% increase (compared to the base year 2018)	10% (compared to the previous year)	50% (compared to the base year)	COOs and Sustainability Leaders
Related SDG	Explanation of Target	Indicator	2022 Performance	2023 Target	2030 Target	Target Owner
 	Sustainable Supply Chain Programme	Percentage of targeted suppliers that have undergone sustainability assessment (%)	53%	75%	100%	Supply Chain and Sustainability
Related SDG	Explanation of Target	Indicator	2022 Performance	2023 Target	2025 Target	Target Owner
	Improving accident ratio in operations	Number of fatal injuries High-consequence injuries Recordable injuries	Fatal injuries: 0 High-consequence injuries: 0 Recordable injuries: 8	Zero accident	Zero accident	COOs and Sustainability Leaders
	Reducing complaints on human rights violations	Number of complaints on human rights violations	Zero complaint	Zero complaint	Zero complaint	Human Resources
	Increasing employee satisfaction	Rate of employee satisfaction (%)	73%	65% and over	65% and over	Human Resources
	Continuing employee development trainings	Sabancı of New Generation competencies	Ratio of occupational and personal development trainings reached 73%.	Continue trainings to complete the competencies	Continuous development	Human Resources
Related SDG	Explanation of Target	Indicator	2022 Performance	2023 Target	2025 Target	Target Owner
	Increasing women employment (Office staff)	Ratio of women employees (%)	34.8%	38.3%	45%	Human Resources
Related SDG	Explanation of Target	Indicator	2022 Performance	2023 Target	2025 Target	Target Owner
	Engagement of Vocational High School students through the Future Reinforcers project under the Republic Day Campaign program	Number of students reached as part of the project	Number of students reached by Kordsa: 1,130	In progress	In progress	Corporate Communications and Sustainability

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

\*\* The data given in the "2022 Performance" column is the realization according to the base year.

# STRATEGY AND GOVERNANCE



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

At Kordsa, we regard the principles of transparency, fairness, responsibility, and accountability as the foundations of our corporate governance approach.





About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

“ 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 disseminate 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 25 Index

In addition to its inclusion in the BIST Sustainability Index since 2016, Kordsa has also earned a spot in the inaugural BIST Sustainability 25 Index of 2022. This index showcases companies boasting the highest levels of corporate sustainability performance.



# KORDSA STRATEGY HOUSE



## MISSION

Deliver high value-added reinforcement solutions globally.

## VALUES

### Safety, Health and Environment

We work carefully, disciplined, and programmed. Following SHE 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

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



# ALIGNMENT OF STRATEGIES

“ Our vision, strategic initiatives, and values that we updated in 2019, match with our material topics that shape our sustainability strategy. The general approach for the process of determining the below listed material sustainability topics is given in the following section. ”

Pillar Initiatives	Material Sustainability Topics	Values
<p><b>Business Excellence</b></p> <p><b>Growth</b></p> <p><b>Innovation</b></p> <p><b>People</b></p>	<p>Corporate Governance Business Ethics and Compliance (Including Anti-Corruption) Information-Data Security and Privacy</p>	<p><b>Customer Focused</b></p> <p><b>Continuous Improvement</b></p> <p><b>Courage</b></p> <p><b>Passion</b></p> <p><b>Collaboration</b></p> <p><b>Safety, Health and Environment</b></p> <p><b>Ethics</b></p>
	<p>Sustainable Growth Sustainable Supply Chain</p>	
	<p>Raw and Other Materials Management Energy Management Emissions (Carbon) Management Waste Management Water and Wastewater Management</p>	
	<p>Occupational Health and Safety Employment and Labor Practices Equal Opportunities and Diversity Talent Management and Organizational Development Human Rights Community Development</p>	



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# OUR SUSTAINABILITY MATERIALITY APPROACH

“ We periodically review our sustainability material topics, incorporating the priorities of Kordsa and key stakeholder groups. In 2022, we expanded our stakeholder engagement efforts to include not only employees and customers but also suppliers and universities. ”



Since our initial report, we have conducted recurring sustainability materiality studies every two years, involving the active participation of Kordsa’s Board of Directors, Executive Leadership Team, and Sustainability Management Team, along with valuable input from key stakeholders. Furthermore, we perform annual reviews of our matrix. The Kordsa Board of Directors and Kordsa Executive Leadership Team approve our Material Topics before they are published each year.

In 2022, we extended our stakeholder engagement efforts to encompass suppliers, universities, employees, and customers. Through internal and external stakeholder surveys, we observed shifts in the ranking of material issues while their core content remained substantially consistent. Notably, we introduced a new subject – Information-Data Security and Privacy. Additionally, we refined existing topics such as Business Ethics to Business Ethics and Compliance, Employment to Employment and Labor Practices, Training and Development to Talent Management and Organizational Development, as well as Water Management to

Water and Wastewater Management. Based on customer feedback from previous years, we have included Supplier Assessments in the matrix as Sustainable Supply Chain.

Considering the BIST Sustainability Index requirements, we added biodiversity to our materiality assessment process. As our plants are located within industrial zones, biodiversity is not in our area of high impact. According to our analysis, none of our operations are situated in areas with sensitive biodiversity. In 2021, this topic took its place among the disclosure requirements of Refinitiv, CDP and loaning processes of banks. It was ranked last in this year’s stakeholder engagement surveys. We disclosed our general approach regarding biodiversity conservation on our [web site](#).

Despite ranking lower in this year’s stakeholder engagement surveys, the Community Development

theme remains integral to our reporting, consistent with our coverage since our inaugural reporting period.

Although Corporate Governance represents our approach to managing all other topics and does not pose a risk, we included it in the survey to gauge stakeholder prioritization. Notably, it placed tenth on average among 17 topics for internal stakeholders yet secured a fifth position among external stakeholders. A summarized table illustrating the comparison of stakeholder priorities is presented on the subsequent page.

Throughout our 2022 review sessions, we closely monitored our advancements in enhancing performance within our existing focal points. Moving forward, we will continue fostering dialogues with our principal stakeholders, shaping and refining our targets for our impending focus areas.

(GRI 3-1)



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# OUR SUSTAINABILITY MATERIALITY APPROACH

## Process of Materiality Assessment

### 2022 Internal Stakeholder Survey Participation (408\* people)

Türkiye: 58%  
Indonesia: 21%  
Thailand: 16%  
USA: 4%  
Brazil: 1%

\*Senior Management and Board of Directors are included.

### 2022 External Stakeholder Survey Participation (27 people)

Supplier: 59%  
Customer: 37%  
University: 4%

### Methodology for Employee and External Stakeholder Online Survey

When shaping our sustainability focal points, we always compile an inventory of issues highlighted by Kordsa's executive management and various stakeholders. We subsequently engaged our internal and external stakeholders in an online survey, urging them to rank these issues in alignment with their own perspectives.

Our survey accommodates an open-ended question, allowing respondents to introduce additional issues that may not have been encompassed in the survey. By dissecting the survey outcomes, we not only refine our sustainability strategies but also assimilate them into our comprehensive report.

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. All results are placed in relevant sections of our report.

In the **Key Stakeholders Communication Platforms** section, we incorporate our established communication platforms designed for engaging with our key stakeholders.

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



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Facilitators at Kordsa

Economy and Growth

Environment and Climate

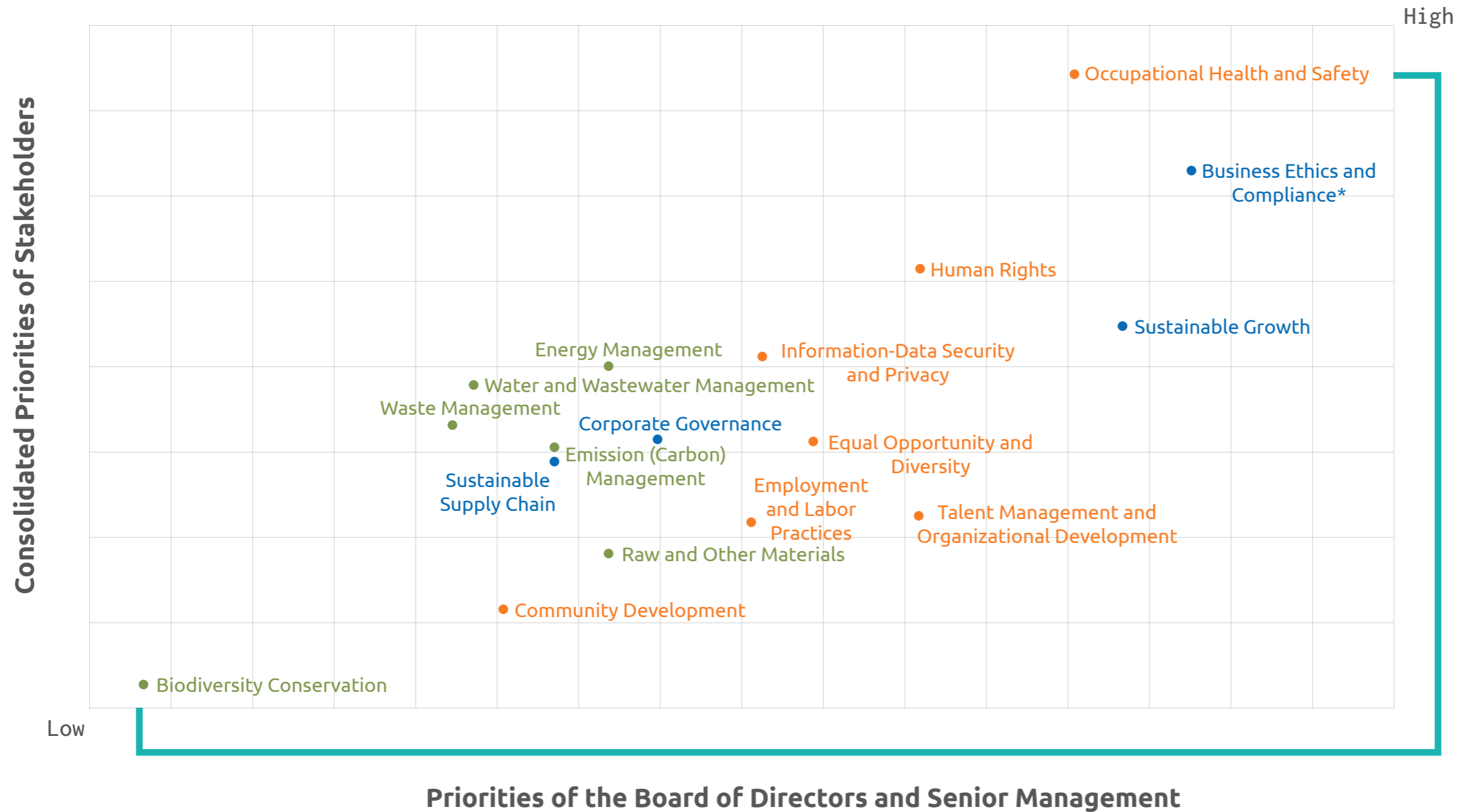
Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# KORDSA MATERIALITY MATRIX



Social     
 Environmental     
 Economic and Governance

\* Business Ethics and Compliance covers Anti-Corruption.

(GRI 3-2)



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# MATERIAL SUSTAINABILITY TOPICS ALONG OUR VALUE CHAIN



Value Chain	Occupational Health and Safety	Business Ethics and Compliance	Sustainable Growth	Human Rights	Information-Data Security and Privacy	Energy Management	Emission (Carbon) Management	Raw and Other Materials
Procurement	✓	✓	✓	✓	✓	✓	✓	✓
Production	✓	✓	✓	✓	✓	✓	✓	✓
Logistics	✓	✓	✓	✓	✓	✓	✓	
Sales		✓	✓	✓	✓			✓

Value Chain	Waste Management	Equal Opportunity and Diversity	Water and Wastewater Management	Talent Management and Organizational Development	Sustainable Supply Chain	Employment and Labor Practices	Community Development
Procurement	✓	✓	✓	✓	✓	✓	
Production	✓	✓	✓	✓		✓	✓
Logistics		✓		✓		✓	
Sales		✓		✓		✓	

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at KORDSA

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



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 the independent members is the chair of both the Early Risk Identification Committee and Audit Committees and member of Corporate Governance Committee. The second independent member is the chair of Corporate Governance Committee and member of both Early Risk Identification Committee and Audit Committees. Our chairman of the board of directors is also in charge of execution.



## INTERNAL STAKEHOLDER VIEW

77% 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.

Board Committees	Responsibility on all Material Sustainability Topics
Early Risk Identification Committee	Analyzing and prioritizing risks
Corporate Governance Committee	Monitoring of strategy and performance
Audit Committee	Auditing and securing those related activities are in line with Kordsa Ethics Code and policies

Kordsa Board of Directors Composition (2022)	Number	Ratio (%)
Total Number of Board Members	6	
Male	5	83
Female	1	17
Under 30 years old	0	0
30-50 years old	1	17
Above 50 years old	5	83
Minority or vulnerable groups	0	0
Executive	1	17
Independent	2	33



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



Having members who possess a diverse range of competencies, knowledge and experience is crucial for strong Boards and enhances better decision making. At Kordsa, during the board nomination processes, we evaluate the competencies of candidates by considering their knowledge of the industry and ESG matters, general and especially crises management skills and global work experience.

We value diversity and inclusion and do not discriminate against any candidates on grounds of gender, age, ethnicity, religion, language, or race. ”

Kordsa Board of Directors Skills Matrix	Ratio (%)
Term (15+yrs)	100
Audit Experience	29
Financial Service Experience	29
Non-Financial Real Sector Experience	57
Risk Management Experience	71
Environmental Social and Corporate Governance Experience	86
International Multi Geographical Experience	29
Research and Development Experience	14
M&A Experience	14
Industry Experience	69
Digital Technologies Experience	14

“The Code of Business Ethics that regulates Kordsa’s relationships with its customers, employees, shareholders, suppliers, business partners, competitors, the environment, and society covers four main topics: obligations, integrity, confidentiality, and conflict of interest. The Kordsa Code of Business Ethics is accessible in multiple languages, including Turkish, English, Indonesian, Thai, Spanish, and Portuguese, and can be accessed on our official website. Furthermore, translations of the Kordsa Code of Business Ethics in German, French, and Italian are also accessible on the Kordsa Ethics Hotline website. This platform was launched in October 2022 as an integral component of Kordsa’s ethical culture, providing a confidential and anonymous channel for all stakeholders, particularly our employees, customers, and business partners, to submit reports and complaints.”

## INTERNAL STAKEHOLDER VIEW

80% of our employees who responded to the sustainability assessment survey think that...

Kordsa’s policies, audits, and training initiatives regarding compliance with laws and ethical principles (labor laws, environmental regulations, etc.), encompassing anti-corruption and anti-competitive behavior, are adequate.



## Kordsa Grievance Mechanism

Kordsa has a third party ethics hotline. When reaching out to the Ethics Hotline, a comprehensive report is generated for the raised issue, and it is managed by Kordsa swiftly, discreetly, and confidentially. Communication with the Ethics Hotline can be conducted verbally or in writing, using

the language preferred by the reporting individual, and its confidentiality is upheld to the extent permitted by the law. Employees also have the option to approach their supervisors, the Global Legal and Compliance team, or the Human Resources Department. At Kordsa, we are dedicated to ensuring the safety and protection of our employees who report suspected ethics violations in good faith, express their concerns, or cooperate in ethics violation investigations and have a zero-tolerance policy against any kind of retaliation. Kordsa considers the sincerity and accuracy of an individual’s intention when reporting a concern, even if the report is later found to be baseless. Consequently, any form of adverse treatment or retaliation against the reporter will lead to disciplinary measures, which may extend to termination of employment and/or contractual agreements.

Comprehensive details about the Kordsa Ethics Hotline are available on our official [website](#).

Thorough explanations regarding our business ethics management processes are accessible on our [website](#).





## Kordsa Code of Business Ethics

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

## Anti-Corruption and Anti-Bribery Policy

The details of our anti-corruption and anti-bribery management approach are explained on our [website](#).

Explanations on how to report an incident through Kordsa Ethics Hotline can be found on our [website](#).

## Compliance Management

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

Three years performance data of business ethics, anti-bribery and anti-corruption and compliance are given [here](#).

## Highlights of Business Ethics and Compliance from 2022

A total of 1,017 employees underwent ethics training, with an average duration of 90 minutes, incorporating a dedicated section on human rights awareness. 69 employees participated in Competition Law training, averaging 120 minutes. For information security, 1,339 employees received an average of 15 minutes of training. Furthermore, 78 employees were engaged in personal data protection training, which lasted an average of 27 minutes. 207 employees completed diversity training, with an average duration of 90 minutes.

As a testament to Kordsa's commitment to an ethical workplace environment, we introduced the Kordsa Ethics Hotline on a global scale. This platform empowers our stakeholders, including employees, customers, and business partners, to confidentially submit their reports and complaints anonymously. This process is accessible through various phone numbers in different countries, particularly those in which we have a presence or online, providing stakeholders the freedom to communicate in their preferred language. Throughout 2022, a total of eight ethics-related notifications were received. Of these, six notifications have been successfully addressed, while two are currently under investigation.

## Legal and Compliance Department Activities

### Türkiye

- Live online business ethics training was delivered to our employees to reinforce understanding and adherence to the Code of Business Ethics. Gender-based violence awareness training was also conducted to promote a fair and equitable workplace culture.
- As part of our competition law compliance program, we provided

live online training for employees and conducted internal audits to ensure compliance with competition laws.

- Internal audits were conducted to enhance Information Security and compliance with Personal Data Protection Law and related regulations and updated our policies and procedures.
- In addition to the existing Standard Terms of Sale which we implemented in 2021, we further prepared implemented Standard Terms of Purchase in 2022.
- A refreshed version of the Statement on Code of Business Ethics was created to align with evolving compliance and sustainability trends. It was made accessible on our website and proactively communicated to business partners. This practice continued throughout 2022.
- Demonstrating our commitment to ethical and compliant business practices, we began incorporating new articles on sustainability commitments into certain supply contracts as part of our ethics and compliance culture.
- As part of our sanctions and export controls compliance program, we implemented a third-party screening program by engaging a service provider in 2022. We communicated with all subsidiaries to assess whether any dealings had occurred with restricted or high-risk countries in 2022 and obtained their feedback.
- Contract literacy training was conducted for employees to foster legal awareness within the organization and enhance their understanding of basic legal matters.
- The establishment of our direct subsidiary in Germany, Kordsa Advanced Materials GmbH, was successfully completed, further expanding our global presence.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## USA

- The merger of our USA subsidiaries Advanced Honeycomb Technologies and Axiom Materials Inc. under Axiom Materials Inc. was successfully finalized.
- We prepared the documentation related to the transaction between Kordsa Inc. and the Italian company Microtex Composites S.r.l. on the acquisition of 60% of the said company's capital shares by Kordsa Inc and provided legal support for the closing of the deal.
- Gender-based violence awareness training sessions were conducted for certain employees.
- We continued our work focused on ensuring legally compliant data transfers to Kordsa Türkiye from US subsidiaries in accordance with the applicable personal data protection regulations.

## Indonesia

- The legal and compliance department at Indo Kordsa is crucial in ensuring that the organization follows all relevant laws and regulations that apply to a publicly traded company. These include Company Law, Foreign Companies Regulation, and Investment Law. In Indonesia, regulatory oversight over key business activities primarily resides with two major government entities: the Ministry of Industry and the Indonesian Financial Services Authority.
- Throughout 2022, the legal and compliance department at Indo Kordsa authored and released 22 reports encompassing corporate governance, corporate law, and capital market regulations.
- We successfully finalized the merger of our Indonesian subsidiaries, PT Indo Kordsa Tbk and PT Indo Kordsa Polyester under PT Indo Kordsa Tbk
- Gender-based violence awareness training sessions were conducted for certain employees.

## Thailand

- In Thailand, our legal and compliance processes are overseen by our Global Legal and Compliance department. Our work encompassed various aspects, including ensuring compliance with personal data protection laws, providing support for contractual matters, and implementing general purchasing terms.
- Gender-based violence awareness training sessions were conducted for certain employees.

## Brazil

- The Legal and Compliance team in Brazil oversees the legal and compliance matters under the supervision of the Global Legal and Compliance team.
- Our efforts within the realm of personal data protection and cybersecurity included convening meetings of the Personal Data Protection Committee, releasing the Personal Data Protection Policy, updating employment and service contracts to align with personal data protection regulations, and conducting internal communications to promote awareness of personal data protection and information security.
- In the domain of occupational health, safety, and environment, we collaborated with relevant institutions to address various crucial aspects, such as the technical report on environmental management, activity permits related to environmental factors, and the solid waste management program.
- We provided comprehensive training to all employees on the Code of Business Ethics, organized training sessions to prevent harassment, facilitated internal communications to enhance ethics awareness and delivered ethics training through an online learning platform.
- The implementation of a standard supply contract for local suppliers was initiated, and general purchasing conditions were introduced.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

<b>Name of Law</b>	<b>Law of the Republic of Indonesia No. 11 of 2020 on Job Creation</b>
<b>Impact</b>	Several regulatory measures have been introduced to enhance the ease of investing and conducting business in Indonesia. This law, enacted in 2020, aims to promote investments and foster job opportunities through streamlining the licensing process.
<b>Progress in 2022</b>	Several adjustments to procedures related to employment such as termination and benefits were made.
<b>Name of Law</b>	<b>Personal Data Protection Law (Indonesia)</b>
<b>Impact</b>	Law No. 27/2022 pertaining to safeguarding personal data has been enacted in Indonesia in October 2022 and the Indonesian government works on the secondary legislation.
<b>Progress in 2022</b>	While we were granted a two-year window for compliance with this legislation, Indo Kordsa has already initiated efforts to align our data transfers and associated processes with the requirements of the law.
<b>Name of Law</b>	<b>Personal Data Protection Law (Thailand)</b>
<b>Impact</b>	Taking effect from June 1, 2022, the Personal Data Protection Law has shaped our compliance endeavors in adherence to Thai local regulations.
<b>Progress in 2022</b>	Throughout 2022, we convened working committee sessions dedicated to personal data protection, extending training to specific employees. Concurrently, we embarked on crafting and rolling out a comprehensive company policy, alongside an array of documents, to firmly address personal data protection concerns.
<b>Name of Law</b>	<b>Personal Data Protection Law (Brazil)</b>
<b>Impact</b>	The legislation's implementation continues to be shaped in Brazil. It is of utmost importance to continue cultivating a corporate culture that prioritizes compliance with the regulations outlined in the Personal Data Protection legislation. We are committed to following the rules and guidelines established by the Brazilian Data Protection Authority.
<b>Progress in 2022</b>	Our activities have encompassed a range of initiatives in the domain of personal data protection and information security. These include convening Personal Data Protection Committee meetings and making the Personal Data Protection Policy publicly available. Moreover, our commitment to safeguarding personal data has manifested through actions like revising employment and service contracts and orchestrating internal communications to enhance awareness regarding the personal data protection and information security. An intra-group data transfer agreement was signed with Kordsa Türkiye.
<b>Name of Law</b>	<b>Law 14.457/22 (Brazil)</b>
<b>Impact</b>	This legislation was designed to foster parental support, enhance the working environment for women, and combat workplace harassment.
<b>Progress in 2022</b>	Our Brazilian subsidiary is already compliant with most of the obligations mandated by the law, including the establishment of an ethics hotline and an internal committee dedicated to preventing harassment and ensuring safety. We are currently evaluating implementation of other activities authorized by the law, such as entering into agreements with schools to support parenting.
<b>Name of Law</b>	<b>Personal Data Protection Law (California/USA)</b>
<b>Impact</b>	This law outlines the regulations that companies operating within the state of California which meet specific criteria must adhere to when they process the personal data of individuals.
<b>Progress in 2022</b>	We have duly executed the necessary data transfer agreements in accordance with the pertinent legislation to facilitate intra-group data transfers.

# SECTORAL AND GLOBAL TRENDS

“ In our risk and opportunity assessment process at Kordsa, we go beyond internal risk monitoring. We also stay attuned to global shifts and transformations, ensuring our company’s readiness for the future by incorporating external variables such as global challenges, sectoral trends, and potential legislative revisions. ”

## Mobility Trend

In Kordsa, we closely follow the developments and trends in mobility in the world, due to its relationship with our products and solutions in the fields of tire reinforcement and composites. The appeal to electric vehicles is increasing very rapidly on both the manufacturer and the consumer side. Electric vehicles with low carbon emission are playing a crucial role in the future of mobility.

### Kordsa’s Actions:

As Kordsa, we follow the mobility trends closely and develop materials that enable the vehicles to be lighter in weight and so create lower carbon emissions.

## New Technologies and Digitalization

One of the most striking power 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.

### Kordsa’s Actions:

The steps that Kordsa takes toward new technologies and digitalization are available in detail under [Technology & Digitalization](#) topic of our report.

## Legal Developments

The ongoing global regulations like EU Green Deal and the new regulations that were introduced in 2022 in the countries we operate, their impact on Kordsa’s activities and the actions Kordsa took are available under [Business Ethics and Compliance](#) topic in our report.

## The EU Green Deal and The Developments in Carbon Boarder Adjustment Mechanism

Addressing and acclimating to climate change, which occupies priority status in the World Economic Forum’s Risk Perception Survey, is vital in the present era. The shift towards a low-carbon economy and the increasing impetus behind green transformation policies have firmly positioned climate change-related measures at the forefront of the global economic and trade discourse.

The Green Deal roadmap announced by the EU in 2019 lays out the actions to be taken to achieve the target to become the first zero emission continent by 2050. The EU officially announced that they will reduce greenhouse gas emissions by 55% compared to the 1990 levels by 2030.

Our Ministry of Trade prepared the “Green Deal Action Plan” in 2021 which aims the adaptation to combatting climate change policies and serves as a roadmap that will reinforce our competitiveness in exporting.

Comprising 32 targets and 81 actions under nine main topics, the “Green Deal Action Plan” aims to support our country’s transition to a sustainable and resource efficient economy in line with its development goals collateral to the changes and transformation that are taking place in the international trade and economy.

With the Turkish Parliament’s ratification of the Paris Agreement back in November 2021, we are expecting important legislations and directives due to the country obligations and export requirements in the upcoming period.

We forecast that the suitable economic environment will develop for Türkiye to subsidize R&D projects in line with its carbon neutral by 2053 target and turn to clean energy investments in all sectors and the lenders to allocate funds to technologies that will develop this. Kordsa diligently tracks these advancements across all the regions where it conducts operations, striving to synchronize its endeavors accordingly.

### Kordsa’s Actions:

Our Legal & Compliance Department is following the national and international green transition policies and measures carefully and offering legal advice to the teams of Sustainability, R&D and Business Development on environmentally responsible policy studies. In 2022, we undertook a comprehensive impact analysis study concerning emission trading systems and carbon taxation regulations across all the regions where Kordsa operates.

The reduction targets Kordsa has set in transition to low carbon economy are available in [ESG Performance Scorecard](#) section of our report.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ESG RISK MANAGEMENT

“ At Kordsa, we manage all environmental, social and governance factors that may create risks and actions to prevent them in accordance with our strategies. ”

At Kordsa, we ensure that the risks we take align with our Strategic Initiatives outlined in our Strategy House. We make informed operational and financial decisions in accordance with our strategy while prioritizing risk awareness. We share the identified risks with all pertinent units and ensure that internal stakeholders incorporate risk analysis into their decision-making processes.

Kordsa’s risk management framework has been meticulously structured in accordance with globally recognized standards such as the COSO (Committee of Sponsoring Organizations) and ISO 31000. At the top of our risk management structure is the Early Detection of Risk Committee, which reports directly to the Board of Directors. This committee provides counsel and recommendations to the Board on identifying potential threats that could compromise the company’s viability, operations, and continuity. It also advises on the implementation of necessary measures to alleviate the impact and likelihood of identified risks. In 2022, the Early Detection of Risk Committee convened on six occasions.

The Global Risk Department, overseen by the CFO within the Finance Group Management, plays a pivotal role. The Global Risk Department, in collaboration with the entity risk responsables assigned to the various business units, is tasked with identifying risks within the risk management framework. These risks are then prioritized based on impact and probability assessment criteria. The department is also responsible for implementing uniform control and monitoring procedures across all business units, as well as coordinating and overseeing these activities.

The Global Risk Department employs scenario modeling, and Monte Carlo analyses to evaluate the financial impact of critical upcoming risks worldwide, customizing their approach for each business unit.

## WEF World Economic Forum Global Risks Report

The World Economic Forum’s annual Global Risks Report identified eight environmental and social risks among the top 10 priorities for 2022. The Risk Management Department at Kordsa thoroughly assessed the risks highlighted in the WEF Risk Report to determine their potential impact on Kordsa’s operations. We created plans to take proactive measures against potential risks that could have a significant impact. We implemented specific actions through our insurance management to address these risks effectively.

### Short Term (2 years)

1	Cost-of-living crisis
2	Natural disasters and extreme weather events
3	Geo-economic confrontation
4	Failure to mitigate climate change
5	Erosion of social cohesion and societal polarization
6	Large-scale environmental damage incidents
7	Failure of climate change adaptation
8	Widespread cybercrime and cyber insecurity
9	Natural resource crises
10	Large-scale involuntary migration

### Long Term (10 years)

1	Failure to mitigate climate change
2	Failure of climate-change adaptation
3	Natural disasters and extreme weather events
4	Biodiversity loss and ecosystem collapse
5	Large-scale involuntary migration
6	Natural resource crises
7	Erosion of social cohesion and societal polarization
8	Widespread cybercrime and cyber insecurity
9	Geo-economic confrontation
10	Large-scale environmental damage incidents

Risk categories

Economic

Environmental

Geopolitical

Societal

Technological



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# ESG RISK MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

WEF Short Term Risks	Kordsa's Approaches
WEF 2: Natural disasters and extreme weather events	Related Insurance Renewals Actions to mitigate/eliminate the impacts of natural disasters for each business
WEF 4: Failure to mitigate climate change	<b><u>Emissions (Carbon) Management</u></b>
WEF 7: Failure of climate change adaptation	<b><u>ESG Risk Management</u></b>
WEF 8: Widespread cybercrime and cyber insecurity	<b><u>Cyber Security &amp; Infrastructure</u></b>
WEF 9: Natural resource crises	<b><u>R&amp;D and Innovation</u></b> R&D activities in the field of alternative and sustainable raw materials

## Infectious Diseases/Pandemic

### Risk Factors

Potential risk factors have been identified, including the emergence of vaccine-resistant or highly contagious variants that could impact public and employee health, as well as the potential for supply chain disruptions that could affect Kordsa's operational and financial performance. It has been demonstrated in recent years that the current measures have effectively detected active cases and prevented internal transmission.

### Measures Taken and Control Activities

- The Covid-19 Executive Committee within Kordsa closely monitors developments in operational regions and implements additional control measures as needed.
- Employee vaccination rates are actively promoted and monitored.
- Preventive and protective measures are enforced in all enclosed work areas, encompassing disinfection, isolation, quarantine, social distancing, remote work arrangements, and more.

## Facility Security

### Risk Factors

Potential risk factors for Kordsa's production facilities in various regions include natural disasters like earthquakes, extreme droughts, floods, and man-made threats such as fires. Our commitment to facility safety and employee well-being aligns seamlessly with our 'Occupational Health, Safety, and Environmental' principles.

### Measures Taken and Control Activities

- Every year, we seek guidance from expert risk engineers through risk engineer field visits facilitated by insurance companies. (Notably, in 2022, these visits yielded no significant findings across different business units.)
- We foster knowledge sharing between our different facilities, promoting the dissemination of best practices and lessons learned.
- A meticulous assessment of existing security measures is regularly conducted. If necessary, investments are initiated to bolster protective measures and ensure facility security remains comprehensive and effective.

## Critical Risks with Global Impact

In our 2022 evaluation, we have identified and prioritized six critical risks. These risks have been categorized as 'high criticality risks' and aligned with strategic initiatives:

Strategic Initiatives	Risks
Effective Finance and Risk Management	Infectious Diseases/Pandemic Facility Security
Commercial Excellence	Raw Material Availability Global Disruptions in Logistics Services
Growth in Emerging Industries	Customer Dependency
Excellence in Sustainability	Physical Impacts of Climate Change and Possible Legislative Adjustments in the Process of Compliance with ESG Objectives and Regulations

During the year, we have identified several significant 'Emerging Risks'. These include the ongoing war between Russia and Ukraine, rising tensions in global geopolitics, concerns about energy shortages in Europe, increasing inflation, and the potential for worldwide economic policies to exacerbate the global recession. We are also aware of the challenges posed by climate change-driven transition risks and evolving customer expectations within the context of sustainability.



## Raw Material Availability

### Risk Factors

We have identified several risk factors that could impact the availability of raw materials for Kordsa's products. These risks include a limited number of suppliers being able to meet our high quality and safety standards, potential disruptions to global supply chains caused by Covid-19, and possible changes to supplier production and shipping processes.

### Measures Taken and Control Activities

- Exploration and identification of alternative or substitute suppliers for primary raw materials, coupled with securing essential customer approvals; this initiative is complemented by collaborative efforts with suppliers in proximate regions as part of the localization project.
- When needed, procurement from spot markets is pursued alongside the efficient transfer of raw materials among different Kordsa locations.
- Dedicated R&D undertakings are conducted to establish new sources of alternative raw materials.
- Streamlining of raw material requirements within our enterprises through the implementation of inventory management and global operational planning practices.

## Global Disruptions in Logistics Services

### Risk Factors

Kordsa relies on external logistics services from various companies for the procurement of diverse raw materials, spare parts, and equipment, the movement of raw materials and semi-finished goods, as well as the distribution of finished products to customers.

We have pinpointed potential risk factors, including unexpected disruptions such as global logistics companies not yet regaining their pre-pandemic shipping capacities, the Suez Canal obstruction caused by the Evergreen ship leading to months of transit halt, and the likelihood of diminished road transportation due to pandemic-related constraints or strikes.

### Measures Taken and Control Activities

- Gaining customer approvals for locally situated suppliers' products, minimizing lengthy logistics routes.
- Efficiently managing transportation requirements through the utilization of inventory management and global supply planning practices.
- Exploring alternate transportation pathways or deploying air shipments in emergency situations.

## Customer Dependency

### Risk Factors

With an extensive network of production facilities spanning various regions, Kordsa benefits from the capacity to cater to both local markets and global clientele. In addition to local customers, a significant portion of Kordsa's revenues is generated from sales to

six global tire manufacturers' factories in or near the countries where Kordsa operates. Aligned with our core value of 'Customer Orientation,' we prioritize customer satisfaction through a keen comprehension of their needs and expectations, aiming to deliver prompt and precise solutions. However, we recognize the potential vulnerability of Kordsa's operations to fluctuations in market dynamics or disruptions within customers' own activities.

### Measures Taken and Control Activities

- Maintaining sales volumes proportionate to customers' market share; this involves ensuring that sales volume corresponds closely with customers' shares in both global and local markets. Vigilantly overseeing a balanced distribution across diverse product categories such as nylon and polyester.
- Monitoring incremental sales to additional value-generating customers within local markets.
- Fostering product-portfolio diversification by driving substantial growth within the composite and construction reinforcement sectors.
- Executing collaborative product development initiatives with select customers.
- Apart from the customer-conducted audit results, communicating customer demands and expectations across all pertinent departments.

## Physical Impacts of Climate Change and Possible Legislative Adjustments in the Process of Compliance with ESG Objectives and Regulations

### Risk Factors

Sustainability lies at the heart of Kordsa's strategic vision, with concerted efforts made across procurement, supply, and production processes to ensure social and environmental sustainability throughout their life cycles. Kordsa's global production sites, as well as our customers and suppliers spanning various regions, face potential exposure to extreme weather events, floods, or droughts induced by climate change. These physical impacts can potentially disrupt raw material sourcing, production, and sales operations. Additionally, we recognize a risk associated with the possibility of significant changes in legislation or consumer preferences as the economy transitions towards a low-carbon future. Detailed insights into the risks identified and the sustainability-related measures we've undertaken can be accessed in the Kordsa [CDP Climate Change](#), and [CDP Water Program](#) reports.

### Measures Taken and Control Activities

- Strategically fortifying facilities against climate change-driven natural disasters through meticulous planning and long-term protective investments.
- Vigilantly tracking global ESG regulations and updates to identify emerging risks proactively.
- Demonstrating dedication to Science Based Targets initiative (SBTi) with the formulation of corresponding action plans.
- Crafting a comprehensive roadmap towards achieving the 2050 Net Zero objective, accompanied by clear short, medium, and long-term targets.
- Sustaining reporting to national and international reporting frameworks, including CDP, EcoVadis, Borsa İstanbul, etc.

# SUSTAINABILITY MANAGEMENT

As a global reinforcement brand, we conscientiously steer our business in alignment with our sustainability objectives and our profound responsibility to the diverse societies and environments in which we operate across various regions.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022





About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

“ Our understanding of sustainability comprises of growing with our R&D and technology investments in our three main business areas, supporting the constant development of our talented human resources, using natural resources responsibly and creating sustainable value for all our stakeholders and society through our social development projects. In all geographies we operate in, we conduct our operations in full compliance with the laws and with our corporate ethical values with the sense of social and environmental responsibility we spread in all our employees.

Thanks to our expertise and innovative approach we contribute to the transformation of the world of today and future into a more sustainable one. We reduce fuel consumption by reducing tires rolling resistance, help production of lighter vehicles through our composite technologies, provide sustainable building projects with construction reinforcement technologies. Science and innovation continue to remain at the core of our business model. ”

## AWARDS and ACHIEVEMENTS

### Kordsa Achieves Gold Medalin EcoVadis Assessment!

Kordsa has been awarded the Gold Medal by EcoVadis, the world’s foremost sustainability rating organization operating in 160 countries across more than 200 industries, for its exceptional performance in the categories of Environment, Labor & Human Rights, Ethics, and Sustainable Purchasing.

### Kordsa took places in CDP A lists

Kordsa has reaffirmed its position in the prestigious Global A list within the CDP Water Program rating and has secured an A rating in the CDP Supplier Relations assessment.

# THE LAST THREE YEARS OF OUR SUSTAINABILITY JOURNEY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

<b>2022</b>	Were included in the 'BIST Sustainability 25 Index', created by Borsa İstanbul for the first time in 2022, consisting of companies with the highest sustainability performance in Türkiye.
	Were included in the Global A list for the second time in the CDP Water Program. Furthermore, were recognized with a B score in the CDP Climate Change Program, while our engagement in the CDP Supplier Relations assessment garnered an impressive A rating.
	Were honored with the EcoVadis Gold Medal mirroring our achievement across the previous year's Environment, Labor & Human Rights, Ethics, and Sustainable Procurement categories.
	Diligently monitored and advanced action plans across all our facilities within the scope of our comprehensive decarbonization roadmap, collaborating closely with regional teams, throughout 2022.
	Commenced the process of seeking approval for our Science Based Targets Initiative (SBTi) objectives.
<b>2021</b>	Won the Golden Trophy in 2021 ARC Awards with our 2019 Sustainability Report.
	Became a member of SKD Turkish Business Council of Sustainable Development Association's Circular Economy Platform.
	Supported the Turkish translation of the ERM document published by WBCSD in cooperation with COSO, as a member of SKD Türkiye Sustainable Finance and Risk Management Working Group.
	Increased our score in CDP Water Program Score once again in 2021 and had ourselves included among the 118 companies in the Global A list, becoming one of the three Turkish companies included in. We held on to our A- score in the CDP Climate Change Program like last year. We were also awarded "A" score in the CDP Supplier Engagement Rating, which assesses on what scale a company includes its suppliers in their combat climate change process.
	Pledged to the Science Based Targets Initiative. (SBTi)
	Won the first prize in Intercompany Collaborations category at the Sustainable Business Awards with the environmentally friendly CoKoon technology Kordsa developed in collaboration with Continental.
	Received the Global Recycled Standard (GRS) certificate for our products containing recycled materials, which we obtain by recycling our scraps.
	Participated in UN Global Compact Climate Ambition Accelerator and Target Gender Equality programs.
<b>2020</b>	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. (* Conformity with the Aviation, Space, and Defense Industry Quality and Risk Management Standard)
	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.
	Won the Silver Award for Best Materiality Reporting at Asia Sustainability Reporting Awards with our 2019 Sustainability Report.

Sustainability milestones before 2018 can be found in our [2020 Sustainability Report](#).

# SUSTAINABILITY MANAGEMENT STRUCTURE

“ Our performance on our sustainability priorities is embraced at the level of the 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. ”



development of corresponding ESG policies, subject to the Board’s approval and subsequent public disclosure on our official website. The Kordsa Sustainability Policy, unveiled in 2022, can be accessed [here](#).

Located at the corporate headquarters, the Sustainability and Marketing Communications Directorate operates under the leadership of the Chief Global Sales and Marketing Officer as of 2022. This directorate works in close harmony with both the Sustainability Working Groups and Regional Sustainability Teams spanning various countries. Its primary objective is to ensure coordination between departments and executive management to achieve the company’s objectives. Furthermore, the directorate is pivotal in executing sustainability-driven strategies across the organization.

Regional Sustainability Teams diligently monitor the established performance indicators designed to actualize sustainability goals envisioned within our strategic plans. This oversight extends to meticulously tracking and executing projects devised to attain these objectives in collaboration with pertinent regional departments.

At Kordsa, the Board of Directors, our highest governing body, holds accountability for our performance within the scope of our sustainability priorities. The Board of Directors considers the environmental-social-economic impacts of the company’s activities and the principles in this regard when determining the corporate governance strategy.

Our material sustainability topics periodically reviewed within the company every two years, guide the

formulation of targets. These targets are entrusted to the Kordsa Leadership Team, composed of our CEO and Chief Officers for periodic review and renewal as needed.

Reporting to the Board of Directors, our CEO, in collaboration with the Kordsa Leadership Team, discerns critical environmental, social, and governance (ESG) issues, along with potential risks and opportunities. These insights culminate in the



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# SUSTAINABILITY MANAGEMENT STRUCTURE

These teams report their sustainability performance indicators through the Quarterly Sustainability Performance Indicators Tracking Program. Quarterly sustainability performance tracking reports, comprised through the monitoring and evaluation of targets, are crafted by the Sustainability and Marketing Communications Directorate.

The Kordsa Leadership Team orchestrates quarterly evaluations of our sustainability targets and roadmap. Integral to Kordsa's structure, Sustainability Working Groups are responsible for devising roadmaps to realize sustainability targets and closely monitor and oversee the outlined action plans. Within this framework; Sustainable Employment, Sustainable Production, Sustainable Products, Sustainable Supply Chain, and Community Development Working Groups steadfastly pursued projects and initiatives aligned with their respective targets. In 2022, these groups reviewed performance indicators every three months in accordance with the principles that guide their functioning.

## Kordsa Sustainability Road Map 2050

### 2020

We decided to include the calculation of Scope 3 emissions at all facilities in the 2020 studies. Our 2020 Scope 3 data is included in the **Emissions (Carbon) Management** section.

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.

We have determined that eight of the Sustainable Development Goals directly overlap with our business processes; SDG4: Quality Education, SDG 5: Gender Equality, SDG 6: Clear Water and Sanitation, SDG 8: Decent Work and Economic Growth, SDG 9: Industry, Innovation, and Infrastructure, SDG 12: Responsible Production and Consumption, SDG 13: Climate Action, SDG 17: Partnership for Goals

### 2021-2022

On our report's **ESG Performance Scorecard** page, we have included the latest updates on our sustainability goals for 2025, 2030, and 2050, which were revised in 2021. Furthermore, the page highlights our progress toward achieving these goals in 2022.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# COMMUNICATION WITH OUR STAKEHOLDERS

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

## Communication With Our Stakeholders

We define our stakeholders as people and organizations influenced by our activities and impact our company to achieve its business targets.

Since the first stakeholder prioritization studies in 2015, we review our stakeholders in terms of their priority, biannually. 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. These groups are given in **the Key Stakeholders** chart.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# COMMUNICATION WITH OUR STAKEHOLDERS



62% 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

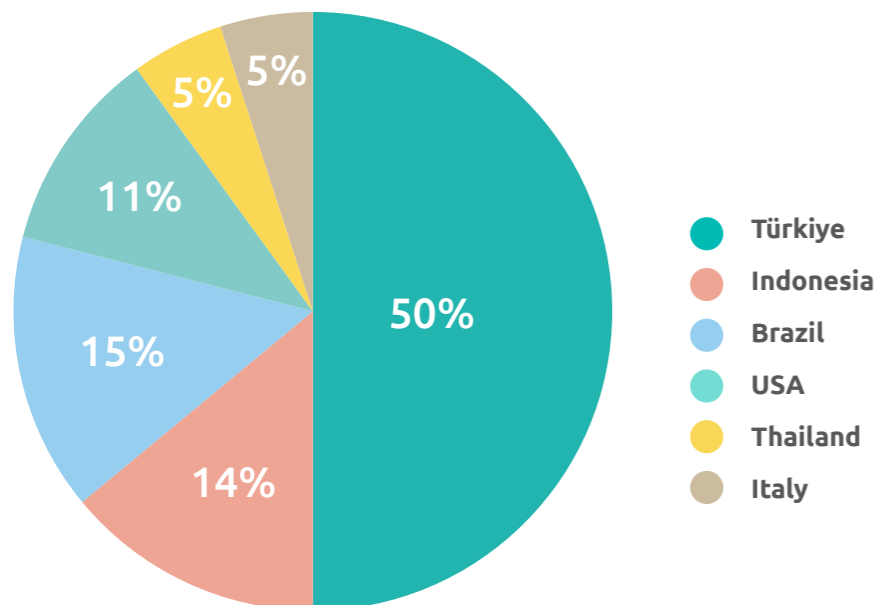
Since 2015, we have been conducting a sustainability assessment survey annually to raise the awareness of our employees on sustainability and domains of our company.

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.

A total of 526 office employees actively engaged in our survey, contributing to the assessment of the year 2022; this marked a notable surge of 53% when contrasted with the preceding year's participation. Among the respondents, 29% comprised experienced professionals, including engineers, specialists, supervisors, managers, directors, and executive management, each boasting a tenure of over 15 years at Kordsa. Impressively, 45% of the participants provided their insights in the sustainability survey for the very first time.

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

## Kordsa Employee Sustainability Survey Participation



## Employee Feedback on Improvement Areas

Salaries and Benefits	17 people
Employee Well-being: Physical and Mental Health	5 people
Promoting Diversity and Equal Opportunity	3 people
Energy-Emission-Waste Management	10 people



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## Sustainability Communication with Our Customers

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 regarding sustainability.

Since its raised as an important feedback by our customers we included 'sustainability in the supply chain' in our reporting process. We have been conducting supplier sustainability performance evaluation program for a growing number of suppliers since 2017. The details are presented under **Sustainable Supply Chain Management** topic of the report.

Another priority issue from our customers' feedback was 'human rights', which was also brought up in BIST Sustainability Index evaluation. As a response, we launched **Kordsa Human Rights Policy** effective for all operations from March 2018.

In 2020, we carried out interviews with customers from three different product groups with whom we conducted an online sustainability prioritization survey. 36% of the participating customers were from tire reinforcement, 22% were from composites and 43% from construction reinforcement technologies market. We did not conduct a specific survey in 2021 regarding this matter, but we gathered feedback through our standard communication channels. The input from 10 customers who participated in the 2022 materiality survey has been incorporated into the **Material Sustainability Topics** section.

In 2022, we documented the feedbacks received from our customers and outlined the corresponding actions undertaken by Kordsa in response. These details can be found in the subsequent pages.



# COMMUNICATION WITH OUR STAKEHOLDERS

## Expectations of Our Tire Reinforcement Customers

## Our Actions and Future Plans

Life Cycle Assessment (LCA)	The Life Cycle Analysis (LCA) study for tire reinforcement products at our Türkiye plant was finalized in 2022
Supply chain ESG assessment	Our Supply Chain Sustainability Program continues
Prepare EcoVadis Report	Preparing our EcoVadis Report annually
Monitor and reduce GHG emissions	In September 2021, we pledged our commitment to the Science Based Targets Initiatives (SBTi) and our targets approved
Monitor and reduce water consumption	We have target to reduce our water footprint
Prepare CDP Reports (Climate Change & Water Security)	Preparing CDP reports since 2014
Use sustainable materials in production	<p>Yarn and fabric products with recycled NY6.6 content, which we produce by recycling Kordsa's nylon production scraps, are positioned at customers.</p> <p>Ongoing R&amp;D projects for appropriate sources for both recycled and alternative sustainable materials.</p> <p>We have successfully conducted production trials using post-consumer recycled polyester chips sourced from suppliers.</p>
Propose low environmental footprint products / Use bio-based materials in production.	Evaluating Life Cycle Assessments (LCA) of raw materials from our suppliers / Searching for new sources and testing them
Find out about Kordsa's sustainability approach in detail	Bringing up and sharing Kordsa's sustainability road map during customer visits
Collaborate for environmentally friendly technologies	Continue our cooperation with institutions such as suppliers, customers, universities and H2020 projects.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



# COMMUNICATION WITH OUR STAKEHOLDERS

## Expectations of Our Composite Customers

## Our Actions and Future Plans

Light weighting especially for long-range electric vehicles and aircraft

Meeting and discussing 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 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

Improve manufacturing processes including digital, analytics and sensors.

The assessments indicating that GHG emissions need to be significantly reduced

Working to extend the life cycle of composites with associated enhancement to the articulation of the benefits

Efficient Waste Management

Working on our products to assure that they could be fully re-used or recycled at end of life, with no negative environmental impact

Production of repairable composite structures

Initiated project on repairable composite parts and we continue to discuss with our clients the current development stage and possible uses.

Alternative solutions to disposal of thermoset polymer, usually by incineration at the end of its life

We are working to increase the biological content of resin (reducing CO2 emissions) and reduce the cost of producing recyclable thermoplastic parts. At the same time, we continue our R&D efforts to recycle thermoset composites.

Adherence to legal mandates and transition to sustainable raw material alternatives

We have started product life cycle analyses and continue updating our raw materials and processes based on the results.

Eliminating the use of toxic / hazardous raw materials

At Kordsa, we use raw materials that comply with REACH legislation. We follow updates related to REACH legislation at Kordsa.

Supply Chain ESG Assessment

Our supply chain sustainability program is structured to include our composites business unit.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# COMMUNICATION WITH OUR STAKEHOLDERS

## Expectations of Our Construction Reinforcement Customers

## Our Actions and Future Plans

<p>Environmentally friendly application of reinforcement techniques to buildings</p>	<p>Our construction reinforcement products contribute positively to the environment by preventing the adverse environmental impacts associated with building demolitions. Also, Kratos synthetic fibers have between 40%-70% less carbon footprint compared to steel mesh which further shows the significance of environmentally friendly products that Kordsa has in its portfolio.</p>
<p>Introduction of strengthening methods in buildings without adding extra load</p>	<p>Given that carbon fabric, composed of high-strength carbon yarns, possesses a lightweight and low-density composition, the additional load applied to the surface is practically negligible. Kratos synthetic fiber reinforcement reinforces structures in a much lighter and three-dimensional way compared to steel.</p>
<p>Space conservation post-retrofitting</p>	<p>Reinforcement using carbon fiber polymers results in significantly less area loss than alternative reinforcement methods.</p>
<p>Enhancement of buildings that were not constructed according to their original design, exhibiting application errors, experiencing performance degradation over time, or requiring improved functionality due to a shift in intended usage</p>	<p>The reinforcement efforts to enhance building performance and achieve prescribed safety standards will render building inventory more resilient to earthquakes.</p>
<p>Fast implementation of the requested reinforcement method.</p>	<p>The primary reason for the preference for carbon fiber polymer reinforcement lies in its lightweight and easily applicable properties; this facilitates quicker and more cost-effective implementation compared to the alternative of demolition and reconstruction. The use of synthetic fiber reinforcements provides faster application compared to steel mesh. Less labor work and energy efficiency therefore can be achieved with synthetic fibers.</p>
<p>No magnetic field required</p>	<p>Kratos synthetic fibers do not affect or get affected by magnetic fields with its polymer structure.</p>
<p>Long-lasting and crack-free concrete</p>	<p>Effective crack control at every point of concrete with synthetic fibers with 3-dimensional homogeneous distribution property that they show in the concrete. Synthetic fibers do not corrode, they have high durability against corrosive, alkaline and acidic environments, which makes them long-lasting and durable products. They also have high concrete toughness and impact resistance.</p>



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes




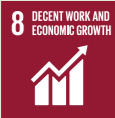
KORDSA  
SUSTAINABILITY REPORT  
2022

# 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 the Covid-19 pandemic. Once accorded periodic prominence, this particular concern has been excluded from next year’s targets due to its lack of direct relevance to our core activities.
- In 2021, with our bold carbon emission and water consumption reduction targets and strong sectoral and academic collaborations, we added SDG 13: Climate Action, SDG 6: Clean Water and Sanitation and SDG 17: Partnerships for the Goals among our focused SDG’s.

UN 2030 Sustainable Development Goals	UN Targets Supported by Kordsa	Related Disclosure Topics Located in the Report
	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. 4.c: Significantly increase the number of qualified teachers through international cooperation for teacher trainings in developing countries by 2030	Community Development Community Development
	5.1: End all forms of discrimination against all women and girls everywhere 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	Employment and Labor Practice Equal Opportunities and Diversity
	6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	Water and Wastewater Management
	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 8.8: Protect labor rights and promote safe and secure working environments for all workers	Sustainable Growth Employment and Labor Practice Talent Management and Organizational Development Human Rights Occupational Health and Safety



- About the Report
- Messages to Our Stakeholders
- Corporate Profile
- Strategy and Governance
- Sustainability Management**

- Sustainability Faciliators at Kordsa
- Economy and Growth
- Environment and Climate
- Employees and Community
- Performance Indicators
- Annexes

# MATERIAL TOPICS AND UN 2030 GLOBAL GOALS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

**Sustainability Management**

Sustainability Facilitators at KORDSA

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## 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 and Innovation Technology &amp; Digitalization</p> <p>R&amp;D and 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 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 and Wastewater Management</p> <p>Raw and Other Materials Management Emissions (Carbon) Management</p> <p>Waste Management</p>
	<p>13.2 Integrate climate change measures into national policies, strategies, and planning</p> <p>13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning</p>	<p>Emissions (Carbon) Management</p> <p>Emissions (Carbon) Management</p>
	<p>17.6: Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, at the United Nations level, and through a global technology facilitation mechanism</p> <p>17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships</p>	<p>R&amp;D and Innovation</p> <p>R&amp;D and Innovation</p>

# 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 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. The details are in the following tables. ”

## SASB Auto Parts Standard 2018 SASB Aerospace Defense Standard 2018 SASB Construction Materials Standard 2018 Common Sustainability Topics and KPIs

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

## 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	<b><u>Technology and Digitalization</u></b>
Materials Sourcing	Description of the management of risks associated with the use of critical materials	<b><u>Sustainable Supply Chain Management</u></b>
Business Ethics	Total amount of monetary losses as a result of legal proceedings associated with incidents of corruption, bribery, and/or illicit international trade	<b><u>Business Ethics and Compliance</u></b>

## SASB Aerospace Defense Standard 2018 Other Sustainability Topics and KPIs

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

## SASB Construction Materials Standard 2018 Other Sustainability Topics and KPIs

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	<b><u>Emissions (Carbon) Management</u></b>
Water Management	(1) Total fresh water withdrawn, (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress	<b><u>Water and Wastewater Management</u></b>
Product Innovation	Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production	<b><u>R&amp;D and Innovation</u></b>



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SUSTAINABILITY FACILITATORS AT KORDSA

At Kordsa, we indicate R&D, innovation, technology, and digitalization as facilitators of our sustainability targets, and we continuously invest and render projects in these fields.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

**Sustainability  
Facilitators at Kordsa**

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SUSTAINABILITY FACILITATORS AT KORDSA



We develop innovative, safer, more efficient, and sustainable products for a more convenient life in Kordsa with our constantly growing team at our 2R&D centers and 13 plants on 4 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.

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 indicate R&D, innovation, technology, and digitalization as facilitators of our sustainability targets, and we continuously invest and realize projects in these fields.



## Best R&D Center Award for the 4th Time!

### 1st Place Award Among R&D Centers

Kordsa has once again been awarded the title of the Best R&D Center in Türkiye, marking its 4<sup>th</sup> consecutive win at the 9th R&D and Design Centers and Technology Development Zones Summit, a prestigious event orchestrated by the Ministry of Industry and Technology.

## Kordsa Secures Second Place in the IDC Türkiye Future Enterprise Awards!

Kordsa has proudly achieved the second position in the Best in Future of Industry Ecosystems category during the IDC Türkiye Future Enterprise Awards with its innovative Campus Software Offices Initiative.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# R&D AND INNOVATION

“ At Kordsa, our operations encompass advanced materials technologies across 13 facilities in four continents. We engage in tire reinforcement, composite reinforcement, construction reinforcement, thin films and flexible electronics technologies, and compounds (engineering plastics) in 2 R&D centers in İzmit and İstanbul, Türkiye. ”

## Our Approach to R&D and Innovation Management at Kordsa

### Pioneering Future Technologies through Technology Roadmaps

Within our technology centers, our focus is on five core business domains: Tire Reinforcement, Composite Reinforcement, Construction Reinforcement, Thin Films and Flexible Electronics Technologies, and Compounds (engineering plastics). We develop Technology Roadmaps for short-mid-long term through these technology domains, which act as a guide for future technologies by aiming to deliver more competitive and innovative products to our customers, differentiate our products and services, expand our sustainable product portfolio, optimize material, process and equipment

efficiency in production and lead the way in emerging technologies. These roadmaps are crafted by aligning global technology trends, Kordsa's strategies, and customer input. We target sector-specific trends emphasizing sustainability and digitalization to drive future technological advancements.

### Value Generation through Efficient Project and Portfolio Management

Our technology roadmaps are transforming into annual project objectives after our project portfolio review workshops. We categorize projects into three distinct groups within our dynamic R&D portfolio: customer-focused projects, operational excellence development projects, and know-how development projects. Customer-oriented projects are projects with a target Technology Readiness Level (TRL) of 7 or above, in which we develop products by listening, evolving, and changing customer expectations regularly to realize customer expectations. Operational excellence development projects encompass initiatives aimed at enhancing our infrastructure to deliver high-value products to our customers; this involves closely tracking technological trends within production methodologies. On the other hand, know how development projects predominantly involve projects with lower TRL, focused on closely monitoring and adopting emerging technologies.

### Intellectual Property Rights

Our innovative approach to intellectual property rights complements our sustainability-oriented mindset. This approach reflects our commitment to both environmental and societal concerns, emphasizing the well-being of future generations. We safeguard our product intellectual rights through patent and trade secret protection methodologies in a hybrid way while respecting external parties' intellectual property.

### Integrated Approach to Project and Patent Portfolio Management

We manage our project and patent portfolio with an integrated portfolio management approach. In our regular portfolio review workshops, we establish project-specific intellectual property strategies through cross-functional communication. These strategies are seamlessly implemented at every project stage, from inception to product realization.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



# R&D AND INNOVATION

## Facts & Figures on R&D and Innovation in 2022



**63** (İzmit R&D Center)

**12** (İstanbul R&D Center)

**Approved R&D Projects**  
(Ministry of Science, Industry and Technology)



**36** New Application  
**Patent Applications**



**115**  
**Personnel**  
(İzmit R&D Center)

**27**  
**Personnel**  
(İstanbul R&D Center)



TL **210**  
Million

**R&D Expenditures**  
**Including Capex and**  
**Opex**



**59.5%**  
**Sustainability - focused\***  
**R&D Expenditure Ratio**



**11.5%**  
**Ratio of**  
**sustainable**  
**products revenues**  
**to total revenue**  
**(%)**

Defined 64 sustainable products of which 32 are developed by Tire Reinforcement, 18 Composites and 14 Construction Reinforcement Business Units. ✓

\*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

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# R&D AND INNOVATION

## 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

Boğaziçi University	Alanya University
Gebze Technical University	Boğaziçi University
Hacettepe University	İstanbul Technical University
İstanbul Technical University	Sabancı University
İzmir Institute of Technology	KTH, Royal Institute of Technology
Marmara University	Loughborough University (LBU)
Oxford University	Lunds University (ULUND)
Purdue University	National Aerospace University "Kharkiv Aviation Institute"
Sabancı University	Sabancı University
Turkish-German University	Universidad Politécnica de Valencia (UPV)
	Universitatea Tehnică din Cluj-Napoca (UTCN)
	University of Sheffield Advanced Manufacturing Research Centre (AMRC)

## Open Innovation Collaborations

**CoKoon:** CoKoon is an eco-friendly bonding technology co-developed by Kordsa and Continental, which stands as an open-source solution accessible to the industry. Comprehensive insights into the project can be found in the provided [link](#).

**RFID Tag:** Through our collaborative

efforts with SES RFID Solutions GmbH, we are making significant strides in the creation of a compact, pliable RFID tag. This tag is designed to be affixed to vehicle tires prior to the tire vulcanization process, leveraging the prowess of the company's proprietary Radio Frequency Identification (RFID) technology. Notably, we have jointly submitted patent applications for this innovative RFID technology solution. For in-depth insights into this project, kindly refer to our [Thin Films and Flexible Electronics](#) products within the Sustainable Products section.

## FUNDING FROM RESEARCH & INNOVATION INCENTIVE PROGRAMS

### 3 European Union Funded Horizon Project Ongoing:

**PolynSPIRE:** The innovative Horizon 2020 project focuses on the efficient and sustainable recycling of plastics. With 21 partners from 11 countries collaborating, this project successfully converts Nylon66 polymer into raw materials using microwave technology and hydrolysis methods. While conducted on a laboratory scale, this project showcases promising advancements in plastic recycling. More detailed information about this project can be found [here](#).

**DiCoMi Project:** Collaboratively undertaken by Kordsa and Sabancı University, the DiCoMi Project operates within the Horizon 2020 program. This project involves 15 partners from 11 countries, aiming to advance composite material production through three-dimensional printer technology by cross-country secondments of researchers, fostering valuable experience exchange. More detailed information about this project can be found [here](#).

**WhiteCycle Project:** The WhiteCycle Project is an innovative European project to process and recycle PET from complex waste. A unique consortium rallying 16 public and private European organizations working together for more circular economy The WhiteCycle Project consortium has been formed to address this issue and is working to recycle this waste with innovative sorting technologies, enzymatic recycling technologies and manufacturing of new products from these recycled plastics. Its primary objective is the potential to reduce greenhouse gas emissions by approximately 2 million tons. More detailed information about this project can be found [here](#).

### 3 Ongoing TÜBİTAK Projects:

**COMACH:** The COMACH project is focused on development of robotic systems for composite milling through an international network collaboration. This project which has EUREKA label, primarily aims to refine robotic mechanisms to ensure human health during composite cutting, mitigate process-related errors, and integrate these cutting-edge technologies into industrial processes.

**Technology-Oriented Industrial Advancement (TEYDEB 1511) Project:** Aligned with Turkish and European Sustainability Goals, this project earned support under the following title: Production of Bio-Based Polyamide Compounds for Automotive, Electrical & Electronics, and White Goods Sectors, along with Blended Compounds of Bio-Based Polyamides and Polyamide 66.

**NANOSIS Platform:** Pioneered under TÜBİTAK's 1004 Center of Excellence Support Program in 2020, the NANOSIS Platform is thriving in its third year. Amidst six diverse research programs housed within the platform, Kordsa spearheads the 'Development of Nanotechnological Sensors for Health Data Tracking via Wearable Technologies' program. This initiative has provided two distinct projects: 'Development of Flexible Systems for Monitoring Pressure Sore Risks' and 'Advancement of Textile-Based Wearable Systems for Cardiac Data Monitoring.' You can find in-depth information about this platform on its official [website](#).



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

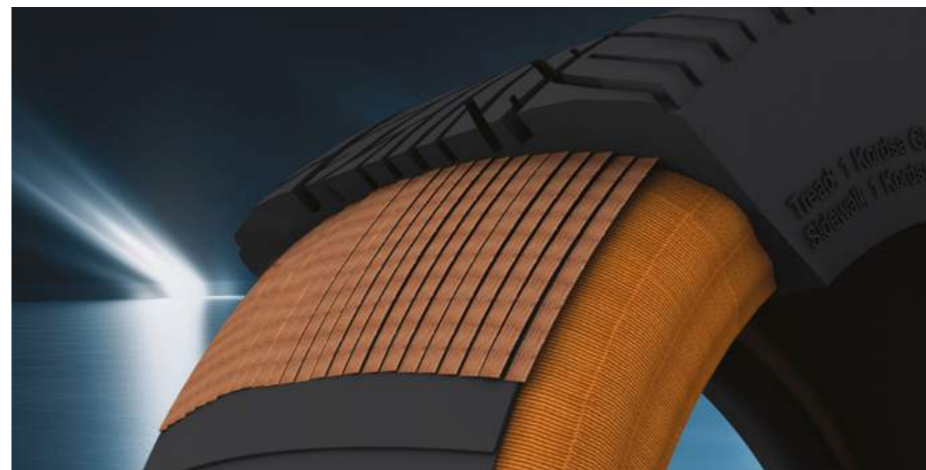
Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# 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. Guided by our robust R&D and innovation strategy rooted in collaborative partnerships, we persistently strive to create cutting-edge products and technologies. Our core objectives encompass sustainable materials and application of circular economy practices.



## 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:

- Efficient and faster production process
- Improved total cost of use

##### Social Gains:

- More safety
- Comfortable driving at high speed

##### Environmental Gains:

- Less material usage opportunity
- Fuel savings by reducing rolling resistance

##### 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

Sustainability  
Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



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 the 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 pride in leading an innovation that will transform the sector we operate in.

**In 2021,** Kordsa started COKOON production on industrial scale. In 2022, 14 new tire cord fabric and tire producers joined the free licensing pool.

Kordsa is aiming to combine 100% Recycled PET cord fabric with COCOON dip technology to serve a whole sustainable approach to the tire reinforcement business.

## DEVELOPMENTS IN TIRE REINFORCEMENT PRODUCTS IN 2022

**BioNY56:** In line with our 2050 sustainability goals, we are investigating bio-based, biodegradable, semi-degradable polyamide materials. We consider NY56 to be a sustainable material because around 50% of its structure is formed of bio-based materials.

**rNY66:** By recycling our internal technological scraps we produce recycled NY66 nylon flake, and by using those recycled nylon material as a raw material we produce recycled nylon content yarn and fabric. Evaluation of recycled NY66 resources other than internal scraps is on our agenda.

According to the life cycle analysis (LCA) 40% recycled material usage instead of 100% virgin raw material usage provide 33% less product level carbon footprint. We also researching for ISCC Plus certification procedures.

**rPET:** We continue to work on producing yarn and cord fabric on an industrial scale, especially with the rPET raw material obtained by recycling, waste PET bottles and textile materials. The assessment process of other rPET sources produced by both mechanical and chemical recycling continues.

**BioPET:** We have made progress in laboratory-scale studies with BioPET raw material obtained using bio-based MEG, and the testing process of products from different sources continues.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

**Sustainability  
Faciliators at Kordsa**

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



<b>Project Name</b>	Chemically Recycled Polyester Raw Materials for Technical Textile Applications
<b>Place and Date</b>	Kordsa Global Technology R&D Center
<b>Objectives and Actions</b>	<p>Our primary aim within this initiative is to explore the viability of usage chemically recycled polyester feedstock for technical textile applications. The findings generated through this endeavor are geared towards facilitating the shift towards a circular economy for plastics. We embarked on a comprehensive review of chemical recycling systems tailored to PET to achieve this.</p> <ul style="list-style-type: none"> <li>• Our investigation encompassed the identification of both local and global suppliers specializing in recycled PET materials.</li> <li>• We procured samples of recycled chips and conducted fundamental analyses and assessments of the material's properties.</li> <li>• Employing Solid State Polymerization kinetics, we undertook a meticulous monofilament study to create recycled PET fibers.</li> </ul>
<b>Results</b>	<p><b>Environmental and Economical:</b> Polyester, specifically polyethylene terephthalate (PET), stands as the third most prevalent polymer utilized worldwide. The strides made through this project facilitate the recycling of PET waste, yielding substantial contributions to the circular economy.</p> <p><b>Social:</b> This undertaking bears socio-economic advantages beyond just environmental gains. It fosters the cultivation of recycling awareness, nurtures a skilled workforce through popularization efforts, spawns new avenues of business.</p> <p><b>Corporate:</b> To protect the world's resources, companies worldwide have developed their own sustainable solutions. This project enables us to realize our business strategies by meeting the expectations and needs of our stakeholders in this regard. At Kordsa, we have been addressing the recycling of PET through R&amp;D studies, and in this project, we focused especially on the chemical recycling method.</p>
<b>Plans for Future</b>	With the successful culmination of this venture, our roadmap extends towards the integration of this technology within our own production processes and novel business ventures.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

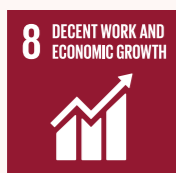
Performance Indicators

Annexes

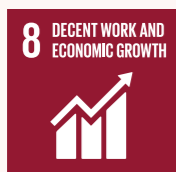
KORDSA  
SUSTAINABILITY REPORT  
2022



<b>Project Name</b>	Mechanically Recycled Polyester Raw Material for Technical Textile Applications
<b>Place and Date</b>	Kordsa Global Technology R&D Center
<b>Objectives and Actions</b>	<p>The recycling of polymers can be categorized into four distinct methods: primary, secondary, tertiary, and quaternary recycling. Within this framework, mechanical recycling proves to be a crucial method involving a series of stages such as waste collection, shredding, washing, drying, extrusion, and culminating in flaking or chip production. Numerous parameters play a pivotal role in altering the physical attributes of PET chips. Our investigation is dedicated to comprehensively exploring the impact of these parameters on the final product's characteristics.</p> <p>Furthermore, this project comprehensively evaluates recycled PET samples sourced from diverse suppliers, focusing on mechanically recycled PET. Our initial strategy involves elevating the physical properties of these recycled PET samples vis-à-vis our conventional virgin polyester samples through an 18-hour solid-state polymerization process. Subsequently, we will embark on spinning studies using the solid-state polymerized chips as distinct entities, meticulously analyzing the mechanical properties of the monofilaments derived from the spinning procedure.</p>
<b>Results</b>	<p><b>Environmental and Economical:</b> Environmental considerations underscore the profound significance of this initiative, as it actualizes circular economy principles while concurrently promoting resource efficiency and reducing greenhouse gas emissions.</p> <p><b>Social:</b> This undertaking bears socio-economic advantages beyond just environmental gains. It fosters the cultivation of recycling awareness, nurtures a skilled workforce through popularization efforts, spawns new avenues of business.</p>
<b>Plans for Future</b>	With the successful culmination of this venture, our roadmap extends towards the integration of this technology within our own production processes and novel business ventures.



<b>Project Name</b>	Next-Generation Polyester Yarn and Cord Fabric
<b>Place and Date</b>	Kordsa Global Technology R&D Center
<b>Objectives and Actions</b>	<p>Polyester is a material predominantly used within the tire reinforcement industry, particularly in passenger car tires. Our pursuit of innovation, acute market awareness, and a steadfast commitment to meeting customer needs has led us to extend our polyester product portfolio with brand-new offerings. Leveraging Kordsa's expansive global reach, we have harnessed customer insights across diverse sectors to craft distinctive, impactful products. Although each of these new products has its own distinctive features, they all share a common purpose of promoting sustainability. Key features encapsulating our overarching objectives include:</p> <ul style="list-style-type: none"> <li>• Utilizing advanced PET with heightened strength and exceptional durability and create lighter tires.</li> <li>• Introducing products that enhance dimensional stability, resulting in prolonged tire lifespan, decreased fuel consumption, and heightened puncture resistance.</li> </ul> <p>Some innovative products have been commercialized at our global sites, while others are undergoing extensive research and development at our R&amp;D sites for further improvement and testing.</p>
<b>Results</b>	<p><b>Economical:</b> These innovations usher in cost efficiencies, presenting opportunities for high-value product sales and localized production benefits.</p> <p><b>Environmental:</b> Our innovations reduce emissions by contributing less fuel consumption. Additionally, extended tire longevity translates to diminished tire waste.</p> <p><b>Social:</b> Our advancements lead to enhancements in road safety, longer tire life, and reduced fuel expenditures.</p> <p><b>Corporate:</b> This pursuit bolsters our market leadership, amplifies our reputation for innovation, and enables the development of high-value patented and trade-secret products, enhancing our corporate know-how.</p>
<b>Plans for Future</b>	Our vision extends to broadening the reach of these products to a diverse clientele and global production sites. Our commitment remains steadfast as we continue developing and expanding our portfolio with various new and innovative products.



<b>Project Name</b>	High Modulus Nylon
<b>Objectives and Actions</b>	<p>Modulus, in simple terms, in tire universe, is a measure of the resistance against elongation under a load. The increase in the cord fabric modulus value has positive direct and indirect contributions to all properties of tire. For this reason, high modulus yarn and cord fabric development studies have gained a lot of value over time and there have been requests from tire manufacturers.</p> <p>This project was determined as a result of joint workshops. A joint development agreement was signed using an open innovation approach, and a new tire design was designed with high modulus yarn and cord fabric on Kordsa side, and a high modulus cord on the customer's side during the project period. The item is the first of its kind for nylon 66 yarn and cord fabric worldwide and patents have been obtained for these technologies. In addition, the developed yarn and fabric were commercialized very quickly after the tire approval by the customer. We support our customers increase their fabric modulus to reduce their compound need for higher speed tires. Up to 40% reduction in rubber compound need is possible.</p>

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

**Sustainability Facilitators at Kordsa**

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

**Sustainability  
Faciliators at Kordsa**

Economy and Growth

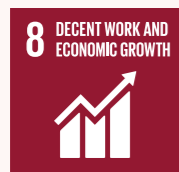
Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



**Project Name** Advancing Double Corded Fabric Production for Tire Applications

**Place and Date** Kordsa Global Technology R&D Center

**Objectives and Actions** Our focal objective has centered on the development of an ecologically sound and sustainable cord fabric aimed at curbing rubber consumption within tire manufacturing.

**Results**

**Environmental:** Elevating the proportion of low-diameter cord within the cord-rubber composite volume can be achieved to reduce tire weight and rolling resistance without loss of tire performance compared to standard cord fabrics. This new development produces lighter tires, less rolling resistance, better fuel efficiency, and lower carbon emissions.

**Economical:** A prominent tire manufacturer wielding a substantial market presence has confirmed the advantageous performance of our double warp fabric through comprehensive tire tests. This resounding endorsement has paved the way for commercialization. This patented, high-value product will be exported to international markets, bolstered by its registered patent in Türkiye, thereby entailing significant tax exemptions.

**Corporate:** The 'double corded fabric,' meticulously developed within our R&D center and fortified with patent protection, serves as a testament to our stature as a distinguished player on the global stage.

**Plans for Future** We are poised to captivate an even broader clientele as we progress ahead.





## 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:** Contributes to the concrete's durability and longer life thanks to its polymer structure and provides labor cost advantages for our customers. Offers easy storability and advantageous logistic costs. Tailored to specific applications, Kratos offers a remarkable time advantage of up to 40%, along with substantial cost savings in overall usage.

**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. By substituting conventional steel wire mesh, Kratos not only bestows structural robustness as a primary reinforcement in concrete but also eliminates the need for labor-intensive steel wire mesh, thereby fostering enhanced occupational safety.

**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 synthetic fiber reinforcement products were granted Made in Türkiye certificate by İstanbul Chamber of Industry, in 2020. We foresee the great advantage of this certificate, especially in government tenders.

In 2021, Kratos Macro received Environmental Product Declaration in accordance with ISO 14025 and EN 15804:2012+A2:2019!

### Kratos Product Carbon Footprint Benchmarking

Kratos Synthetic Fiber Concrete Reinforcement product increases the strength of concrete. Compared to its equivalent steel reinforcement products, the use of Kratos Synthetic Fiber Concrete Reinforcement reduces the carbon footprint of concrete by approximately 40-70%.<sup>2</sup>

Detailed information about Kratos is available [here](#).

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Facilitators at KORDSA

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



## Project Name

Kratos Structural Reinforcement (C-Fabric, Prime Resin, C-Plate, Adhesive)

## Objectives and Actions

Kratos Structural Reinforcement, the latest addition to our product portfolio following Kratos Fiber, introduces a carbon fiber reinforced polymer (CFRP) based structural reinforcement system. Its versatility extends to enhancing the longevity of existing structures and facilitating the creation of more resilient new constructions. This comprehensive system comprises high-strength carbon fabric, pultruded resin pre-impregnated carbon plates, and the necessary resin components.

In the lifecycle of any structure, evolving demands and conditions may necessitate alterations to its load-bearing capacity, functionality, and qualifications. Our Kratos Structural Reinforcement system addresses these evolving needs by leveraging carbon fiber-reinforced polymer (CFRP) retrofitting technologies. These advancements effectively rectify existing structures' flexural, shear strength, or seismic deficiencies, significantly enhancing their overall performance.

The application of CFRP optimizes strength and deformation-related structural properties within reinforced concrete building systems, amplifying structures' load-bearing capacity.

Notably, the low density of composite products formed with high-strength carbon yarns translates into minimal additional loads on the surface, while its compatibility with existing materials allows for the seamless replacement of steel or reinforced concrete sheathing, thereby mitigating space loss.

Beyond its versatile application across varied structural elements, the ease of shaping facilitates integration into complex surface geometries, minimizing volume loss within structures. Additionally, the lightweight nature of these products expedites labor-intensive processes, ensuring swift and efficient application. Crucially, the significance of structural reinforcement extends to sustainability considerations.

## Results

**Economical:** Retrofitting engineering-compliant buildings presents cost and time advantages over demolition and reconstruction.

**Environmental:** By opting for Kratos Structural Reinforcement, you can reinforce your building in an environmentally friendly and sustainable way without resorting to the harmful practice of demolition and reconstruction.

**Social:** Retrofitting structures that cannot be reconstructed saves lives and reduces injury risks during seismic events.

## Plans for Future

Through Kratos Structural Reinforcement Systems, we leverage our expertise in structural reinforcement solutions to foster a safer, more robust built environment. Our dedicated efforts are centered around the development of an innovative retrofitting system that serves a dual purpose: augmenting the service life of existing structures and facilitating the design and construction of exceptionally resilient new buildings.

Comprehensive details about Kratos are available on the dedicated product [website](#).



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



## COMPOSITE PRODUCTS

### Sustainability Features of Composite Products Developed at Kordsa

- Materials produced using resin systems and natural fibers are more environmentally friendly and can provide competitive mechanical values with currently used fibers.
- Bio-based resin systems offer better mechanical and fire-resistant properties than their counterparts. They are referred to as 'materials of future' as they are entirely natural materials and have low product level carbon footprint
- The carbon fiber fabrics we produce at Kordsa which are used to produce composite battery cases for electric vehicles contribute significantly to the essential transition to sustainable transportation solutions.

- E-glass prepreg, our flame-retardant formulation, which we have offered to the aviation industry to be used instead of commonly used E-glass/phenolic prepreps, is environmentally friendly due to the absence of solvent content and its flame-retardant feature with additives.
- Our flame-retardant resin products offer fire resistance and delay the emission of harmful gases during fires.
- Our ceramic matrix composite products are applied in fuel cells.
- We have reduced energy usage with the new resin mixer system by preventing the resins from being heated repeatedly.

## Water Based Phenolic Honeycombs

Kordsa produces honeycomb cores for a wide range of applications from aerospace and aviation industries to construction and consumer level sporting and leisure products, and aramid honeycomb cores are made of Dupont Nomex® paper coated with water-based heat insulating phenolic resin which exhibits extraordinary flame resistant properties that make them suitable for the aerospace and aviation standards, finding them a place in aviation applications.

The key distinction of the water-based phenolic honeycomb production process from the industry norm lies in its specially formulated solvent-free approach. This innovation significantly reduces volatile organic compound (VOC) emissions, contributing to a safer production process.

**Economical:** Aviation qualified solvent free water based phenolic honeycomb production creates competitive advantages.

**Social:** Occupational health hazards due to solvent usage are eliminated in water-based honeycomb production. It also eliminates explosion risk during manufacturing and reduces VOC release.

**Environmental:** Water based technology decreases the risk of hazardous solvent release to the environment.

**Corporate:** Depending on current and upcoming necessary restrictions in EU for occupational safety, health and environment, it is expected that avoiding solvent in production and switching water based phenolic resins will make it easier to open new plants and sustain them.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

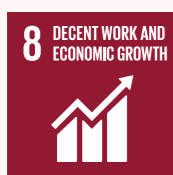
Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# R&D AND INNOVATION



<b>Project Name</b>	Development of Biobased System for Honeycomb Applications
<b>Place and Date</b>	CTCE Composite R&D (September 2022 - July 2023)
<b>Objectives and Actions</b>	Phenolic honeycomb structures are commonly used in aerospace applications. Our project aims to create a sustainable and safe honeycomb alternative by utilizing furan resin derived from sugar cane waste.
<b>Results</b>	<p><b>Economical:</b> We enhanced our sustainable product portfolio</p> <p><b>Environmental:</b> Our method eliminates formaldehyde by-products and solvents, reducing the product's environmental impact through its biobased nature. Biobased resins have about 77.4% lower product carbon footprint.</p> <p><b>Social:</b> By removing specific chemicals, our honeycomb has no adverse effects on human health.</p> <p><b>Corporate:</b> We have achieved success in creating a sustainable aviation product.</p>
<b>Plans for Future</b>	We are on track to meet project deadlines.



<b>Project Name</b>	Development Out of Autoclave Prepregs for Aerospace Applications
<b>Place and Date</b>	CTCE Composite R&D (2020 January - 2023 July)
<b>Objectives and Actions</b>	<p>This project's objective is to create high-strength out-of-autoclave (OOA) cured prepregs with elevated glass transition temperature designed explicitly for aerospace applications. OOA also presents both environmental and economic advantages by enabling the production of components at a reduced energy need and reduced cost, necessitating shorter processing times, and demanding lower capital and equipment investments compared to the composite autoclave manufacturing process.</p> <p>Given these merits, the aviation industry has widely adopted the OOA production method, favoring composite materials amenable to this curing technique. In line with this, Kordsa launched this project to cultivate a product portfolio in this domain.</p> <p>Starting in January 2020, we successfully formulated a thermoset epoxy resin capable of curing at temperatures between 135°C and 180°C. Our ongoing efforts encompass comprehensive test packages for Technical Data Sheets (TDS) and ongoing dialogues with potential clients.</p>
<b>Results</b>	<p><b>Economical:</b> We have eliminated the need for expensive autoclave applications by creating an oven-curing resin system.</p> <p><b>Environmental:</b> Energy consumption has been notably reduced, leading to a decrease in greenhouse gas emissions.</p> <p><b>Corporate:</b> We have achieved a pivotal milestone by creating a significant product tailored for aerospace clientele.</p>
<b>Plans for Future</b>	In the coming phases, we are poised to finalize the technical requisites, share them with potential clients, and continue the rigorous qualification process.

- About the Report
- Messages to Our Stakeholders
- Corporate Profile
- Strategy and Governance
- Sustainability Management

## Sustainability Facilitators at Kordsa

- Economy and Growth
- Environment and Climate
- Employees and Community
- Performance Indicators
- Annexes



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

**Sustainability  
Faciliators at Kordsa**

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## THIN FILMS AND FLEXIBLE ELECTRONICS



<b>Project Name</b>	Application of Embedded RFID Tags for Tire Identification and Tracking (RFID: Radio Frequency Identification Technology)
<b>Objectives and Actions</b>	Tire tracking represents the latest market trend embraced by leading tire manufacturers, offering a comprehensive automated identification and tracking solution that enhances real-time visibility and control throughout the tire’s production journey. Through a collaborative endeavor with SES-RFID, we have introduced the integration of RFID tags for tire tracking directly into the tire layers prior to the curing process. This strategic implementation ensures enduring tire traceability, facilitated by tamper-resistant digital RFID tags accompanying the tire throughout its lifespan
<b>Results</b>	<b>Environmental:</b> By enabling comprehensive tracking of a tire’s life cycle, we foster traceability and transparency within the tire recycling process. <b>Social:</b> Thanks to this project, we will become a supplier alternative to tire manufacturers. <b>Corporate:</b> This project stands to expand our product portfolio, seamlessly infusing digitalization, and sustainability paradigms into the tire domain.
<b>Plans for Future</b>	RFID technology represents the first step toward the digital transformation of tires. We provide the essential infrastructure to address road grip challenges stemming from tire air pressure fluctuations and seasonal variations. By integrating sensors, we can gather real-time data about tires.

# TECHNOLOGY AND DIGITALIZATION

“ In 2021, we crafted our Digital Roadmap, laying a comprehensive foundation. Building on this framework, in 2022, we incorporated our business-driven priorities, channeling our efforts across four pivotal domains: Connected Operations, Autonomous Technologies, Cyber Security & Infrastructure, and Digital Workforce. ”

## Technology and Digitalization

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, we have reached to a point at Kordsa today where we established such systems that evaluate and integrate higher level new generation smart technologies with an analytic intelligence.

At Kordsa, we approach digital transformation as a journey rather than a project. We commenced the transformation journey in 2018 using a measurement and assessment methodology and investing right technologies to create future of Kordsa. We prepared our X+3 roadmap in 2018 after many business processes were examined in detail by expert sector consultants from different countries; as a result, future development areas were determined. We implemented all the inclusive projects in the roadmap and maintained outstanding efficiency, quality, and customer satisfaction with digital outputs for all stakeholders. Starting in 2022, we undertook a major initiative to implement an ERP transformation across all areas of our operation. This strategic move, a vital component of our digital roadmap, underscores our commitment to forging a digitally integrated Kordsa.

Digital and cyber security maturity assessments continue to be done regularly by independent international institutions, and we constantly pursue new technology and development opportunities.

In 2021, we repeated digital maturity assessments in all our global facilities and determined new strategies by selecting two-year targets and our main focus areas.

We have planned our digital transformation journey at Kordsa under four main categories:

1. Connected Operation
2. Autonomous Technologies
3. Digital Workforce
4. Cyber Security & Infrastructure (Information-Data Security and Privacy\*)

\*Since the Information-Data Security and Privacy domain, which was added to the materiality analysis last years, includes the work carried out under the Cyber Security and Infrastructure topic, we have included this priority topic in this section of the report.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# TECHNOLOGY AND DIGITALISATION

## KORDSA DIGITAL ROADMAP

### 1. Connected Operation

At Kordsa,

- To ensure rapid end-to-end traceability with the transition to a large data platform structure where data is centralized in production,
- To prevent quality errors and save time with advanced sensor systems and image processing technologies,
- To ensure more effective and flexible planning management with optimizations and smart systems in the supply chain.

Thanks to our robust infrastructure, we have provided remote working and secure connection services to all our employees to ensure uninterrupted business, even during the pandemic period.

### 2. Autonomous Technologies

At Kordsa,

- We have implemented robotic process automation, one of our priorities in the field of digital applications.
- We have activated many innovative technologies such as image processing, mobile technologies, and machine learning at all our facilities.
- In 2020, we transformed 50 processes to run entirely digitally without human intervention. In 2022, we continued to develop our robotic sensor systems and transformed nearly 160+ processes with robotic process automation.
- Amid the pandemic, our intensified focus on image-processing technologies facilitated the implementation of digitalization practices to enhance our employees' health and occupational safety.
- We continued our global investments in augmented reality projects during the remote working period.

At Kordsa, we prioritize business partnerships with start-ups, projects carried out within the framework of TÜSİAD's Digital Transformation Program SD2, university and industry collaborations, joint projects with Sabancı Holding companies, and projects in the field of Internet of Things (IoT) with Sabancı Dx. We will continue to maintain our exemplary quality, occupational safety, and productivity through digital automation.

### 3. Digital Workforce

At Kordsa,

- We consider it crucial to provide our employees with exceptional training; therefore, we cooperate with Sabancı University, Sabancı Dx, and many international consultancy companies in digital transformation training.
- In 2021, we launched a pioneering campus software office initiative in collaboration with Kocaeli University—a venture we regard as our sectoral social responsibility. Subsequently, in 2022, we expanded this endeavor to encompass Sabancı University, thereby enriching our digital workforce.
- Communication channels effectively enable our stakeholders to carry out their business efficiently and securely with digital conveniences.
- We develop advanced technologies with project teams from various business units adding analytical approaches to their expertise.

2022 witnessed the implementation of engaging gamified training activities designed to elevate the digital literacy of our entire workforce. Our overarching goal is to bolster each employee's digital competencies in alignment with our era's demands. By channeling investments into key areas through our proficient expert teams, we stride resolutely toward our vision of becoming the 'Digital Company of the Future.'



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# TECHNOLOGY AND DIGITALISATION



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## CYBER SECURITY & INFRASTRUCTURE (INFORMATION-DATA SECURITY AND PRIVACY\*)

At Kordsa,

- We see our work on cyber security as a crucial part of our digital transformation.
- We regularly conduct studies such as vulnerability scanning, phishing assessments, and disaster recovery solutions.
- Our commitment to cyber security and digital literacy is unwavering. We consistently merge our efforts to enhance cybersecurity awareness among employees through our digital literacy initiatives.
- Through the utilization of Security Operations Center applications, we maintain continuous global threat monitoring, operate 24/7, promptly report potentially detrimental incidents, and enact necessary countermeasures.
- We successfully completed the 2022 audit at Kordsa Turkiye, which holds the ISO 27001:2013 Certification for Information Security Management System. We decided to renew our certification and expand our standards in this field globally.
- At Kordsa, where business continuity is paramount, we align our cyber security roadmap to this goal. Regularly, we engage in risk assessments and integrate investment decisions into our strategic priorities through collaboration with relevant management committees.
- We guarantee the traceability and security of information through our deployed DLP applications. Additionally, we employ cyber intelligence programs equipped to monitor all company domain-related and information asset-related data within the dark web and internet landscape.
- We support our employees' access to company resources with a ZTN (Zero Trust Network) approach.
- We adopt proactive intervention methods against threats with artificial intelligence-supported security solutions (such as SOAR).
- We constantly monitor our efforts to increase our Secure Score.

Our Information Security Policy is located [here](#).

\*Since the Information-Data Security and Privacy domain, which was added to the materiality analysis last years, includes the work carried out under the Cyber Security and Infrastructure topic, we have included this priority topic in this section of the report.



# ECONOMY AND GROWTH

Throughout 2022, Kordsa remained dedicated to generating value for its stakeholders. Our solutions and technologies, harnessed across our three principal business lines, continue to foster local and global economic prosperity.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

“ We continued our investments for a sustainable growth in Kordsa in the year of 2022. We protected our leader position in the tire reinforcement market which relies on our longstanding strategic partnerships with all global players. As we prepared for new investments in the composites field we have been actively operating, we also increased our company’s operational profitability by 77% and net profits by 76% to 1 billion 509 million TL.

We increased our operational efficiency with the successful outputs of our industry-leading innovation efforts in our two R&D centers which focus on tire and construction reinforcement, thin-film & flexible electronics and composites.

Our goal is to protect our market-leading position in tire reinforcement technologies, strengthen our position in construction reinforcement technologies, and become one of the leading advanced components companies in the world with our product portfolio enhanced by composites investments. ”

## AWARDS and ACHIEVEMENTS

**Kordsa has been honored with the prestigious Star Award by ITHIB!**

This accolade, which represents the highest possible recognition, was bestowed upon Kordsa for its exceptional export performance in 2021 during the esteemed ‘Adding Value to Exports Award Ceremony’ organized by the İstanbul Textile and Raw Materials Exporters Association (ITHIB).



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SUSTAINABLE GROWTH

## INTERNAL STAKEHOLDER VIEW

82% of our employees who responded to the sustainability assessment survey think that...  
**Kordsa creates significant economic value for its customers.**

### SUSTAINABLE GROWTH

As Kordsa, we transformed ourselves into a company that innovates, produces, and offers advance technology to the whole world. 2022 brought significant challenges to businesses, demanding agility, and flexibility in finding efficient solutions for energy, supply chain, and raw material-related issues. Amid this backdrop, sustainability and digitalization retained pivotal roles in shaping the emerging world. At Kordsa, we responded to these demands by providing our customers with rapid, agile services, leveraging the advantages of our global presence across six distinct countries to ensure uninterrupted business continuity.

We continued to ensure our business continuity and create profitability in all the geographies we were operational in with our strategic decisions and reinforcement technologies. Under auspices of our strategic investments and industry-leading technologies, we closed the year 2022 with 18.4 billion TL turnovers. Our period profit has been 1.5 billion TL, and our main operational profit has been 1.7 billion TL.

In 2022, the subsidy we received from the government as part of the Turquality Scheme increased by 39% to 211K TL. Our donations totaled 48 million TL.



### The Value We Distribute to Our Stakeholders

In 2022, 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 9%.

#### Economic Value Distributed 2022



- **82.41%** Suppliers
- **9.38%** Employees
- **0.66%** Government & Communities
- **0.29%** Shareholders
- **7.45%** Profit



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SUSTAINABLE GROWTH



<b>Project Name</b>	Towpreg Development for Filament Winding Systems
<b>Place and Date</b>	CTCE Composite R&D
<b>Objectives and Actions</b>	The primary reason behind the production of our Towpreg product that was developed as a resin-soaked carbon-fiber to be used in filament winding systems, is the increasing demand for hydrogen tanks and the switch to these products in the aviation sector. We as Kordsa developed this system in our R&D center and offered it to the market in the international arena. We have successfully completed the initial prototype trial production of a hydrogen tank using our Towpreg products. This accomplishment is part of our ongoing research into the technical capabilities of our product.
<b>Results</b>	<p><b>Economical:</b> With towpregs amount of consumables are reduced compared to wet filament winding process. Energy efficiency increases due to the new resin system which does not require high temperatures to be cured. The product took its place in our product portfolio as a high-return technology.</p> <p><b>Social:</b> The Towpreg resin system we developed in our R&amp;D center is a testament to our company's position in the international arena as a self-developing, market leading and trendsetting establishment.</p> <p><b>Environmental:</b> We continue to enhance our portfolio of environmentally responsible and energy-efficient products</p> <p><b>Corporate:</b> The fact that the product is an outcome of a collaboration between our R&amp;D centers in Türkiye and the United States is a good example of institutionalization of information and the units that complement and help each other develop.</p>
<b>Plans for Future</b>	We will continue to enhance our product portfolio.



<b>Project Name</b>	Bicycle Tire Fabric Production Advancement
<b>Place and Date</b>	Kordsa Global Technology R&D Center
<b>Objectives and Actions</b>	Our project aims to revolutionize the bicycle tire industry by producing NY66 235 and 470 thin Dtex bicycle fabrics. Additionally, we are dedicated to innovating diverse Dtex fabrics tailored for various bicycle tire constructions, thus forging our entry into this thriving sector.
<b>Results</b>	<p><b>Economical:</b> Bicycle fabric manufacturers are primarily located in China and other countries in the Far East. Through this project, Kordsa is set to become a pioneer in Türkiye, becoming the first company to produce these fabrics locally. Our endeavor offers a distinct competitive edge, boasting superior pricing advantages and added value when juxtaposed with conventional cord fabrics.</p> <p><b>Environmental:</b> Our fabrics' longevity and lightweight composition contribute to bicycle tires' extended lifespan, outweighing their automotive counterparts. We reduce our carbon footprint by curbing cord fabric usage in tire manufacturing.</p> <p><b>Social:</b> This highly beneficial solution, driven by research and development, is debuting in Türkiye; this exemplifies Kordsa's innovative prowess and positions us as market trailblazers.</p> <p><b>Corporate:</b> The pandemic-induced surge in bicycle usage over automobiles underscores the growing relevance of our venture. Pioneering local production further underscores our credibility and market leadership.</p>
<b>Plans for Future</b>	Laboratory approvals for 235 and 470 Dtex fabric have been successfully completed, paving the way for the next stage of development. We are poised to embark on tonnage production trials while concurrently exploring capacity and speed augmentation. Our objectives encompass expediting design and modifications in the finishing and weaving units tailored for bicycle fabric, investing in a specialized weaving machine with a special beam feeding loom and an automatic knotting machine to increase drawing and weaving capacity, and expanding our customer base in the near future.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

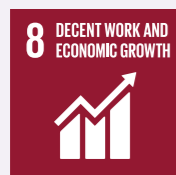
Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



## Wire Up Program

The 'Wire Up Startup Acceleration Program' by Kordsa is designed to foster collaboration with innovative entrepreneurs and develop end-to-end solutions across a spectrum of fields, such as sustainability technologies, OHS solutions, artificial intelligence technologies, HR solutions, sensor technologies, and machine learning software.

This program is for technology startups and teams that create solutions for Kordsa's focus areas with their business ideas or technologies, such as big data extraction and labeling, machine maintenance with Industry 4.0 image processing technology, predictive maintenance, in-house process management, optimization of logistics processes, machine learning and data analysis, virtual reality, artificial intelligence solutions when it comes to procurement and product supply, sustainability technologies, as well as unmanned warehouse and shipment management.

This program, facilitating interaction between entrepreneurs and 'Kordsa Reinforcers,' is designed to:

- Identify the organization's areas of need and focused technologies, granting access to innovative solutions and products tailored for these domains.
- Contribute to the organization's digital transformation and R&D/I&D strategies.
- Cultivate potential investment prospects for the organization and facilitate the growth of partnered startups into scalable enterprises.
- Assist startups in expanding their customer base before seeking funding.

While providing new products and services, access to new markets, cost optimization and efficiency, it contributes to global change and offers early investment opportunities to good entrepreneurs.

Within the program's scope, which started with an introductory event in December 2022, an eight-week acceleration program was done. With the end of the acceleration program, Wire Up has become an always open platform and has continued its operations.

# SUSTAINABLE SUPPLY CHAIN MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## INTERNAL STAKEHOLDER VIEW

73% of our employees who responded to the sustainability assessment survey think that...

**Kordsa's policies, audits, and training programs aimed at safeguarding human/employee rights and preserving the environment/natural resources within its supplier network 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 13 plants in six 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%.

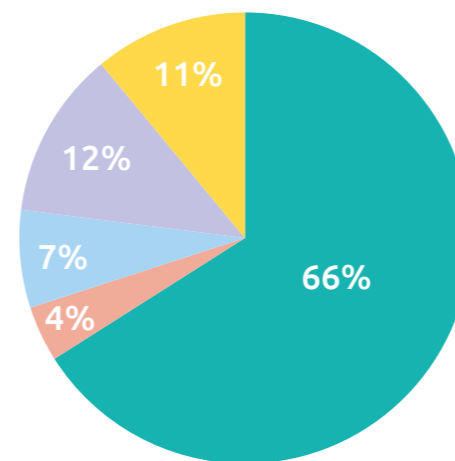
Our main procurement items are raw materials to produce nylon and polyester yarns, cord fabric, single end cord, reinforcement fibers and composites.

## EVALUATION AND SELECTION OF 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, environment, ethics, and governance practices. Following the 2022 performance reviews and system audits, none of our suppliers scored less than 60 points.

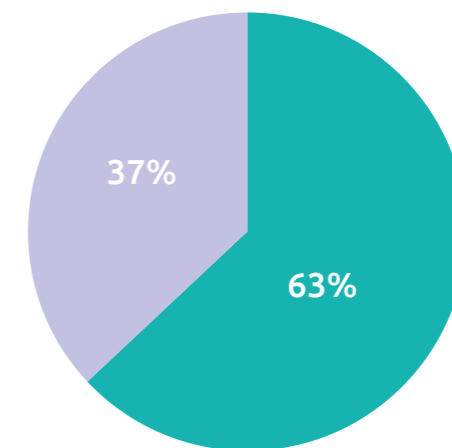
The details on the processes of supplier evaluation and selection are [here](#).

Breakdown of Purchasing Expenditures 2022



- Raw Materials including Chemicals
- Packaging
- Energy
- Other Products and Services
- Management Expenditures

Shares of Purchasing Functions 2022



- Global Purchasing
- Local Purchasing

# SUSTAINABLE SUPPLY CHAIN MANAGEMENT

## Supplier Sustainability Assessment Program

As of the end of 2019, we have integrated the sustainability performance of suppliers into our current supplier evaluation system as an evaluation criterion. We encourage our suppliers, who represent an essential link in our value chain, to improve their sustainability performance. For 2022, we attained an A rating in the CDP Supplier Engagement Reporting program. We use different tools to measure and improve the sustainability performance of our suppliers within the scope we have determined based on risk analysis, Kraljic matrix studies and annual spent ratio assessment. EcoVadis, a globally widespread sustainability assessment tool, is one of our assessment tools. EcoVadis rating is carried out by assessing detailed questions covering policy, performance, and actions regarding Labor and Human Rights, Environment, Sustainable Procurement, and Business Ethics. In addition, we apply an annual “Kordsa Annual Supplier Sustainability Survey,” and we conduct quality and sustainability audits for our raw material suppliers within the scope of the “Annual Supplier Audit Program.”

The sustainability topics we focus on with the assessment are the following.

- Sustainability Governance
- Social Impacts (Ethics, Labor and Human Rights, Occupational Safety, Conflict Minerals)
- Environmental Impacts (Environmental Management, Energy and Emission Management, Waste Management, Materials Management)
- Sustainable Supply Chain practices

If the performances of our suppliers do not match the determined criteria, we encourage our suppliers to create performance improvement plans and introduce specific practices to ensure further improvements in those cases.

The success criterias of the supply chain sustainability program are monitored with the determined performance indicators. These indicators are reviewed quarterly by the Global Supply Chain and Sustainability and Marketing Communications Departments. We share the our sustainable supply chain program’s performance via Sustainable Procurement Performance Report

In the long term, we aim to expand our supplier engagement activities with our suppliers. We’d like to focus on improvement and collaboration areas.

Sustainable Procurement Performance Report	2022
Ratio of targeted suppliers who have gone through a sustainability assessment survey	53% ✓
Ratio of targeted raw material suppliers audited in line with annual scheduled audit plan	100% ✓
Number of suppliers evaluated in the scope of human rights	63 ✓

Further insights into our Sustainable Supply Chain initiatives can be found in our report’s 2022 Legal and Compliance Department Activities section. This information is presented on a country-specific basis in the **Business Ethics and Compliance** category.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SUSTAINABLE SUPPLY CHAIN MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



**Project Name** Registration, Evaluation, Permission and Restriction of Chemicals

**Place 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 to the local reports. The most important challenge we may face in this process is the lack of content information from our suppliers on their products.

In 2022, we have completed all the necessary study for the following purposes:

1. Ensure that all chemicals used to be registered or confirmed to be registered by the end of the year
2. Ensure that each department is informed through Chemicals Committee meetings and equipped to be capable of performing self-checks/routinely performing necessary reportings
3. By activating the EBA Chemical Control system, the chemicals are pre-checked in the planning phase of the purchase, and the necessary records of the chemical are made in the period before the purchase. Later storage conditions are determined and their acceptance to the company in the safest and most legal way.
4. Ensure the active control of the existing stocks in the Chemicals Storage
5. Determine and eliminate the incomplete phases in the handling of chemicals and start the standardization processes to have a standardized system established in place in the upcoming periods.

## Results

Considering our Sustainable 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



# ENVIRONMENT AND CLIMATE



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



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. 54% of our plants have ISO 14001 Environmental Management System Certificates. We have not received any fines or penalties due to an environmental incompliance in any of our premises in 2022.

Our comprehensive Global Environmental Policy can be accessed on our official [website](#).

We invest in clean technologies to ensure efficient use of energy, reuse our materials, prevent air and water pollution, 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 sustainable materials.

In 2022, our environmental investments and expenditures such as emissions management, waste recycling, waste disposal, consultancy, training, and project investments totaled over 6.17 million dollars.

We consistently offer our employees training sessions covering water management, waste management, chemical handling, and climate change awareness. In 2022, our employees received 44,978 man-hours total of occupational health safety and environment training.

Environmental risk and impact assessments are systematically conducted across all our facilities. In 2022, these assessments were carried out at all our facilities. Our efforts to assess the environmental footprint of our products began in 2021. In pursuit of this goal, we have adopted a product life cycle approach to gauge the environmental impact of our products accurately.



## AWARDS and ACHIEVEMENTS

### Kordsa Achieves 'A' Grade in CDP Water Program for Consecutive Years!

Since 2016, Kordsa has actively participated in the assessment of its 'Climate Change' and 'Water Program' categories as part of the esteemed CDP Carbon Disclosure Project, recognized as the world's foremost platform for environmental reporting. Kordsa elevated its rating from "A-" in 2020 to "A" in the preceding year. Continuing its impressive streak, Kordsa has once again in the A List in CDP Water Security Program, an evaluation encompassing 15,000 companies. This achievement places Kordsa amongst 107 high-performing companies worldwide.

### Kordsa Recognized with Water Management Award at the Sustainable Business Awards!

In pursuit of its mission to 'Reinforce Life' and foster enduring value for stakeholders and local communities, Kordsa continues to garner substantial recognition. Appearing as a finalist at the esteemed 2022 Sustainable Business Awards organized by the Sustainability Academy, Kordsa clinched victory in the distinguished 'Water Management' category. This triumph was attributed to the impactful 'Kordsa İzmit Water Saving' project.



# RAW AND OTHER MATERIALS MANAGEMENT

## INTERNAL STAKEHOLDER VIEW

72% 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 expenditure constitutes about 88% of our total procurement.

We closely monitor our material usage performance to achieve efficiency in material management. Despite capacity optimizations in USA, Brazil and Indonesia and R&D programs implemented in Türkiye, no significant increase in our chemical usage was detected.

Kordsa is committed to fostering resource efficiency through collaborative projects extending beyond its own operations to benefit its customers. Kordsa places significant importance on ensuring that the products it develops align with its sustainability goals and enhance material efficiency within its customers' processes. These endeavors are diligently documented and highlighted in the **Our Sustainable Products** section of our report.

The materials and chemicals usage data of our plants and the reduction performances are given in the **Environmental Performance Indicators** part of our report.

#### Performance in 2022

Besides our ongoing projects on the reuse and reduction of the use of materials and especially chemicals, we as also continued the usage of recycled raw material in production and recovery of acetone. The details of these studies are available on the following pages.

As Kordsa, we became a member of the Turkish Circular Economy Platform in 2021. The Business Council for Sustainable Development Türkiye (SKD Türkiye) carries out the project developed by the European Bank for Reconstruction and Development (EBRD). Turkish Circular Economy Platform aims to fulfill the need for information/resources in the circular economy, offer measurement mechanisms, provide technical grants, and create collaboration opportunities.

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



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# RAW AND OTHER MATERIALS MANAGEMENT





## Project to Reuse Materials

To increase the reuse of yarn tubes; we started this project in Kordsa Türkiye site in 2014. Since then, we contribute to the corporate budget and natural resource savings.

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 2022, we saved 5.04 million dollars through reuse of 2.73 million pieces of materials in our facilities. The average reuse rate across all our plants was 29%. In the upcoming years we will continue to deploy this project to rest of our sites.

REUSED MATERIALS (Reuse Ratios)						
	Materials	Plants	2020	2021	2022	
	<b>Steel Shells</b>	Türkiye - İzmit	50%	56%	49%	✓
		USA - Laurel Hill	86%	100%	56%	✓
		Indonesia	41%	82%	89%	✓
		Thailand	84%	82%	81%	✓
		Brazil	93%	99%	93%	✓
	<b>Tubes</b>	Indonesia	28%	26%	21%	✓
		ABD - Chattanooga	14%	0.1%	0%	✓
		Brazil	84%	73%	84%	✓
	<b>Carton Separators</b>	Türkiye - İzmit	16%	18%	12%	✓
		Indonesia	13%	10%	7%	✓
		USA - Chattanooga	38%	36%	46%	✓
	<b>Wooden Pallets</b>	Türkiye - İzmit	33%	37%	32%	✓
		Indonesia	19%	16%	15%	✓
		USA - Chattanooga	73%	44%	53%	✓



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# RAW AND OTHER MATERIALS MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

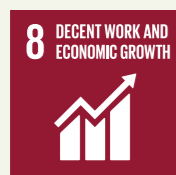
Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



<b>Project Name</b>	Recycled Nylon 6.6 Chip Usage for Nylon 6.6 Tire Grade Yarn&Fabric Production
<b>Place and Date</b>	October 2020-September 2023 / Kordsa Global Technology R&D Center
<b>Objectives and Actions</b>	In this project, we transform our production/technological nylon scraps through our recycle machine into chips and reuse them in the production as recycled nylon material input. It is aimed in this project to produce tire grade yarn&fabric with min 40% amount of recycled nylon 6.6 polymer and has comparable physical and chemical properties with yarn&fabric that is produced with virgin nylon 6.6 polymer.
<b>Results</b>	<b>Economic:</b> We enhanced our sustainable product portfolio. <b>Environmental:</b> According to Life Cycle Analysis (LCA) compared to using 100% nylon virgin raw materials, the 40% recycled nylon content provides 33% less carbon footprint in tire cord fabric product. <b>Corporate:</b> We develop our sustainable product portfolio by combining circular approaches with our strong R&D power.
<b>Plans for Future</b>	We aim to increase the ratio of recycled polymer in the product. We are researching for post-consumer recycled materials. Kordsa is actively working towards obtaining the highly esteemed ISCC Plus certification, which is recognized worldwide. We also continue research for bio based, biodegradable, semi biobased Polyamide (PA) raw material alternatives.



<b>Project Name</b>	Development of Resorcinol and Formaldehyde-Free Overcure Formulations for PET Cord
<b>Place and Date</b>	Kordsa Global Technology R&D Center
<b>Objectives and Actions</b>	Our team has successfully developed a formulation yielding exceptional cord-tire ret adhesion retention, particularly for large tires requiring prolonged curing.
<b>Results</b>	<b>Economical:</b> Our innovative formulation capitalizes on chemicals that are not only more readily accessible but also boast reduced costs and eliminate supplier-related challenges compared to the incumbent resorcinol-formaldehyde-based solutions. <b>Environmental:</b> The chemicals used in our formulation are more environmentally friendly, compliant with regulations and contribute positively to sustainability. <b>Corporate:</b> Armed with this pioneering technology, Kordsa is poised to embrace upcoming environmental regulations that will shape the tire industry. This strategic adaptation ensures our ability to fulfill customer expectations.
<b>Plans for Future</b>	We will send samples to our customers once laboratory and plant-scale testing have been completed.

# ENERGY MANAGEMENT

## INTERNAL STAKEHOLDER VIEW

65% 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 are strategically important for our company. At Kordsa, electricity, natural gas and steam are the main types of energy we use as input for production. We manage energy topic under **Energy Management Policy**.

The Energy Committee, which consists of various departments 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. The energy committee aims to improve energy efficiency by at least 1% every year compared to the previous year.

At Kordsa, we conduct diverse training programs for our employees across all facilities, focusing on energy efficiency and conservation. Our energy management units actively engage in consultancy and training sessions, gaining insights into emerging technologies to stay abreast of energy efficiency advancements. Specialized external firms conduct energy audits at our facilities to identify potential efficiency opportunities. At the start of each year, our facilities devise projects aligned with energy efficiency goals.

During our quarterly sustainable production meetings, encompassing all global facilities, we evaluate the advancement of annual energy efficiency projects and monitor energy consumption. Additionally, annual renewable energy utilization rates are evaluated.

We monitor our energy consumption trends by plants and manufacturing processes. Product variety and production planning has direct effect on energy consumption.

We are tracking the parameters such as Dtex, speed, scrap, and unit rates monthly, and go over the changes in the BPR meetings with the participation of all related managers. Our dedication to energy efficiency has remained and continues to be a top priority every year.

### Performance in 2022

In 2022, our electricity consumption increased 3.5% compared to 2021, while our natural gas consumption decreased by 1.19%.

Our renewable energy utilization rate was 31%; this includes 193,890 MWh of I-REC certified electricity that we purchased and 1,583 MWh of electricity that we generated in our renewable electricity generation facilities.

Throughout 2022, Kordsa successfully executed 13 distinct energy efficiency projects, contributing to a saving of 8,590 MWh/year of electricity and 16,932 MWh/year of natural gas. Notably, the Ecodip initiative focused on heat recovery and stood out as a significant accomplishment.

Furthermore, we completed the installation and commissioning of rooftop solar power production plant at our Indonesia facility in 2022. This facility now generates an average of 6,645 MWh of renewable electricity annually, significantly reducing our carbon footprint by approximately 5,250 tons annually.

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

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

Detailed insights into our energy consumption data are [here](#).

### Electricity Consumption (MWh)

2020	490,177
2021	608,253
2022	629,300

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

2020	54.3
2021	64.5
2022	63.7

### Diesel Oil Consumption (liter)

2020	254,745
2021	592,837
2022	551,046

### Gasoline Consumption (liter)

2020	109,869
2021	94,859
2022	143,533

### LPG Consumption (kg)

2020	35,199
2021	33,145
2022	1,861,073



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ENERGY MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022



## Energy Saving Projects (Electricity)

Project Details	Site Name	Estimated Annual Savings	Savings Unit
R&D Micro Grid Project	Türkiye	63,030.00	kWh/year
Reducing Compressed Air need (SSP2 Chip Loading)	Türkiye	204,400.00	kWh/year
Purchasing Energy Efficient Compressor to PET Utilities	Türkiye	881,280.00	kWh/year
Purchasing Energy Efficient Chiller to PET Utilities	Türkiye	535,248.00	kWh/year
Solar Power Plant Project at Indo Kordsa	Indonesia	6,645,000.00	kWh/year
Inverter for Cooling Tower	Indonesia	70,255.85	kWh/year
LED Lighting transformation	Indonesia	141,708.00	kWh/year
Chattanooga LED transformation	USA- Chattanooga	48,755.00	kWh/year
<b>Total Saving</b>		<b>8,589,676.85 kWh/year</b>	



## Energy Saving Projects (Natural Gas)

Project Details	Site Name	Estimated Annual Savings	Savings Unit
Dow Heater O2 Trim System Implementation	Türkiye	1,100,000.00	kWh/year
Ecodip Zone 2 at DU 1 and Ecodip Zone 1 at DU 3	Indonesia	1,623,877.10	kWh/year
Optimize Specification at DU 1	Indonesia	2,370,585.00	kWh/year
Reduce NG Gas Consumption	Thailand	1,076,125.79	kWh/year
Air to Air Project	Thailand	10,761,257.95	kWh/year
<b>Total Saving</b>		<b>16,931,845.90 kWh/year</b>	

# ENERGY MANAGEMENT



<b>Project Name</b>	Solar Energy Power Plant (SEPP) Projects in Indonesia and Thailand
<b>Targeted Date</b>	2022
<b>Objectives and Actions</b>	<p>The aim of solar power plant projects to produce renewable electricity to achieve Kordsa's decarbonization road map.</p> <p>We planned the first large scale rooftop solar energy power plant for our Indonesia plant. Similar investment is also planned for Kordsa Thailand plant.</p> <p>In 2022, our solar power generation plant at our Indonesian facility became operational, while the installation of a solar power plant at our Thailand facility, set to be commissioned in 2023, continued throughout the year.</p>
<b>Results</b>	<p><b>Economic:</b> Our Indonesian plant's rooftop solar power generation capacity is 4.8 MWp, and our Thai facility's capacity is 3.51 MWp.</p> <p><b>Environmental:</b> In Indonesia, the project's contribution of emission reduction is estimated 5,250 tCO<sub>2</sub>e per year.</p> <p>In Thailand, the project will contribute an estimated reduction of 2,450 tCO<sub>2</sub>e per year.</p> <p><b>Social:</b> These investments will be duplicable models to other industries nearby Bogor, Indonesia and Rojana Industrial Park, Thailand to develop environmentally friendly energy systems.</p>



- About the Report
- Messages to Our Stakeholders
- Corporate Profile
- Strategy and Governance
- Sustainability Management
- Sustainability Facilitators at Kordsa
- Economy and Growth

Environment and Climate

- Employees and Community
- Performance Indicators
- Annexes



# EMISSIONS (CARBON) MANAGEMENT

## INTERNAL STAKEHOLDER VIEW

63% of our employees who responded to the sustainability assessment survey think that...

**Kordsa's emission reduction initiatives and proactive measures to mitigate greenhouse gases in the fight against climate change are adequate.**

## EMISSIONS MANAGEMENT

We are targeting to reach net zero emission by 2050 the latest, to limit the global warming to 1.5°C. We are committed to the Science-Based Targets Initiative, and our target approval process continued in 2022 and was approved in June 2023 before our report was published. Our ambitious goal is to achieve a 46.2% reduction in scope 1&2 emissions by 2030 compared to 2019's levels. In Scope 3 emissions, we commit that 64% of our supplier's emissions covering Category 1, will have science-based targets that meet the latest SBTi criteria by 2027 and to reduce absolute Scope 3 Category 3 and Category 10 emissions 25% by 2030 from a 2021 base year. In 2022, we made significant progress by reducing Scope 1& 2 emissions by 12.9% compared to the 2019 baseline. We received a rating of 'B' for our CDP Climate Change Program in 2022.

### Responsibility

Within Kordsa's sustainability management structure, all units starting from the Board of Directors assume duty and responsibility for the definition of strategies and taking of the necessary actions to combat climate change.

### Risk Management

We monitor the climate change risks within the risk analysis works that are run by the Early Detection of Risk Committee under The Board of Directors. We systematically assess possible legislative changes that may take place in the transitional period to low carbon economy as well as the risks and opportunities that may arise from extreme weather conditions due to climate change or the changes in customer preferences. A detailed analysis of our risks and opportunities in climate change scope is available in [CDP Climate Change Program Report](#).

### The Steps We Took in Combatting Climate Change

**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 Türkiye, 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 Türkiye's Climate Leaders.

We started calculating our Scope 3 emissions. Scope 1, 2 and 3 emissions data of our three facilities in Türkiye, 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.

**In 2021**, we protect our CDP Climate Change Program score of A- placed us among Türkiye's Climate Leaders one more time. Scope 1, 2 and 3 emissions data of our three facilities in Türkiye, USA-Chattanooga and Indonesia were verified by external audit. We committed to the Science Based Targets Initiative to support the limiting of global warming to 1.5°C.

**In 2022**, We meticulously audited the Scope 1&2 emission data across all our facilities. We received a 'B' rating for our CDP Climate Change Program. Furthermore, we achieved an exceptional grade of 'A' in the CDP Supplier Engagement Rating.

Our emission management approach is firmly established within our [Sustainability Policy](#).

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

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

Details of our emissions data are [here](#).



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# EMISSIONS (CARBON) MANAGEMENT



## CDP Climate Change Scores by Years



GHG EMISSIONS (tCO <sub>2</sub> e)	2020	2021	2022
Scope 1	113,544.12	133,342.32	136,010.44 ✓
Scope 2	231,272.22	258,144.66	221,392.73 ✓
<b>TOTAL*</b>	<b>344,816.33</b>	<b>391,486.99</b>	<b>357,403.17</b>

\*In 2022, we achieved 12.9% reduction in our Scope 1 and Scope 2 emissions compared to the 2019 base year.  
Data scope: All Kordsa plants

GHG EMISSIONS (tCO <sub>2</sub> e)	2020	2021	2022
Scope 3	1,160,121.63	2,090,130.14	2,357,441.87
<b>TOTAL*</b>	<b>1,160,121.63</b>	<b>2,090,130.14</b>	<b>2,357,441.87</b>

\* In 2021 we included category 10 and category 12 in our Scope 3 calculation  
Data scope: All Kordsa plants

The calculations were conducted according to the methodology outlined in the GHG Protocol.

### Scope 3 Data Includes:

- C1- Purchased Goods and Services
- C3- Fuel and Energy Related Activities (not reported under Scope 1 and 2)
- C4- Upstream Transportation and Distribution
- C5- Waste Generated in Operations
- C6- Business Travel
- C7- Employee Commuting

- C9- Downstream Transportation and Distribution
- C10- Processing of Sold Products
- C12- End-of-Life Treatment of Sold Products
- C13- Downstream Leased Assets

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# WASTE MANAGEMENT

## INTERNAL STAKEHOLDER VIEW

71% 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, recovery and reuse of production wastes and wastewater as specified by law are among our regular activities. We employ waste mapping studies within our facilities to pinpoint waste sources, enabling the design of targeted waste reduction plans. We dispose 100% of the wastes generated by recycling, reclamation, landfill, incineration, and direct disposal in accordance with national regulations.

As of 2021, we determined our waste management performance indicator as the amount of waste generated per total unit sales tonnage. As Kordsa, we are targeting to reduce our waste amount per total sales tonnage by 50% by 2030 in comparison to the base year 2018.

#### 2022 Performance

In 2022, our waste per unit sales tonnage indicator increased 22% compared to the 2018 base year. Addressing this, our sustainable production working group undertook root cause analyses to identify reasons for the uptick, leading to the formation of project teams charged with implementing necessary corrective actions.

Throughout 2022, we proactively executed diverse waste reduction projects and emphasized waste mapping studies to curtail waste generation within our facilities. In this reporting period, we continued to reuse some of the materials that could otherwise be wasted, hence not only do we use our corporate resources effectively, but also prevented environmental pollution.

Our waste management approach has been firmly established within our **Sustainability Policy**.

Details of our environmental management approach (Implementations and Control) are **here**.

Details of our waste management approach (Implementations and Control) are **here**.

Our waste data according to disposal methods are **here**.

Waste Intensity	Year	TOTAL
<b>Total Waste Amount / Sales Tonnage (ton/ton)</b>	2022	0.055
	2021	0.053
	2020	0.047
	2019	0.044
	2018	0.045

Data scope: All tire reinforcement plants



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

**Environment and Climate**

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# WASTE MANAGEMENT

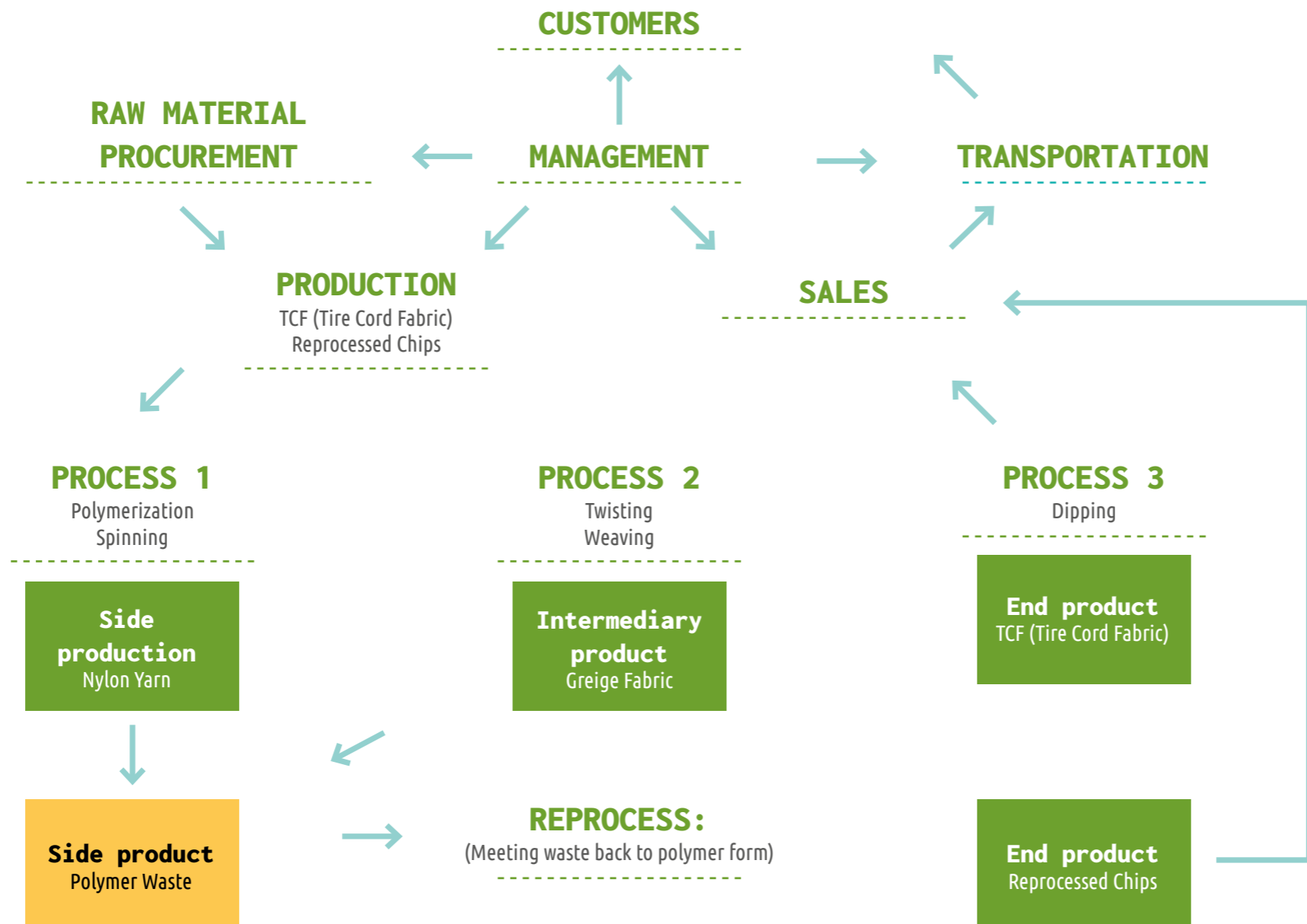


## Kordsa's Contribution to Circular Economy

Since 2014, we recycle our nylon production/technological scraps at Kordsa Türkiye and turn them into a recycled raw material. The nylon recycled raw materials provided low carbon raw material input in various sectors regaining them into the economy. We received the Global Recycled Standard (GRS) certificate for our recycled products.

We also started to use those recycled nylon raw materials in our own yarn and fabric production. Additionally, we started compounding R&D studies with those raw materials we obtained from Nylon 6.6 yarn production/technological scraps.

In 2022, we gained about 492 tons of nylon waste to the circular economy on a global scale.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# WASTE MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

<b>Project Name</b>	Plastic Use Reduction Project
<b>Place</b>	Kordsa İzmit Facility
<b>Objectives and Actions</b>	The dedicated project team at the Kordsa İzmit facility focused on reducing plastic consumption, targeting high-volume items such as antiseptic wipes, disposable plastic straws, and plastic packaging.  Integral to the project, the cessation of plastic straws and antiseptic wipe usage in offices and facilities was implemented. Office employees were equipped with one-liter glass water bottles for personal use, substituting for disposable bottles. Moreover, plastic raw material sacks, comprising a significant 57.5 tons annually and constituting 25% of our waste, were repurposed within the company, aligning with circular economy principles.
<b>Results</b>	Ceasing the use of specific plastics in cafeterias yielded a reduction of 2 tons of plastic annually.

## Global Strategic Cooperation for Plastic Recycling



Kordsa participates in PolynSPIRE, an open innovation project backed by the European Union’s Horizon 2020 program, collaborating with 20 other partners with the aim of enhancing plastic recycling’s efficiency. The project’s success could lead to broader adoption of recycled plastics, potentially reducing greenhouse gas emissions by 30-40% per ton of plastic produced through PolynSPIRE. Throughout 2022, Kordsa conducted R&D assessments to gauge the quality of recycled plastics employing the PolynSPIRE technology. As a key partner in PolynSPIRE, a visionary technology development venture focusing on efficient and sustainable plastic recycling under the Horizon 2020 framework, Kordsa actively engaged in laboratory-scale validations. These encompassed polymerization studies of adipic

acid and hexamethylene diamine-products derived from chemical recycling of PA66 polymer through microwave technology, a collaborative effort with technology developer partners. Furthermore, Kordsa spearheaded the creation of mirror committees, a sub-objective of the PolynSPIRE initiative. The Plastics Mirror Committee within TSE (Türkiye Mirror Committee of WG11-CEN/TC 249 - MTC 187 Plastics) was established.

With this project, we tested the viability of novel, sustainable, and cost-effective recycling technologies for plastics (specifically PA and PU), resulting in valuable insights and expertise. Furthermore, efforts to reintegrate mixed plastics into the value chain have been successful.

For a comprehensive understanding of the project, please review project [website](#).

# WATER AND WASTEWATER MANAGEMENT

## INTERNAL STAKEHOLDER VIEW

68% 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 usage is extremely important for the manufacturing processes at Kordsa plants. Water quality, accessibility and preservation of water resources are critical for the sustainability of our production and cost control. Consequently, water management is one of our focal sustainability issues.

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. We routinely analyze the wastewater produced at our facilities in accordance with legal regulations.

Our Sustainable Supply Chain Program includes the assessment of water safety and management risks within our supply chain.

As of 2021, we determined our water management performance indicator as the water withdrawal per total unit sales tonnage. In comparison to the base year 2019, our water withdrawal per total sales tonnage decreased by 24.6%. Also, in 2022 we increased our water recycling by about 17% according to the previous year.

Kordsa is committed to a 50% reduction in water intensity by 2030, actively pursuing water-saving projects annually. Our focus areas encompass rainwater utilization, wastewater recycling, pollution-reducing wastewater technologies, and water-saving methods.

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

Our Water Policy is [here](#).

Our Sustainability Policy is [here](#).

### Responsibility

In line with Kordsa's sustainability management, all units starting from the Board of Directors assume duty and responsibility for the definition of strategies and taking the necessary actions on water management.

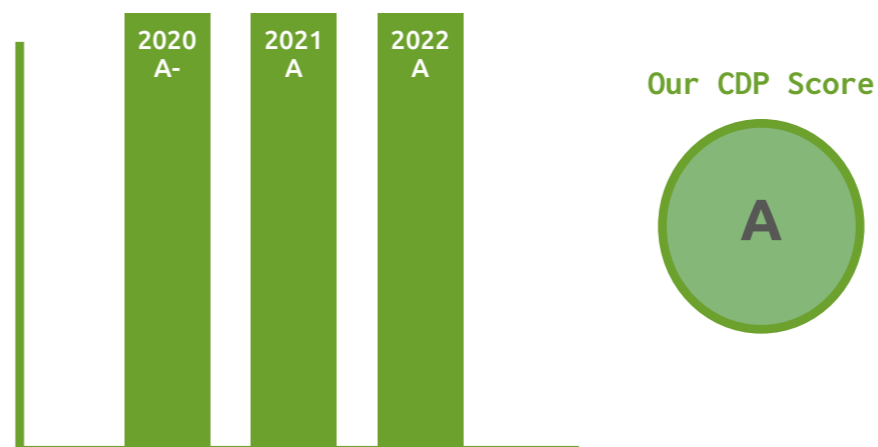
### Risk Management

We monitor the water related risks across all our facilities within the corporate risk management framework. In water risks, which we regularly review many times throughout the year, we evaluate the risks that may occur in the short (0-1 years), medium (1-5 years) and long-term (5-35 years). Among the tools we use in these assessments are the World Resource Institute (WRI) Aqueduct water risk mapping app, COSO Corporate Risk Management Framework and ISO 31000 Risk Management Standard. The details of all risk areas are available in CDP Water Program 2021 Report.

### Our 2022 Performance

In the Carbon Disclosure Project (CDP) Water Security Program, which we have been reporting since 2016, we have once again been involved in the Global A list, which includes 107 companies around the world.

### 2022 CDP Water Program Leader



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# WATER AND WASTEWATER MANAGEMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

**Environment and Climate**

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



## Water Efficiency Projects 2022

**Project Name** New Reverse Osmosis (RO) System

**Objectives and Actions** A new RO system was implemented to reduce water consumption by 5%.

**Results** 47,250 m<sup>3</sup>/year

**Project Name** Pre-Treatment Water (Indonesia)

**Objectives and Actions** Reduce conductivity with pre-treatment to aim higher quality water process and reduce the amount of blowdown water

**Results** 5,000 m<sup>3</sup>/year

**Project Name** Reuse of Water (Thailand)

**Objectives** Reuse wastewater discharge from cooling tower blow down and use it for garden irrigation system

**Results** 9.456 m<sup>3</sup>

**Project Name** Reduce Water Use (Thailand)

**Objectives** Reduce draining water from cooling tower

**Results** 1,920 m<sup>3</sup>

# WATER AND WASTEWATER MANAGEMENT



WATER WITHDRAWALS	2019 (m <sup>3</sup> )	2020 (m <sup>3</sup> )	2021 (m <sup>3</sup> )	2022 (m <sup>3</sup> )
Fresh Surface Water	3,166,771.64	2,035,366.39	2,735,498	2,674,782
Groundwater-Renewable	658,350.00	633,601.00	657,425	689,092
Third Party Sources	260,599.75	231,408.91	262,813	347,172.37
<b>TOTAL WITHDRAWALS</b>	<b>4,085,721.39</b>	<b>2,900,376.30</b>	<b>3,655,736</b>	<b>3,711,047.58</b>

	2019 (m <sup>3</sup> )	2020 (m <sup>3</sup> )	2021 (m <sup>3</sup> )	2022 (m <sup>3</sup> )
<b>RECYCLED WATER (m<sup>3</sup>)</b>	181,671.00	184,101.00	219,127	263,697

Data scope: All plants

Water Withdrawal Intensity	Year	Total
<b>Withdrawal / Sales Tonnage (m<sup>3</sup>/ ton)</b>	<b>2022</b>	13.95
	<b>2021</b>	14.73
	<b>2020</b>	14.87

Data scope: All tire reinforcement plants.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

**Environment and Climate**

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



# EMPLOYEES AND COMMUNITY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



“ At Kordsa, we practice equal opportunities from recruitment to retirement policy, providing an 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.

We continued uninterruptedly to provide for our over 5,000 strong human resource in six 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.

At Kordsa, with our volunteer employees' participation, 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. ”

## AWARDS and ACHIEVEMENTS

Kordsa achieved a remarkable feat at the Brandon Hall Group Human Capital Management Excellence Awards, securing the highest number of awards for a Turkish company.

Kordsa proudly garnered 14 accolades at the esteemed 'Brandon Hall Group Human Capital Management Excellence Awards'. Kordsa was recognized as the most notable Turkish company and a record-holder for this prestigious global awards platform. The Brandon Hall Group offers consultancy services to corporate entities and influences the training strategies of approximately 10,000 global customers.



### Kordsa has been awarded the 'Great Place to Work' certificate in 4 countries

Following the 2022 evaluation by Great Place to Work®, Kordsa has been recognized as the Best Employer in Brazil, Indonesia, Thailand, and Türkiye. This remarkable achievement highlights Kordsa's dedication to cultivating an employee-centered environment within its expanding organizational framework.

### Thai Indo Kordsa has won the 'Excellent Practices on Labor Relations and Welfare' Award at the national level for the 13th year in a row.

Thai Indo Kordsa has been honored with the 'Excellent Practices on Labor Relations and Welfare at the National Level' award for the thirteenth time. This esteemed recognition is bestowed by Thailand's Ministry of Labor, which identifies industry leaders by meticulously evaluating labor-employer relations and the level of employee welfare within companies operating within the country.

### Kordsa Garner 5 Prestigious Stevie Awards!

Kordsa has achieved a remarkable milestone by securing 5 distinct awards in the Human Resources category at the esteemed 2022 Stevie International Business Awards. Kordsa's achievements were recognized with 1 silver and 4 bronze awards in this esteemed competition outshining over 3,700 projects from 65 countries.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# OCCUPATIONAL HEALTH AND SAFETY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## INTERNAL STAKEHOLDER VIEW

82% of our employees who responded to the sustainability assessment survey think that...

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

### OCCUPATIONAL HEALTH AND SAFETY

The 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.

Our commitment to occupational health and safety covers all employees, including subcontractors, through comprehensive systems and policies. We have made our occupational health and safety procedures available in multiple languages so that everyone across our facilities can access them easily.

Access our Kordsa Global Occupational Health and Safety Policy [here](#).

Our stringent approach is underpinned by 10 OKRs (Objectives and Key Results) dedicated to minimizing workplace injuries across all our locations. Occupational health and safety concerns are integral to our change management strategy. Various risk assessment methodologies are employed to evaluate occupational health and safety risks. We refresh process hazard surveys every five years and conduct ongoing updates to risk assessments utilizing our online system. We have Occupational Health and Safety Committees in all our facilities with the same operating structure. 100% of our workforce is represented on these committees.

The majority of project ideas on occupational health and safety improvements originate from our employees. We took precautions against accidents thanks to our employees' ideas. We rigorously manage all measurement and analysis procedures concerning occupational health and safety in our facilities, meticulously aligning

with the stipulated criteria within legal regulations. Our competent occupational health and safety teams execute internal audit processes as outlined in our annual audit plans.

Our workplace health units are entrusted with supervising employee health checks and follow-ups, ensuring full compliance with legal regulations.

Under the umbrella of our Sustainable Supply Chain Program, we are dedicated to enhancing awareness and overseeing occupational health and safety measures across our supply chain.

### 2022 Performance

During the reporting period, no fatal accident and/or occupational disease has occurred at any Kordsa facility or any of its subcontractors.

In 2022, our total recorded accident was 8, 8 of which from among our employees and 0 among our subcontractors. In all our plants the Lost Time Injury Rate Total (LTIR) was 0,71, Employees Lost Time Injury Rate was 0.84 and Contractors Lost Time Injury Rate was 0. In 2022, we provided our employees with 44,978 man-hours of health & safety training. We implement the ISO 45001 Occupational Health and Safety Management System approach across all our facilities. The ratio of overall HSMS certified operations is 9.09% representing İzmit facility.

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

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

Details of Occupational Health and Safety Committees are [here](#).

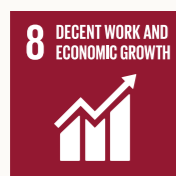
# OCCUPATIONAL HEALTH AND SAFETY



OHS Training Hours	Kordsa	Contractor	OHS TRAININGS
Türkiye - İzmit	16	8	In 2022, our comprehensive occupational health and safety training encompassed various fundamental topics. Our employees benefited from a range of training modules spanning general, health, and technical categories. Over 20 additional themes were covered, including working at height, machine safety, Lock-Tag-Try LTT, safe chemical management, hazardous chemical labeling, storing, handling, transporting, safe driving, fire extinguishing, search, and rescue, and comprehensive first aid training.
Türkiye - KTMM	2.5	6	
Brazil	16	3	
Indonesia	3.6	3	
Thailand	3.8	7.7	
USA - Chattanooga	7.7	0	
USA - Laurel Hill	5.5	0	
USA - Quakertown (FDI)	5	5	
USA - Anaheim (TPI)	3.81	3.81	
USA - San Marcos (AHT)	2.95	2.95	
USA - Santa Ana (Axiom)	7.1	4.6	
Microtex- Italy*	1.11	1.6	

CTCE: Composite Technologies Center of Excellence  
 \* Composite company joined Kordsa in 2022

- About the Report
- Messages to Our Stakeholders
- Corporate Profile
- Strategy and Governance
- Sustainability Management
- Sustainability Facilitators at Kordsa
- Economy and Growth
- Environment and Climate



<b>Project Name</b>	Occupational Health and Safety Awareness Initiative
<b>Place</b>	Kordsa İzmit Facility
<b>Objectives and Actions</b>	<p>Our initiative, designed to foster an occupational health and safety (OHS) culture while enhancing employee awareness, set out to elevate our OHS awareness survey outcomes to 88%.</p> <p>Through this endeavor, we executed a range of activities, including monthly dissemination of 'Life-Reinforcing Principles for Employees' posters, videos, and podcasts, bolstered by strategically placed communication televisions across our facilities. A dedicated OHS corridor was established, and events were orchestrated during OHS week. Involving employees, we crafted an OHS-themed video showcasing Life-Reinforcing Principles and conducted enlightening awareness training.</p>
<b>Results</b>	This initiative has been highly effective not only in mitigating potential occupational accidents but also curbing financial losses.
<b>Future Plans</b>	Our commitment to OHS awareness will persist and flourish in the times ahead

## Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# OCCUPATIONAL HEALTH AND SAFETY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

## 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 2022

Across our factory locations, we have diligently established targets for our award processes, fostering a cohesive and lean network that facilitates regular interactions, sharing of advancements, and best practices among our staff.

#### Türkiye

In 2022, our efforts culminated in the Kordsa İzmit plant securing the TPM Excellence Award Category A from JIPM (Japan Institute for Sustainable Factories).

We've conducted diverse studies aimed at enhancing both the duration and ergonomics of fieldwork. Collaboratively with the Focused Improvements committee, we have meticulously dissected our losses, presenting them in financial terms for thorough analysis.

#### Indonesia

Our commitment to TPM has gained momentum in our Indonesian plant. As a key principle of TPM, the Early Management Committee was established to prevent errors before they occur. This proactive approach helps to ensure smoother operations and reduce the likelihood of mistakes. Additionally, the fifth phase of autonomous maintenance is ongoing, aimed at streamlining, cleaning, greasing, and tightening activities.

#### Brazil

We examined the company's loss structure at our Brazil-based plant with the creation of a 'loss tree.' Furthermore, we aimed to enhance our analysis techniques to reduce losses resulting from breakdowns. We acknowledged the vital importance of training and, therefore, created a dojo for technical education.

#### Thailand

In Thailand, our efforts encompass both reward processes and autonomous maintenance. We structured a comprehensive TPM training system. Furthermore, we sustained our focus on incentive programs and persistently pursued identifying and quantifying our company's losses.

#### USA-Chattanooga & Laurel Hill

Reigniting our TPM activities in the post-pandemic period, we resumed TPM training sessions across our factories. A dedicated system was introduced to monitor our targets effectively to bolster our progress tracking.

**Composite (USA)** We continued the 5S works and established plans for the application of the first 3S. We provided training on various discrete tools applications.

**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 awareness and increase the leadership among all our employees in our plants. In addition to these, we will actively follow TPM committee structures and ensure the effective use of TPM by offering improvements where required. We are aware of the benefits of TPM. We will build our muscles in global information exchange and continue our TPM journey as the entire Kordsa by benefiting from each other's knowledge.

## Employee Suggestions for Operational Excellence

The employee suggestion system which was transformed by TPM integration continued to be available on the Kaizen portal since 2019. We've implemented constraints and acceptance criteria to optimize our suggestion (Kaizen) system. This strategic approach has yielded a noticeable enhancement in Kaizen quality, alongside a decline in total Kaizens in line with error reduction goals.

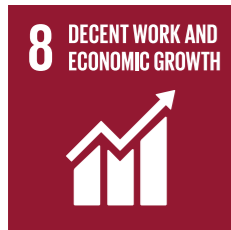
In 2022, we received, 5,627 improvement suggestions from our employees in Türkiye, Indonesia, Brazil, and Thailand.

In 2022; Indonesia team won **All Stars** awards with projects on sustainability.



### Employee improvement suggestion category distribution in 2022

Occupational Health and Safety	55%
Employment, Diversity & Equal Opportunity, Training, Human Rights	27%
Energy, Emissions, Water, Waste, Raw and Other Materials	18%



## INTERNAL STAKEHOLDER VIEW

82% of our employees who responded to the sustainability assessment survey think that...

**Kordsa's policies, training, and audits on human rights protection (championing freedom of unionization, eliminating child and forced labor, and prohibiting discrimination) 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 no 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 subcontractors and suppliers in the value chain through sustainable supply chain program and the supplier contracts. We stand firmly against child labor, forced labor, and discriminatory practices across all our endeavors. Our steadfast commitment to freedom of association remains unwavering.

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

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

Kordsa Code of Business Ethics is [here](#).

### 2022 Performance

During the reporting period, we did not receive any complaints regarding human rights violations or discriminative practices at any of our locations. In the year 2022, we were able to provide 1.5 hours of ethics training to 1,017 employees successfully. The training program included a dedicated section on human rights.

In Türkiye, 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 62% in 2022, totaling to 2,207 employees. Our employees in USA, Thailand and China are not unionized. There has been no incidence of violation for freedom of association in 2022. Our operations do not bear any apparent and significant risk concerning these issues.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# HUMAN RIGHTS



Topic Covered by Collective Labor Agreement	Türkiye	Indonesia	Brazil
Occupational Health and Safety	√	√	√
Working Conditions (work-rest hours, leaves)	√	√	√
Training	√	√	-
Career Management	-	√	-
Employee Representatives' Tasks and Responsibilities	√	√	-
Additional Work Payments	√	√	√
<b>Employees with Collective Labor Agreement (2,094)</b>			
Türkiye	922	42%	
Indonesia	960	43%	
Brazil	325	15%	

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022



## Standing Firm Against Violence!

At Kordsa, we uphold a strong stance against any form of violence, recognizing it as a grave infringement of rights. Our resounding 'no!' resonates against violence targeting all living beings, with a particular focus on children and women. Emphasizing our commitment, we shared the 'Guideline on Combating Domestic Violence against Women' with our workforce. This guide, a product of the Business Against Domestic Violence (BADV) Project conducted by Sabancı University Corporate Governance Forum, with support from Sabancı Foundation and the United Nations Population Fund (UNFPA), comprehensively outlines various forms of violent behavior and provides emergency contact numbers. As a vital resource, this guide significantly heightens our employees' awareness of this critical issue.

Location	Indonesia
Name	Bipartite Discussion
Frequency	Monthly
Target Group	Labor Union
Participation	About 20 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

# EMPLOYMENT AND LABOR PRACTICES



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## INTERNAL STAKEHOLDER VIEW

73% 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 Employment Policy

Having considered the requests and feedback from our stakeholders, our HR department reviewed and revised the Kordsa HR Policy in 2020 and published it as **Sustainable Employment Policy** in 2021.

The new policy covers the following topics:

- ▶ 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



### 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 Türkiye, 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.

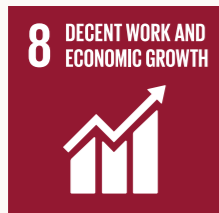
We prepared and took our Remote Work Procedures into action in May 2020 in accordance with these works besides pandemics circumstances.

In 2021, we dedicated our efforts to remote working and an agile organizational approach. Launching a flexible work model, we aimed to enhance our employees' work-life balance, elevate their happiness quotient, and empower them with greater control over their schedules. This initiative was notably aligned with the expectations of Generation Y and Z, fostering employee engagement in the process. Shifting our focus to 2022, we concentrated on physical and mental health, strategic workforce planning, and talent cultivation. The strategic workforce planning initiative commenced as a pilot in Indonesia and Türkiye, envisaging completion across all geographies, including the US and Brazil, by the close of 2023. This comprehensive effort aims to chart the workforce landscape and new competencies for the next five years. In the realm of mental and physical health, we innovatively harnessed the 'HelpSteps' app, translating our steps into donations for non-governmental organizations as part of our social responsibility outreach. Moreover, our six-week mindfulness challenge reinforced mental well-being through meditation. Since 2020, we have maintained a firm belief that these practices will continue to yield positive outcomes in key dimensions:

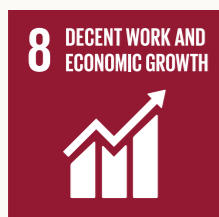
- Amplified employee satisfaction and engagement
- Heightened competitiveness and bolstered employer branding
- Strengthened recruitment and retention of qualified talent
- Empowered employees with control over their work schedules and motivation



# EMPLOYMENT AND LABOR PRACTICES



<b>Project Name</b>	Strategic Workforce Planning SWP
<b>Place and Time</b>	Global Operations-2022
<b>Objectives and Actions</b>	<p>We embarked on a project aimed at transforming the manual headcount budgeting process into a data-driven, analytically robust foundation for future workforce planning. We aim to ensure that the budget and Kordsa's 5-year HR strategy are carried out utilizing this platform.</p> <p>In partnership with Boston Consulting Group, our project's framework encompassed several strategic steps. We undertook activities encompassing talent pool classification into competency-oriented job families, numerical data transformation of factors, and their assimilation into simulations for supply-demand analysis of the future workforce. Collaborative analysis with managers followed, culminating in the formulation of actionable plans.</p>
<b>Results</b>	<p><b>Social:</b> By proactively forecasting and catering to talent needs, we mitigate the risk of overburdening our existing staff due to talent scarcity. Employees' career and development plans will be arranged more clearly and quickly in line with the company's future talent needs.</p> <p><b>Corporate:</b> Our financial resource management seamlessly aligns with the evolution of our current workforce and talent reservoir.</p>
<b>Plans for Future</b>	Currently, the project is operational in Türkiye and Indonesia, with expansion plans formulated for Thailand, Brazil, and the USA.



<b>Project Name</b>	Digital Global HR Report
<b>Place and Time</b>	Global Operations-2022
<b>Objectives and Actions</b>	<p>In the project in which we collaborated with Peopleoma, we aimed to eliminate the high risk of errors resulting from manual execution of human resources data sharing and reporting processes and the extra workload on employees and to ensure rapid access to up-to-date data from all facilities.</p> <p>With this project, we aimed to update and analyze daily HR data of all facilities on 4 continents and make them accessible on a single platform. With this goal, we carried out integration studies with the HR systems of all facilities. We ensured regular data checks, data cleaning and data analysis.</p>
<b>Results</b>	<p><b>Social:</b> It ensured that managers were informed about their teams so that they could make people-oriented decisions. Analyzing social metrics, like the ratio of female employees, paves the way for strategic actions that align with Diversity, Equality, and Inclusion objectives.</p> <p><b>Corporate:</b> Managers are armed with up-to-the-minute analysis and recommendation modules, bolstering their decision-making with data-backed insights. This initiative simultaneously fosters an in-house culture of digitalization and data-driven communication.</p>
<b>Plans for Future</b>	We are poised to amplify the breadth of data integration within our existing system, ushering in more comprehensive analysis and recommendation modules.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# EMPLOYMENT AND LABOR PRACTICES

## G.O. Reinforcers

G.O. Reinforcers is our short-term internship, starting in August every year from 2021, program where both Turkish and foreign students step into business life with the remote working model and various development programs in different countries where Kordsa operates. In 2022, the program started on August 1 with the participation of interns from Türkiye, South Korea, Brazil, Indonesia, and The Netherlands. During the process, interns had the opportunity to work with different cultures and get to know Kordsa better.

Future Reinforcers is a 6-month project-based internship program. Within the scope of the program, interns are assigned to projects in different departments of Kordsa and have the opportunity to participate in training that contributes to their career development.

## 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 employee interaction meetings.

In our employment satisfaction survey that we perform biennially in cooperation with an external consulting firm, our employee loyalty ratios increased from 44% of 2014 base year to 62% in 2016 and 68% in 2018. In our Employee Engagement and Experience survey, initially postponed

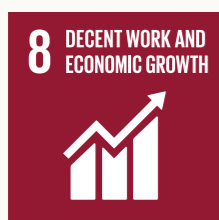
due to the pandemic and eventually conducted in 2021, we achieved a 62% engagement rate. By 2022, our engagement score stood at 78%.

In collaboration with 'Great Place to Work,' an internationally recognized independent research firm, Kordsa endeavored to formalize its human resources strategy and people-centric practices. Following a two-week survey, the assessment of employees led to the attainment of Great Place to Work certification in November 2022. An indicator of Kordsa's commitment to DE&I practices, the statement 'Employees are treated fairly regardless of their nationality and ethnic origin,' received a favorable response from 87% of employees.

Categories such as Individual Contribution, Teamwork, Cooperation, and Friendship reflected a positive work culture, implying high employee satisfaction. The statement 'Great Place to Work' was agreed upon by 83% of female employees and 71% of male employees. Surveys conducted in Brazil, Indonesia, and Thailand yielded outcomes aligned with those in Türkiye. Our aim is to cultivate the Great Place to Work culture as an integral aspect of our corporate identity, bolstering participation rates in the years ahead.

## Internal Career Opportunities

We provide overseas assignments to ensure the personal development of employees, and to develop a common corporate culture across all Kordsa sites. Currently, 21 of our employees, whom two of them are women, are positioned abroad for long term assignments.



<b>Project Name</b>	My Work is Complete
<b>Targeted Date</b>	Kordsa Türkiye-2022
<b>Objectives and Actions</b>	In a project led by our Global Human Resources team in Türkiye, our objective was to enhance communication with field employees and provide them quicker and more efficient access to HR services. Within this project, we collaborated with Kocaeli University's IT office to identify suitable students for collaboration. We proceeded to assess the needs of field employees, benchmarked against industry peers, and subsequently designed and implemented the application with the assistance of university students
<b>Results</b>	<b>Social:</b> This initiative has notably improved communication with field employees, effectively boosting employee loyalty and satisfaction as planned. <b>Environmental:</b> The application's implementation has contributed to reduced paper consumption. <b>Corporate:</b> We successfully completed this project with the involvement of two university students who have since joined our workforce after graduation
<b>Plans for Future</b>	Our intentions involve expanding the application's utilization across the entire Kordsa organization.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# EMPLOYMENT AND LABOR PRACTICES



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## Performance Evaluation

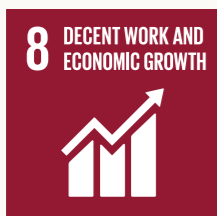
At Kordsa, all employees undergo performance and career development evaluations, and the reward plans are determined by the company's overall performance. As Kordsa, we support career development plans of our employees, measure the leadership styles of our managers, and evaluate the climate they provide to the organization regularly. With international assignments from all over 6 countries, we provide employees with the opportunity to work with different cultures and support them. We measure the success of our employees with different incentive systems, reward and recognize them in a fair way.

We see performance culture as a part of working life. Perfx, the performance system designed for this purpose, was launched in 2020 in cooperation with SabancıDx. The system, which has Task Management and Instant Notification functions to reduce the negative effects of remote working and to make performance tracking sustainable, supports employees to manage their work remotely, inform their managers about their tasks and comply with

their deadlines. At Kordsa, we began implementing the Objectives and Key Results (OKR) framework in 2022. This system is driven by strategic plans and is a part of our performance management system. This approach provides many benefits besides being a more agile and adaptable system to meet the expectations and needs of the dynamic business environment. The OKR system promotes transparency and accountability while aligning individual goals with the company's overarching goals. In addition, OKRs enable a more focused approach to goal setting while providing a better understanding of how individual efforts contribute to the company's success. As a result, Kordsa's adoption of the OKR framework has resulted in a more effective and dynamic performance management system that drives the company to achieve its long-term goals.

## 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.



### 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 the '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 country's human resources teams.

Each employee is encouraged to participate in any project to his/her taste. The process starts at the end of each year. After evaluation by the judging team, ELT reviews the results. Submission of projects and evaluation take approximately four months. All employees are invited to the awards ceremony that takes place in the following year and the ceremony is broadcast live through video conference.

At the '2022 All Stars Awards,' approximately 100 thousand dollars was awarded to the winning project teams. A total of 829 employees participated, with 113 projects in nine different categories.

### 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.

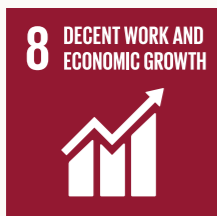
The team on this platform can suggest value creating projects where they can reflect their young points of view and continue their work. Besides, they can take part in projects recommended to them by our CEO.

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.

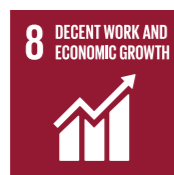
While contributing to the strategic decision-making processes, YAR takes place within important projects for Kordsa and has opportunities to develop themselves by working like a shadow of the ELT for a year and tap into their experiences and points of view in the process. This makes them a part of the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

Türkiye was the pilot country for this program in 2019-2021. In 2021, a team of five members, and in 2022, a team of five members participated in a program that initiated the 'Wire Up' project. This project aims to foster collaboration with the start-up ecosystem and establish the necessary infrastructure for Kordsa. The Young Advisory Reinforcers team, which is refreshed at the conclusion of the one to one-and-a-half-year tenure, sets its own operational guidelines, establishes its agenda, plus devises and implements project ideas for the company or its department.

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



# EMPLOYMENT AND LABOR PRACTICES



Regular Employee Engagement Meetings	
Location	Brazil
Name	Engagement Focus Groups
Frequency	Biannually
Target Group	Representatives of each department
Participation	About 70 people
Purpose	Share the engagement results and build together an action plan to get better results.

Regular Employee Engagement Meetings	
Location	Thailand
Name	Employee Engagement Driver Meeting and Chatroom
Frequency	Monthly / Everyday 3 pm-5 pm
Target Group	All employees
Participation	50-70 people
Purpose	To share employees' opinions about any issue in the company and find solutions together.

Regular Employee Engagement Meetings	
Location	Indonesia
Name	Intranet & 11 Information Boards
Frequency	Monthly / Occasionally
Target Group	AI Employees
Participation	Over 1,000 people
Purpose	To inform all updates of HR or related-HR information or company in general and available open positions.

Regular Employee Engagement Meetings	
Location	USA
Name	Off-site Quality Meeting
Frequency	Annually
Target Group	All employees
Participation	300+
Purpose	Business Information and team building



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# TALENT MANAGEMENT AND ORGANIZATIONAL DEVELOPMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## INTERNAL STAKEHOLDER VIEW

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

**Kordsa's provided training and programs encompassing technical and personal development, career growth initiatives, rotations, and more 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.

We adopted the 70:20:10 development approach to add new talents that will feed our growth targets into our organization and help them gain new competence, knowledge, and skill acquisitions through various development opportunities. Emphasizing experiential growth, we hold the belief that human development occurs because of experiences. Alongside exposure to diverse cultures, we foster employee development through strategies like rotations, international assignments, project participation, and the facilitation of new project creation.

In the 20% parts of the model, we have coaching, mentorship, participation in assessment centers, personal development planning and raising awareness through stakeholder opinions approaches. Beside these development tools, we support the acquisition of knowledge, skill and competency gaining process through in-class, online and offline trainings.

#### 2022 Performance

The total hours of training our employees received in 2022 reached 281 thousand hours. We provided 58 hours of training per person on average.

The trainings mainly focused on career development topics by 54%. In 2022, we invested 15,8 million TL in trainings.

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	58
Women	59

### Trainings Provided by Category



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

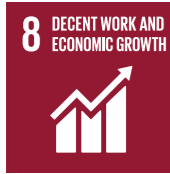
Since 2010, KEEP serves as an easily accessible and individualized training program tailored to our company, and to cascade the technical expertise of the World leader in the industry to all our employees in a more efficient method.

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 training over the KEEP system, as well as managing their training plans, apply for classroom training, and suggest new training. 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 2022, the amount of training our employees received on KEEP reached 5,176 hours.



## Global Alignment

Global Alignment, a developmental initiative conceived by our Global HR team in İstanbul, aims to synchronize leaders across Kordsa's global footprint in alignment with our business strategy, cherished values, leadership proficiencies, and collaborative work culture. In 2022, the program encompassed 35 leaders from Indonesia, 11 from Thailand, and 15 from Brazil. Our collaborative work with Sabancı University and Mercer concentrated on the following themes:

- Situational Leadership
- Needs-driven Management
- Purposeful Motivation
- Autonomy Management
- Tailored Work Management
- Constructive Feedback
- Inclusive Approaches for Individuals, Teams, and the Organization
- Voter Architecture

## Participation in Sabancı Holding Development Programs

Kordsa consistently engages in Sabancı Holding's development programs annually, with employees from all countries taking part. In 2022, the global participation breakdown was as follows:

- TPX: 3 people
- INLEAD: 3 people
- XPOSURE: 3 people
- IVAA: 2 people
- XLAB: 18 people
- XCELERATE: 2 people
- XTEAMS: 39 people

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# TALENT MANAGEMENT AND ORGANIZATIONAL DEVELOPMENT



## Our Human Resources Practices

Title	Practice	Contents
Orientation	BBF - Buddy App,	During their first three months at Kordsa, newly hired colleagues are paired with Buddies from within the organization to help them integrate into the company.
Recruitment and Orientation	Peoplise	Online Recruitment and Orientation Application
Training and Development	Introduction to Kordsa	Training series for Kordsa Specialists and Engineers, covering crucial topics such as Team Dynamics, Agile Project Management, Presentation Techniques, Resilience, and Values.
Talent Development	Global Alignment	Leadership and management training series tailored for senior management roles across all Kordsa global operations
Talent Development	Sabancı Holding Development Programs	Talent development series (X-Posure, In-Lead, IVAA, X-Lab) encompassing all Sabancı Holding group companies yearly, including international collaborations and trending topics for Hypo employees.
Talent Development	Kordsa Development Programs	Gen-Next, Future Readiness
Talent Development	E-MBA	E-MBA program featuring designated quotas for Sabancı Group employees.
Talent Development	E- Learning	Providing technical, personal development, and legal training through the Kinde & Keep & Talent LMS system, our Kordsa digital development platform is based on lifelong learning principles. This platform, updated with state-of-the-art technology, offers Mandatory, Personal Skills, Technical training, and enriched content covering hobbies, well-being, as well as leadership development.
Talent Development	Global Rotation and Collaborations with Foreign Universities	Kordsa implements a project-based employee exchange program, allowing team members to work in different countries for 6 months to 1 year, fostering collaboration and project execution with local teams.
Talent Development	Global Job Posting	Internal Cross-Country Vacancy Platform: This mechanism enables employees to discover and apply for job openings in company branches.
Talent Development	Young Advisory Reinforcers	A year-long initiative enabling Generation Z employees to engage in diverse projects alongside the management team, facilitating reverse mentoring and fresh perspectives.
Talent Development	Global Mentoring Program	Employees participate in a 6-month mentoring initiative, partnering with experienced mentors from various countries and departments.
Communication	Yammer	Corporate Social Network
Communication	Sabancı Social	This digital platform unites Sabancı Group staff, boosting interaction, communication, and collaboration as well as strengthening the shared 'Sabancı' identity.
Communication	Meydan	An Online Chat and Encounter Platform. Weekly Friday sessions at 16:00 provide Kordsa employees with an interactive platform for chatting, as well as contests and connections.
Communication	Social Clubs	Women's, Club, Sports & Travel Club, Photography Club, Help for Stray Animals Club, Music Club, and Social Responsibility Club
Performance	Perfx	Performance Management App
Recognition and Rewarding	Kordsa Stars	Instant Recognition and Rewarding Platform
Recognition and Rewarding	Seniority Award	At Kordsa, we value our employees' dedication and recognize their long service. As part of our Kordsa Stars system, we reward employees for 5, 10, 15, 20, and 30 years of service. For employees who have completed 25 years of service, we are offering a special vacation package for 2 people in a beautiful seafront 5-star hotel.
Recognition and Rewarding	All Stars	Managed by Global Human Resources, the Global Recognition and Rewarding initiative acknowledges exceptional projects and high-performing teams, enhancing employee engagement and success.
Equal Opportunity	Paternity Leave	We provide fathers with a 3-week leave that they can use any time before their child's first birthday
Equal Opportunity	Maternity Leave	We provide new mothers up to 1-year leave that they can be with their babies in their first months .
DE&I	Global Diversity, Equity & Inclusion (DE&I) Committees	5 DE&I committees structured
Back Ups	Talent Forum	Sessions where Kordsa Global white collar employee performance and competencies are discussed, and development plans are created.
Talent Acquisition	Talent In	Intra-Group Talent Acquisition Platform
Remote Work	Flexxa	Flexible Work Arrangements
Fringe Benefits	Fringe Benefits	Life Insurance, Private Pension Plans, Health Insurance, Premium, Flexible Benefits - Social Assistance Utility and Internet payments, Daily Meal Support, and Ergonomic Assistance through Avansas vouchers.
Wellbeing*	Pilates	12-week plates programs with weekly videos explicitly designed for Kordsa, promoting employee well-being.
Wellbeing*	Avita	24/7 Counseling and Information Service Through Avita, Kordsa employees and their families can access free counseling services to address financial, legal, psychological, nutritional, and veterinary concerns.
Wellbeing*	Helpsteps	Donate by Step App With our 'Helpsteps' initiative, employees participate in step-based contests, converting their physical activity into charitable donations, aligning with our motto "Bring the Best of You to the Future!"
Wellbeing*	I'm Fine App	Our health monitoring survey app gathers daily health updates from employees, enabling us to take proactive measures through our health unit.
Wellbeing*	Book Me	Online Office Reservation System

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# EQUAL OPPORTUNITIES AND DIVERSITY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## INTERNAL STAKEHOLDER VIEW

69 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 insurance and retirement plans for all our full-time employees. We added increasing the female employment among our sustainability goals in 2019.

In 2022, ratio of women employees was 16.05% and ratio of in management positions was 31%.

In 2022, 18 female and 200 male employees used their maternity and paternity leaves and 98% of them returned their job to work at least another 12 months in our company.

In 2022, the rate of disabled employees at all Kordsa facilities was 1.98%.

In 2022, we had the second graduates of the **Women Reinforcing Engineering Mentorship Program** Project.

In collaboration with Sabancı University Gender and Women's Studies Center for Excellence (SU Gender), we conducted Diversity and Inclusion training programs in 2022.

#### Actions Planned in Diversity, Equality, Inclusion

Our 2022 vision of Diversity, Equality, Inclusion

To create a culture of inclusion by providing an equal working environment where every individual is valued as a human being first and where differences are seen as opportunities in every aspect of our business.

The Diversity, Equality, and Inclusion strategy also serves the company's strategy and objectives. We have defined our strategy to help.

- Drive innovation
- Provide a better understanding of customers
- Increase employee engagement
- Acquire high-potential talent
- Create synergy with multicultural organizations
- Strengthen employer branding
- Strengthen organizational performance



# EQUAL OPPORTUNITIES AND DIVERSITY



## Women Reinforcing Engineering Mentorship Program

As an industrial company, Kordsa champions women's employment and representation across all levels. Many female students today maybe turning away to other professions as their choice because of this glass ceiling that creates the false perception that the engineering profession and engineering-based companies are rather male-dominant. With our female reinforcers at Kordsa, we hit the road to inspire and encourage the female students. Launched on March 8th World Women's Day, our Engineering Reinforce by Woman Mentorship Program kickstarted with the goal of empowering female engineers of the future.

### Scope of The Program

We received 6,182 applications from all female students who study engineering in Türkiye, and especially from among those who study in the Anatolian universities with limited resources. This year, we are delighted to announce that we have achieved a remarkable sixfold increase in the enrollment of female students compared to the previous year's performance.

### Program Contents

Seven women reinforcers from Kordsa shared their inspiring stories with an audience of 5,812 female engineering students at a forum on March 25th. Seven students from among 35 participants who agreed to share their stories with us as a prerequisite to the participation in the mentorship program were inducted in as the mentees of our seven female mentors. As the program's popularity has steadily grown and Kordsa's brand perception has continued to evolve, we have witnessed a substantial increase in our audience size, rising from 272 to 5,812. Throughout the program, our mentors worked on empowering the female engineer candidates in their career and personal developments with telling them about the hardships they had to face and how they overcame them in order to be successful in becoming good female engineers. The six-month long program from May to October that we enriched with one-on-one consultations with the mentors and HR sessions (with insights to getting to know Kordsa, preparing resumés, and effective interview methods) finally ended with the graduation ceremony in November. We will continue the program in 2022.

## Embracing the VUCA World at Kordsa

Kordsa is fortunate to possess such rich diversity in terms of race, ethnicity, age groups, and more. We aim to utilize our employees' diversity and uniqueness to achieve company and individual goals. Creating teams with diverse skills, knowledge, backgrounds, and experiences is pivotal in cultivating high-performance workplaces. At Kordsa, we highly appreciate individuals and their career paths, which is why we leverage their skills and abilities. Our commitment to innovation is demonstrated by uniting employees with varied perspectives and characteristics, enabling us to navigate the VUCA (Volatility, Complexity, Uncertainty, Ambiguity) world and maintain a high-performing organization.

### Accessibility Analysis

Accessibility entails secure and independent access to buildings, open spaces, transportation, information services, and communication technology for individuals with disabilities. Employees with disabilities may face challenges participating in business activities due to inappropriate physical conditions. A short-term priority for Kordsa is to employ more disabled individuals across all areas. Our initial step toward realizing this objective involves conducting accessibility analyses within our facilities, ensuring physical environments that cater to all, regardless of disability. As part of this endeavor, we conducted analyses across Kordsa's facilities in Türkiye, identifying digital and physical improvement actions.

### Inclusive Recruitment

Kordsa is dedicated to crafting inclusive sourcing strategies, eradicating bias in assessment and selection processes, and championing underrepresented talent groups. Our commitment to sustained behavioral and structural change is exemplified by our creation of an accountability system that places underrepresented candidates at its core. Driven by a people-centered approach, Kordsa has adopted inclusive hiring practices, broadening the talent pool and ensuring the recruitment of high-quality candidates. These practices enhance Kordsa's ability to attract, engage, and retain potential candidates by refining the recruitment experience and reinforcing its employer brand.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# EQUAL OPPORTUNITIES AND DIVERSITY



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## Diversity, Equality, and Inclusion (DEI) Committees

Within our organization, DEI Committees offer a platform for employees to convene based on shared characteristics, experiences, or goals. These groups are empowered to form a united community and express their perspectives. They contribute to learning and development by providing formal and informal leadership opportunities while also elevating the visibility of proactive employees. Their expertise and experience are instrumental in promoting equality within the company.

## Collaborative Initiatives with Universities for Diversity, Equality, and Inclusion at Kordsa

In collaboration with Kadir Has University Gender and Women's Studies Research Center and Sabancı University Gender and Women's Studies Center of Excellence, we have undertaken the following activities:

- Organized awareness sessions for all employees
- Method researching on Gender Pay Gap assessment
- Ensured equitable career opportunities
- Reviewed end-to-end recruitment processes
- Crafted new policies and revised existing ones (such as the Sustainable Employment Policy and the Human Rights Policy, etc.)
- Established Employee Resource Groups
- Developed and shared a calendar of significant days related to diversity, equality, and inclusion (Human Rights Day, Women's Day, etc.)
- Integrated women into production lines
- Implemented well-being initiatives to safeguard the physical and mental health of the organization
- Conducted an accessibility analysis to increase the recruitment of employees with disabilities

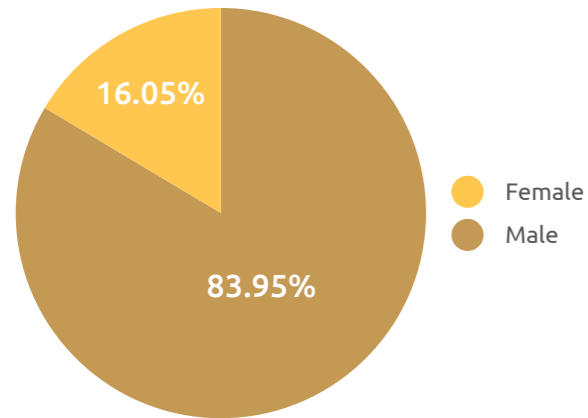
- From 2022 on we worked with SU GENDER as our training partners to raise awareness among all our employees in Diversity Equality Inclusion. We started with a training series on unconscious bias in the first quarter.
- We shared our corporate pledges in diversity and equity inclusion with our employees.
- We reviewed the recruitment processes from advertisement to the interview questionnaire within this scope.
- After conducting extensive research, we have developed a certification process to ensure equal pay for all employees, regardless of gender. We plan to implement this process in 2023.
- We worked with the compliance team to create policies promoting safety, including a 'zero tolerance for violence' policy. These policies were implemented on the 'International Day for the Elimination of Violence against Women.'
- We built-up 'Women Friendly Facility' applications.
- We successfully staffed our K1 Line entirely with female employees, in alignment with our women's employment targets.

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

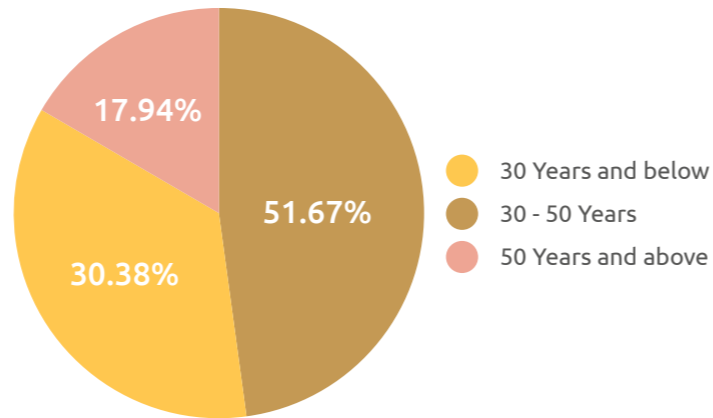
# EQUAL OPPORTUNITIES AND DIVERSITY



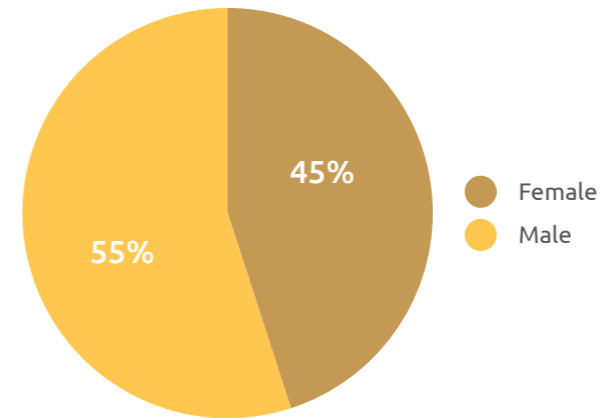
Employees by Gender



Employees by Age Group



R&D Center Employees by Gender



Number of Employees	2022
EMEA	1,802
Asia Pacific	1,533
South America	399
North America	808

Average Tenure (Years)	2022
All Kordsa	10.32
Türkiye	8.98
Indonesia	13.28
Thailand	13.65
Brazil	10.40
USA	7.51

Average Tenure (Years)	2022
Female	7.8
Male	10.81

Average Tenure (Years)	2022
White Collar	9.49
Blue Collar	10.56

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

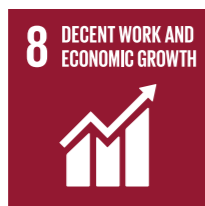
Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# EQUAL OPPORTUNITIES AND DIVERSITY



## Being Plural Program

Under the 'Being Plural' initiative, we have embraced a strategy focused on diversity, equality, and inclusion. We have identified key priorities to achieve our organizational goals with this project.

Our set goals under these priorities are as follows:

- Increase the representation of female employees across all global operations.
- Promote balanced and uniform representation of women throughout the company.
- Establish accessible workplaces for individuals with disabilities.
- Raise awareness about Diversity, Equality, and Inclusion.
- Involve employees at every stage of each process.
- Support decisions and goals through policies and procedures that prioritize employee involvement.
- Ensure equal rights for all employees without discrimination.

Project Overview:

- Awareness: Cultivate awareness among employees and society at large.
- Compliance: Review and adapt relevant policies and procedures through a lens of Diversity, Equality, and Inclusion.
- Operations Integration: Examine company processes like HR Management focusing on Diversity, Equality, and Inclusion.

- Talent Integration: Evaluate talent management processes with a Diversity, Equity, and Inclusion perspective.
- Market Integration: Collaborate with female-owned businesses and other diverse suppliers.

As part of the Being Plural Program, aimed at enhancing employee engagement and promoting inclusive processes, we have established global employee resource groups focused on five different topics. Participation in these groups is entirely voluntary, allowing employees to join the groups that correspond most to their interests. The overarching objective is to unite individuals around specific topics, fostering an inclusive company culture through heightened awareness. We selected these specific topics in line with Kordsa's ongoing diversity, equality, and inclusion goals and strategies.

The groups and their respective focuses are as follows:

**Impact on Women:** Strives to increase the employment and representation of women.

**Reinforcers with Disabilities:** Aims to enhance employment and representation of workers with disabilities.

**Identities @Kordsa:** Raises awareness for the acceptance of diverse identities within the organization.

**Roots @Kordsa:** Focuses on promoting diversity in terms of religion, ethnicity, and race.

**Well-being Manifestos:** Concentrates on sustaining employees' physical and mental health.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



## INTERNAL STAKEHOLDER VIEW

65% of our employees who responded to the sustainability assessment survey think that...  
**Kordsa has sufficient social development investments for the local community.**

“ At Kordsa, we carry out various social responsibility projects with the ‘We Reinforce Life’ vision in all the geographies where we operate. The ‘Future Reinforcers’ project, which we initiated in Türkiye in 2016 and is now being extended to other countries, is based on the UN Sustainable Development Goals’ of ensuring education that combines quality and equity. This initiative serves as the overarching framework for our education support endeavors. ”



### Kordsa’s ‘Future Reinforcers’ Project within the Sabancı Republic Day Campaign

Within the Republic Day Campaign activities framework involving all Sabancı

Group companies and thousands of employees committed to serving the community, Kordsa initiated the ‘Future Reinforcers’ Project in November 2022. The purpose of this project is to provide support to young individuals in vocational high schools who are interested in technology and innovation. By helping them acquire the necessary skills, we aim to help them prepare for a brighter future. In 2022, 122 Kordsa employees eagerly volunteered for this endeavor.

We aim to provide essential competencies to students in vocational high schools in İzmit to help cultivate a skilled textile industry workforce.

In the project’s initial phase, set to expand nationwide, we collaborated with Mikado Sustainable Development Consultancy and the Association of Innovative Solutions for Sustainable Development to organize physical activities in four schools selected by the Kocaeli Provincial Directorate of National Education. The schools benefiting from Kordsa’s support are Sabancı Vocational and Technical Anatolian High School, İzmit Vocational and Technical Anatolian High School, Kartepe Vocational and Technical Anatolian High School, and Fevziye Tezcan Vocational and Technical Anatolian High

School. We conducted seven diverse workshops in 2022. These workshops engaged students in activities like the Sustainability Game, Water Footprint Game, Occupational Health & Safety Game, and Vocational Exploration as well as introduced various professions. Moreover, participants received training in Coding and Design Thinking. The eventful Social Space workshop saw volunteers and students collectively coloring a portrait of Atatürk on one of the school facades, which was then presented to the school.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# COMMUNITY DEVELOPMENT



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

The ultimate aim of these initiatives was to enable students to:

- Gain insights into diverse professions
- Expand their career aspirations
- Develop self-confidence and motivation
- Foster a sense of responsible citizenship

Under the **Future Reinforcers** Project, 122 Kordsa volunteers collaborated with 1,130 students across five schools in one year, facilitating workshops totaling 336 hours. Sabancı Vocational and Technical Anatolian High School was assisted by 86 volunteers, İzmit and Kartepe Vocational and Technical Anatolian High Schools received support from 27 volunteers, and 9 volunteers aided Fevziye Tezcan Vocational and Technical Anatolian High School. Following the events, 37 out of the 122 Kordsa volunteers filled out impact forms. Notably, 86% of these volunteers attested that the experience enhanced their communication skills with young individuals.

Under the scope of Sabancı Cumhuriyet Seferberliği, educational videos targeting young people were created and posted on Youtube and other social media platforms. These videos consisted of topics such as sustainability, technology, and new professions, and aimed to contribute to society by providing young people with more accessible resources of information.



# PERFORMANCE INDICATORS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ECONOMIC PERFORMANCE INDICATORS



<b>KORDSA ECONOMIC VALUE CREATED AND DISTRIBUTED</b>			
<b>Economic Value Created &amp; Distributed ('000 TL)</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Economic Value Generated (Net Revenues)	4,685,766	8,610,629	19,475,864
<b>Economic Value Distributed to Stakeholders</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Operating Expenses	3,999,121	6,627,921	16,050,872
Benefit to Employees	687,877	1,045,850	1,828,431
Benefit to Government	22,427	80,398	87,414
Benefit to Providers of Capital	0	160,000	57,000
Benefit to Community	0	742	42,377
Economic Value Retained (Profit)	150,394	695,718	1,452,148
<b>Financial Assistance Received From Government</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Turquality	345	159	211
Tax Reliefs	0	36,306	57,600
Incentives	0	21,179	3,410

[About the Report](#)

[Messages to Our Stakeholders](#)

[Corporate Profile](#)

[Strategy and Governance](#)

[Sustainability Management](#)

[Sustainability Faciliators at Kordsa](#)

[Economy and Growth](#)

[Environment and Climate](#)

[Employees and Community](#)

[Performance Indicators](#)

[Annexes](#)

KORDSA  
SUSTAINABILITY REPORT  
2022



# SOCIAL PERFORMANCE INDICATORS



KORDSA EMPLOYEE DIVERSITY			
EMPLOYEES			
By Gender	2020	2021	2022
Female	544	621	729 ✓
Male	3,492	3,730	3,813 ✓
<b>TOTAL</b>	<b>4,036</b>	<b>4,351</b>	<b>4,542</b> ✓

By Type of Employment and Gender	2020	2021	2022
White-collar - Female	293	316	372
White-collar - Male	549	596	623
Blue-collar - Female	251	305	357
Blue-collar - Male	2,943	3,134	3,190
<b>TOTAL</b>	<b>4,036</b>	<b>4,351</b>	<b>4,542</b>

By Location and Gender	2020	2021	2022
Türkiye - Female	144	156	232
Türkiye - Male	1,395	1,509	1,570
Indonesia - Female	71	84	103
Indonesia - Male	1,050	1,067	1,048
Thailand - Female	104	109	107
Thailand - Male	251	281	274
Brazil - Female	51	61	66
Brazil - Male	347	333	333
USA - Female	174	211	221
USA - Male	448	539	587
China - Female	0	0	0
China - Male	1	1	1
<b>TOTAL</b>	<b>4,036</b>	<b>4,351</b>	<b>4,542</b>

By Age Group and Gender	2020	2021	2022
30 Years and below - Female	97	151	210 ✓
30 Years and below - Male	1,097	1,221	1,170 ✓
30 - 50 Years - Female	285	299	356 ✓
30 - 50 Years - Male	1,755	1,821	1,991 ✓
50 Years and above - Female	162	171	163 ✓
50 Years and above - Male	640	688	652 ✓
<b>TOTAL</b>	<b>4,036</b>	<b>4,351</b>	<b>4,542</b>

STEM-related positions	2020	2021	2022
Female	34	37	40
Male	51	46	57

EMPLOYEES			
By Management Category and Gender	2020	2021	2022
Executives (ELT) - Female	2	2	2 ✓
Executives (ELT) - Male	8	8	11 ✓
Director - Female	1	2	3 ✓
Director - Male	8	12	14 ✓
Manager - Female	44	56	67 ✓
Manager - Male	116	122	133 ✓
Engineer & Specialist - Female	154	168	238 ✓
Engineer & Specialist - Male	206	233	239 ✓
Supervisor & Technician - Female	13	12	17 ✓
Supervisor & Technician - Male	157	166	232 ✓
Officer (White-collar) - Female	95	92	76 ✓
Officer (White-collar) - Male	100	110	114 ✓
Operator - Female	235	289	326 ✓
Operator - Male	2,897	3,079	3,070 ✓
<b>TOTAL</b>	<b>4,036</b>	<b>4,351</b>	<b>4,542</b>

By Other Groups	2020	2021	2022
Expat - Female	1	2	1
Expat - Male	16	20	20
Disabled - Female	0	0	11
Disabled - Male	38	55	79

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SOCIAL PERFORMANCE INDICATORS



RATIO OF EMPLOYEES			
By Gender	2020	2021	2022
Female	13.48%	14.27%	16.05%
Male	86.52%	85.73%	83.95%
By Gender	2020	2021	2022
30 Years and below - Female	2.40%	3.47%	4.83%
30 Years and below - Male	27.18%	28.06%	26.89%
30 - 50 Years - Female	7.04%	7.38%	8.79%
30 - 50 Years - Male	43.33%	44.96%	49.16%
50 Years and above - Female	4%	4.22%	4.02%
50 Years and above - Male	15.80%	16.99%	16.10%
By Region and Gender	2020	2021	2022
APAC - Female	4.34%	4.44%	4.62%
APAC – Male	32.23%	30.98%	29.11%
EMEA - Female	3.57%	3.59%	5.11%
EMEA – Male	34.56%	34.68%	34.57%
NA – Female	4.31%	4.85%	4.87%
NA – Male	11.10%	12.39%	12.92%
SA – Female	1.26%	1.40%	1.45%
SA – Male	8.60%	7.65%	7.33%
By Management Category	2020	2021	2022
STEM-related positions - Female	40%	44.58%	41.24%
STEM-related positions - Male	60%	55.42%	58.76%
Management Positions - Female	26.26%	29.70%	31.30%
Management Positions - Male	68.75%	70.30%	68.70%
First Level Management Positions - Female	24.58%	27.72%	29.13%
First Level Management Positions - Male	64.80%	60.40%	57.83%
Top Management Positions - Female	1.68%	1.98%	2.17%
Top Management Positions - Male	8.94%	9.90%	10.87%
Ratio of Total Employees at Manager and Above Management Level by Region	2020	2021	2022
APAC	n.a.	25.74%	24.78%
EMEA	n.a.	40.59%	41.74%
NA	n.a.	27.72%	26.96%
SA	n.a.	5.94%	6.52%

Governance Bodies	Ratio		
Board of Directors and ELT	2020	2021	2022
Women	17.65%	12.50%	16.67%
30 Years and below	0.00%	0.00%	0.00%
30 - 50 Years	47.06%	31.30%	16.67%
50 Years and above	52.94%	68.70%	83.33%
Expats	0.00%	0.00%	5.26%
Employees with disabilities	0.00%	0.00%	0.00%

In 2022 18 female and 200 male employees used their maternity leaves and 98% of them returned their job to work at least another 12 months in our company.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SOCIAL PERFORMANCE INDICATORS



## KORDSA EMPLOYEE TURNOVER

New Hires vs Dismissals by Gender and Ages	2020	2021	2022
New hires – Female	54	138	231 ✓
New hires – Female (30 Years and below)	n.a.	73	116 ✓
New hires – Female (30-50 Years)	n.a.	56	94 ✓
New hires – Female (50 Years and above)	n.a.	9	21 ✓
Dismissals - Female	56	135	191 ✓
New hires - Male	260	561	486 ✓
New hires – Male (30 Years and below)	n.a.	390	332 ✓
New hires – Male (30-50 Years)	n.a.	133	125 ✓
New hires – Male (50 Years and above)	n.a.	38	29 ✓
Dismissals - Male	319	418	550 ✓
New Hires by Management Category	2020	2021	2022
Senior Manager (ELT) - Female	n.a.	0	0 ✓
Senior Manager (ELT) - Male	n.a.	1	0 ✓
Director - Female	n.a.	0	0 ✓
Director - Male	n.a.	2	0 ✓
Manager - Female	n.a.	5	13 ✓
Manager - Male	n.a.	12	20 ✓
<b>Total - New hires</b>	<b>314</b>	<b>699</b>	<b>717</b> ✓
<b>Total - Dismissals</b>	<b>375</b>	<b>553</b>	<b>741</b> ✓

Ratio of Total New Hires by Gender	2020	2021	2022
New hires – Female	17.20%	19.74%	32.22%
New hires – Male	82.80%	80.26%	67.78%
Ratio of Total Dismissals by Gender	2020	2021	2022
Dismissals - Female	14.93%	24.41%	25.78%
Dismissals - Male	85.07%	75.59%	74.22%

Internal Human Capital Allocation	2020	2021	2022
Open Positions	23	93	235
Open Positions closed with internal candidates	1	17	20
Turnover Rate	2020	2021	2022
Total Employee Turnover	9.3	12.7	16 ✓
Employee Initiated Turnover	3.1	5.2	5.6

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

## Employee Initiated Turnover

By Facilities and by Type of Employment	2020		2021		2022	
Facilities	White Collar	Blue Collar	White Collar	Blue Collar	White Collar	Blue Collar
Headquarter	n.a.	n.a.	14%	0%	12%	7%
Türkiye	n.a.	n.a.	9%	7%		
USA - Chattanooga	n.a.	n.a.	5%	1%	8%	7%
USA - Laurel Hill	n.a.	n.a.	12%	1%	6%	3%
USA- FDI	n.a.	n.a.	10%	19%	19%	11%
USA-TPI	n.a.	n.a.	1%	8%	19%	0%
USA- AHT	n.a.	n.a.	0%	0%	13%	8%
USA- AXIOM	n.a.	n.a.	0%	0%		
Brazil	n.a.	n.a.	10%	1%	11%	1%
Thailand	n.a.	n.a.	8%	7%	2%	5%
Indonesia	n.a.	n.a.	2%	1%	6%	1%
Indonesia- PET	n.a.	n.a.	1%	1%		
<b>Ratio of Total Voluntary Employee Turnover</b>	n.a.	n.a.	<b>7.90</b>	<b>4.50</b>	<b>9.61%</b>	<b>4.56%</b>

n.a.: not available

## EMPLOYEE TENURES

Average Length of Service (Years)	2020	2021	2022
All Kordsa	11.6	11.03	10.32
Türkiye	9.7	9.5	8.98
Indonesia	14.3	13.64	13.28
Thailand	14.9	13.96	13.65
Brazil	10.7	10.73	10.40
USA	10.2	9.01	7.51

Average Length of Service (Years)	2020	2021	2022
White Collar	10.9	10.57	9.49
Blue Collar	11.8	11.15	10.56

Average Length of Service (Years)	2020	2021	2022
Female	11.0	9.97	7.8
Male	11.7	11.2	10.81

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SOCIAL PERFORMANCE INDICATORS



KORDSA TRAINING INVESTMENTS			
	2020	2021	2022
Total Number of Trained Employees	3,284	4,021	4,827
Total Training Expenses (TL)*	3,551,653	6,718,860	15,842,620
Average Training (By Employee Category)			
	2020	2021	2022
Executives (ELT)	18.15	12.44	17.69
Director	70.00	8.88	31.79
Manager	54.67	46.26	59.95
Engineer & Specialist & Officer (White-collar)	50.20	58.87	39.34
Supervisor	47.11	23.37	41.36
Operator & Technician	53.65	68.09	60.77
Average Training Hour (By Gender)			
	2020	2021	2022
Male	59.84	66.24	57.95
Female	35.28	41.51	59
Average Training Hour (By Training Type)			
	2020	2021	2022
Career Development	35.45	18.53	55.33
Personal Development	11.11	8.55	29.79
Health, Safety and Environment	9.41	5.58	11.38
Average Training Hours (All Trainings)			
	2020	2021	2022
Total Training Hours Per Person	55.97	63.43	58.15
TOTAL TRAINING HOURS			
	2020	2021	2022
Career Development	133,050	146,398	152,051 ✓
Personal Development	36,300	37,298	53,681 ✓
Health, Safety and Environment	36,969	47,084	44,978 ✓
Other	7,634	28,757	30,698 ✓
<b>Total Training Hours</b>	<b>213,953</b>	<b>259,537</b>	<b>281,409</b> ✓
Contractor Trainings			
	2020	2021	2022
Total Number of Trained Contractors	216	158	160
Total Training Hours	1,436	1,073	4,200

\* Contractor trainings are included.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SOCIAL PERFORMANCE INDICATORS



## KORDSA ETHICS

	2020	2021	2022
Total Number of notifications/complaints on ethics hotline	2	7	10*
Number of notifications/complaints resolved within the year	2	6	8
Number of discrimination incidents	0	0	1
Number of harassment (Mobbing) incidents	0	0	4
Number of child and/or forced labor incidents	0	0	0
Number of information security incidents	0	0	2
Total training hours on ethics provided to employees (including human rights)	1,488	3,685	2,028
Total number of employees trained on ethics within the year	1,374	1,559	1,017 <span style="color: green;">✓</span>
Average number of ethics training hours per employee	1.08	2.36	1.99
Coverage of ethics trainings within the company	White-collar employees: 100% online Blue-collar employees: 100% within on the job trainings	Türkiye: 100% Brazil: 71.6% Indonesia: 92% Thailand: 23.5%	Kordsa North America: 34% Brazil: 88% Indonesia: 7% Thailand: 22%
Coverage of Ethics Training Topics	Bribery /Corruption / Fraud / Human Rights Discrimination / Mobbing / Harassment / Confidentiality / Antitrust / Trade restrictions / Conflict of Interests		

\* Two of these 10 reports were not considered an ethical issue.

## KORDSA COMPLIANCE

	2020	2021	2022
Non-compliance fines for customs, taxes, and social security regulations (TR)	676,220 TL	158,116 TL	233,909 TL

No public cases on compliance occurred and/or finalized on environmental, social or governance topics, against Kordsa.

## KORDSA ANTI-BRIBERY AND ANTI-CORRUPTION

	2020	2021	2022
Number of bribery and corruption cases occurred	1	3	1
Number of disciplinary penalties to employees because of these cases	3	3	2
Number of criminal cases to Kordsa because of these cases	0	0	0

No contract with business partners that was terminated or failed to be renewed due to violations related to corruption; no public lawsuit opened against our company or our employees because of corruption. In 2022, the employment contracts of two employees were terminated due to corruption.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SOCIAL PERFORMANCE INDICATORS



## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (1)

Plants	Group	Unit	Türkiye			Thailand			
			2020	2021	2022	2020	2021	2022	
Accidents	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	2 LWC	1 LWC	✓	0.00	0.00	0.00
		Rate	0.00	0.13	0.0560	✓	0.00	0.00	0.00
	Contractor	Number	0.00	3 LWC	0.00	✓	0.00	0.00	0.00
		Rate	0.00	0.72	0.00	✓	0.00	0.00	0.00
The number of hours worked	Kordsa Employee	Number	2,602,925	3,097,244	3,568,076	✓	760,080	805,734	828,734
		Rate	0.68	0.75	0.82	✓	0.87	0.83	0.80
	Contractor	Number	822,619	837,559	770,839	✓	127,096	166,893	203,320
		Rate	0.32	0.25	0.1776	✓	0.17	0.17	0.20

## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (2)

Plants	Group	Unit	Indonesia			Brazil			
			2020	2021	2022	2020	2021	2022	
Accidents	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	2 LWC	0.00	1 LWC	✓	2 LWC	1 LWC	2 LWC+1 RWC
		Rate	0.24	0.00	0.0847	✓	0.70	0.25	0.00
	Contractor	Number	1 LWC	0.00	0.00	✓	0.00	0.00	0.00
		Rate	1.13	0.00	0.00	✓	0.00	0.00	0.00
The number of hours worked	Kordsa Employee	Number	1,692,608	2,473,009	2,360,203	✓	573,426	808,032	0.00
		Rate	0.89	0.86	0.86	✓	0.55	0.79	0.00
	Contractor	Number	177,399	355,229	397,978	✓	260,383	208,865	191,172
		Rate	0.11	0.14	0.1442	✓	0.45	0.21	1.00

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# SOCIAL PERFORMANCE INDICATORS



## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (3)

Plants	Group	Unit	USA - Chattanooga			USA - Laurel Hill			
			2020	2021	2022	2020	2021	2022	
The number and rate of fatalities because 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	2 RWC – 1 LWC	0.00	1 MTC	✓	0.00	1 RWC	1 MTC
		Rate	1.31	0.00	0.357	✓	0.00	0.99	0.56
	Contractor	Number	0.00	0.00	0.00	✓	0.00	1 LWC	0.00
		Rate	0.00	0.00	0.00	✓	0.00	6.58	0.00
The number of hours worked	Kordsa Employee	Number	457,956	483,493	559,493	✓	185,545	201,642	354,109
		Rate	0.81	0.82	0.97	✓	0.80	0.87	1.00
	Contractor	Number	85,315	88,219	18,598	✓	37,094	30,392	0.00
		Rate	0.19	0.18	0.03	✓	0.20	0.13	0.00

## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (4)

Plants	Group	Unit	Composite Technologies Center of Excellence (CTCE)			USA - Anaheim (TPI)*		
			2020	2021	2022	2020	2021	2022
The number and rate of fatalities because 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	0.00	2 LCW	1 MTC	0.00
		Rate	0.00	0.00	0.00	2.72	1.32	0.00
	Contractor	Number	0.00	1 LCW	0.00	1 MTC	0.00	0.00
		Rate	0.00	3.34	0.00	17.56	0.00	0.00
The number of hours worked	Kordsa Employee	Number	172,847	131,321	216,549	147,183	151,259	161,854
		Rate	0.59	0.67	0.73	0.92	0.97	0.91
	Contractor	Number	71,480	59,929	81,382	11,388	3,844	15,197
		Rate	0.41	0.33	0.27	0.08	0.03	0.09

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# SOCIAL PERFORMANCE INDICATORS



## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (5)

Plants	Group	Unit	USA - Quakertown (FDI)*			USA - San Marcos (AHT)*		
			2020	2021	2022	2020	2021	2022
Accidents	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 fatalities because 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	1 LWC	0.00	0.00	0.00	0.00	0.00
		Rate	1.00	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 of hours worked	Kordsa Employee	Number	227,739	205,534	214,923	42,263	43,304	91,368
		Rate	0.97	0.94	0.95	1.00	0.95	0.96
	Contractor	Number	6,314	12,159	11,147	0.00	1,985	4,017
		Rate	0.03	0.6	0.05	0.00	0.05	0.04

## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (6)

Plants	Group	Unit	ABD - Santa Ana (Axiom)**			Microtex (Italy)***		
			2020	2021	2022	2020	2021	2022
Accidents	Kordsa Employee	Number	0.00	0.00	0.00	-	-	0.00
		Rate	0.00	0.00	0.00	-	-	0.00
	Contractor	Number	0.00	0.00	0.00	-	-	0.00
		Rate	0.00	0.00	0.00	-	-	0.00
The number and rate of fatalities because of work-related injury	Kordsa Employee	Number	0.00	0.00	0.00	-	-	0.00
		Rate	0.00	0.00	0.00	-	-	0.00
	Contractor	Number	0.00	0.00	0.00	-	-	0.00
		Rate	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
		Rate	0.00	0.00	0.00	-	-	0.00
	Contractor	Number	0.00	0.00	0.00	-	-	0.00
		Rate	0.00	0.00	0.00	-	-	0.00
The number and rate of recordable work-related injuries	Kordsa Employee	Number	1 MTC	1 MTC	0.00	-	-	1 LWC
		Rate	1.00	0.92	0.00	-	-	3.84
	Contractor	Number	0.00	1 LWC	0.00	-	-	0.00
		Rate	0.00	6.54	0.00	-	-	0.00
The number of hours worked	Kordsa Employee	Number	207,673	217,193	289,308	-	-	52,140
		Rate	0.97	0.88	0.88	-	-	0.93
	Contractor	Number	6,202	30,581	38,336	-	-	3,679
		Rate	0.03	0.12	0.12	-	-	0.07

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022



# SOCIAL PERFORMANCE INDICATORS



## KORDSA OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT (7)

OHS TRAINING HOURS (Employees)	2020	2021	2022	OHS TRAINING HOURS (Contractors)	2020	2021	2022
Türkiye - İzmit	5	12	16	Türkiye - İzmit	5	8	8
Türkiye - CTCE	4	6.6	2.5	Türkiye - CTCE	4	8	6
Brazil	21	26	16	Brazil	6	3	3
Indonesia	3	4.5	3.6	Indonesia	3	3	3
Thailand	4	4	3.8	Thailand	1	8	7.7
USA - Chattanooga	8	17	7.7	USA - Chattanooga	3	3	0
USA - Laurel Hill	3	2	5.5	USA - Laurel Hill	1	1	0
USA - Quakertown (FDI)*	8	5	5	USA - Quakertown (FDI)*	7	5	5
USA - Anaheim (TPI)*	8	6	3.81	USA - Anaheim (TPI)*	0	6	3.81
USA - San Marcos (AHT)*	2	2	2.95	USA - San Marcos (AHT)*	n.a.	1	2.95
USA - Santa Ana (Axiom)**	8	10.4	7.1	USA - Santa Ana (Axiom)**	6	5	4.6
Italy - Microtex***	-	-	1.11	Italy - Microtex ***	-	-	1.6

### Explanations for OHS Data:

\* Composite companies joined Kordsa in 2018

\*\* Composite company joined Kordsa in 2019

\*\*\* Composite company joined Kordsa in 2022

**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 requires 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

n.a.: not available

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SOCIAL PERFORMANCE INDICATORS



## KORDSA HUMAN RIGHTS DATA

Employees with Collective Bargaining Agreement	2020	2021	2022
Türkiye	754	802	922
Indonesia	944	967	960
Brazil	320	325	325
USA	0	0	0
China	0	0	0
Thailand	0	0	0
<b>Total</b>	<b>2,018</b>	<b>2,094</b>	<b>2,207</b>
Ratio of employees with collective bargaining agreement to total blue-collar employees (%)	55%	61%	62%

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

## SUSTAINABLE PROCUREMENT

In 2022, we invited more than 400 global and local suppliers from six countries in which we operate to participate in the Sustainable Supply Chain Program.

In 2022, 102 of our suppliers were included in our Sustainable Supply Chain program. 68% of our suppliers signed Kordsa Supplier Business Ethics Statement. We provided training on sustainable procurement to 87% of all supply chain employees across all locations. In 2022, 53% of our global suppliers participated the survey.

In 2022, we reviewed our sustainable procurement KPIs and determined new indicators. As of 2022, our performance table follows.

### Sustainable Procurement Performance Report

Performance Indicator	2021	2022
Ratio of targeted suppliers who have gone through a sustainability assessment survey	72.5%	53% <span>✓</span>
Ratio of targeted raw material suppliers audited in line with annual scheduled audit plan	87.5%	100% <span>✓</span>
Number of suppliers evaluated in the scope of Human Rights*	74	63 <span>✓</span>

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



## KORDSA ENERGY CONSUMPTION

Electricity (kWh)	2020	2021	2022
Türkiye - İzmit	160,629,631	195,104,931	213,481,160 <span>✓</span>
Türkiye - İstanbul (CTCE)	2,323,572	2,485,810	2,324,992
Indonesia	151,965,785	199,420,998	206,844,274 <span>✓</span>
Thailand	36,338,516	45,288,022	42,451,961
Brazil	62,143,543	74,711,663	70,866,394
USA - Chattanooga	53,510,420	61,253,960	55,146,982 <span>✓</span>
USA - Laurel Hill	18,887,897	25,227,093	30,092,182
USA - Quakertown (FDI)	1,201,550	1,298,040	1,413,840
USA - Anaheim (TPI)	858,180	913,040	1,047,500
USA - San Marcos (AHT)	274,405	281,101	424,021
USA - Santa Ana (Axiom)	2,043,468	2,269,190	2,723,796
Italy – Microtex*	-	-	2,483,162
<b>TOTAL</b>	<b>490,176,967</b>	<b>608,253,848</b>	<b>629,300,263</b>

## KORDSA ENERGY CONSUMPTION

Natural Gas (Sm <sup>3</sup> )	2020	2021	2022
Türkiye – İzmit*	21,096,261	25,030,373	24,087,168 <span>✓</span>
Türkiye - İstanbul (CTCE)	147,995	156,807	136,616
Indonesia*	6,559,498	8,343,215	8,525,202 <span>✓</span>
Thailand	3,147,424	3,918,444	3,924,897
Brazil	2,409,499	3,039,828	2,952,286
USA - Chattanooga *	18,462,584	21,140,903	20,470,379 <span>✓</span>
USA - Laurel Hill	1,990,048	2,380,454	2,941,083
USA - Quakertown (FDI)	57,526	25,312	39,822
USA - Anaheim (TPI)	586	872	4,395
USA - San Marcos (AHT)	73,414	73,592	89,082
USA - Santa Ana (Axiom)	328,037	400,488	476,354
Italy- Microtex**	-	-	98,151
<b>TOTAL</b>	<b>54,272,871</b>	<b>64,510,289</b>	<b>63,745,437</b>

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



KORDSA ENERGY CONSUMPTION									
Other Fuels	Diesel Oil (liter)			Gasoline (liter)			LPG (kg)		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Türkiye – İzmit*	68,733	55,646	360,643 ✓	0	36,182	82,230 ✓	0	0	1,826,438 ✓
Türkiye - İstanbul (CTCE)	1,385	1,443	1,412	0	0	0	0	0	0
Indonesia*	33,769	133,505	79,641 ✓	20,583	17,639	17,431 ✓	0	0	0 ✓
Thailand	16,033	11,494	13,871	10,984	7,568	7,873	9,960	10,965	12,555
Brazil	70,810	367,005	72,283	12,093	10,233	9,444	21,700	22,150	21,720
USA – Chattanooga*	47,870	13,085	12,142 ✓	16,922	6,721	7,620 ✓	2,177	0	0 ✓
USA - Laurel Hill	0	1,759	558	8,058	0	652	0	0	0
USA - Quakertown (FDI)	0	0	0	9,464	9,448	11,023	0	0	0
USA - Anaheim (TPI)	3,104	1,964	4,562	1,783	4,174	2,952	0	0	0
USA - San Marcos (AHT)	13,041	3,906	4,785	13,628	1,577	2,526	27	30	360
USA - Santa Ana (Axiom)	0	3,030	1,148	16,356	1,317	1,781	1,334	0	0
Italy – Microtex**	-	-	20,385	-	-	0			0
<b>TOTAL</b>	<b>254,745</b>	<b>592,837</b>	<b>551,046</b>	<b>109,869</b>	<b>94,859</b>	<b>143,533</b>	<b>35,199</b>	<b>33,145</b>	<b>1,861,073</b>

### Explanations for Data:

CTCE: Composite Technologies Center of Excellence

n.a. : data not available

\*2020, 2021 and 2022 data are verified by PWC.

\*\* Composite company joined Kordsa in 2022

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



## KORDSA EMISSIONS (Scope 1)

Kordsa Plants (tCO <sub>2</sub> e)	2020	2021	2022
Türkiye - İzmit*	43,035.49	51,518.89	55,981.11 ✓
Türkiye - İstanbul (CTCE)	359.64	583.23	935.49
Indonesia*	15,040.53	17,267.64	17,618.33 ✓
Thailand	7,182.53	8,196.58	8,939.98 ✓
Brazil	6,926.72	8,080.81	6,954.29
USA - Chattanooga*	36,026.13	41,909.48	38,547.22 ✓
USA - Laurel Hill	3,851.64	4,588.34	5,548.96
USA - Quakertown (FDI)	134.97	234.61	102.43
USA - Anaheim (TPI)	13.60	16.76	27.46
USA - San Marcos (AHT)	207.99	155.99	187.01
USA - Santa Ana (Axiom)	764.88	789.99	901.31
Italy – Microtex**	-	-	266.85
<b>TOTAL</b>	<b>113,544.12</b>	<b>133,342.32</b>	<b>136,010.44</b> ✓

## KORDSA EMISSIONS (Scope 2)

Kordsa Plants (tCO <sub>2</sub> e)	2020	2021	2022
Türkiye - İzmit*	68,667.78	51,622.46	8,102.93 ✓
Türkiye - İstanbul (CTCE)	1,075.35	1,076.60	948.93
Indonesia*	117,560.73	151,898.97	159,538.71 ✓
Thailand	17,366.18	21,081.57	20,236.85 ✓
Brazil	7,289.44	7,799.90	6,618.92
USA - Chattanooga*	12,984.50	17,009.56	15,860.03 ✓
USA - Laurel Hill	5,217.63	6,529.27	8,080.55
USA - Quakertown (FDI)	392.34	411.21	433.59
USA - Anaheim (TPI)	194.08	188.53	253.57
USA - San Marcos (AHT)	62.06	58.04	111.44
USA - Santa Ana (Axiom)	462.13	468.55	659.34
Italy – Microtex**	-	-	547.86
<b>TOTAL</b>	<b>231,272.22</b>	<b>258,144.66</b>	<b>221,392.73</b> ✓

We purchased **International Renewable Energy Certificate (I-REC)** of 193,890 MWh from Enerjisa for our Türkiye İzmit plant. In addition, we produced 1,582 MWh of electricity in our Türkiye-İzmit, İstanbul CTCE, Indonesia and Microtex facilities. Thus, we obtained 31% ✓ of our electrical energy from renewable energy sources.

\*In 2022, the total Scope 1 and 2 emissions verified by PWC.

\*\* Composite company joined Kordsa in 2022

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



## KORDSA EMISSIONS (Scope 3)

Kordsa Plants (tCO <sub>2</sub> e)	2020	2021	2022
<b>TOTAL</b>	<b>1,153,662.95</b>	<b>2,090,130.14</b>	<b>2,357,441.87</b>

## KORDSA EMISSIONS (Scope 3)

Categories (tCO <sub>2</sub> e)	2020	2021	2022
C1 Purchased Goods and Services	1,049,218.26	1,459,457.87	1,798,520.41
C2 Capital Goods	0.00	0.00	0.00
C3 Fuel and Energy Related Activities	62,659.16	137,974.34	109,787.19
C4 Upstream Transportation and Distribution	40,065.56	57,573.97	93,743.10
C5 Waste Generated in Operations	2,075.05	1,527.78	1,613.57
C6 Business Travel	363.93	612.84	1,828.80
C7 Employee Commuting	2,204.03	4,892.52	4,521.38
C8 Upstream Leased Assets	0.00	0.00	0.00
C9 Downstream Transportation and Distribution	2,101.03	8,769.21	12,697.47
C10 Processing of Sold Products	0,00	360,565.43	282,502.73
C11 Use of Sold Products	0.00	0.00	0.00
C12 End-of-Life Treatment of Sold Products	0,00	57,437.82	50,887.60
C13 Downstream Leased Assets	1,434.60	1,318.36	1,339.62
C14 Franchises	0	0.00	0.00
C15 Investments	0.00	0.00	0.00
<b>TOTAL</b>	<b>1,160,121.63</b>	<b>2,090,130.14</b>	<b>2,357,441.87</b>

### Explanations for Data:

The calculations were conducted according to the methodology outlined in the GHG Protocol.

### Scope 3 Data Includes:

- C1- Purchased Goods and Services
- C3- Fuel and Energy Related Activities (not reported under Scope 1 and 2)
- C4- Upstream Transportation and Distribution
- C5- Waste Generated in Operations
- C6- Business Travel
- C7- Employee Commuting
- C9- Downstream Transportation and Distribution
- C10- Processing of Sold Products
- C12- End-of-Life Treatment of Sold Products
- C13- Downstream Leased Assets

This year we made some revisions in calculations for 2019-2020-2021 years.

Türkiye İzmit, Indonesia and USA Chattanooga sites' 2020 and 2021 Scope 3 emission have been verified by QSI.

**CTCE:** Composite Technologies Center of Excellence

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

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



KORDSA EMISSIONS (Total)	Scope 1&2		
	2020	2021	2022
<b>Kordsa Plants (tCO<sub>2</sub>e)</b>			
Türkiye - İzmit*	111,703.27	103,141.35	64,084.05
Türkiye - İstanbul (CTCE)	1,434.99	1,659.83	1,884.42
Indonesia*	132,601.26	169,166.61	177,157.04
Thailand	24,548.71	29,278.15	29,176.83
Brazil	14,216.16	15,880.71	13,573.21
USA - Chattanooga*	49,010.63	58,919.04	54,407.24
USA - Laurel Hill	9,069.28	11,117.61	13,629.51
USA - Quakertown (FDI)	527.31	645.82	536.02
USA - Anaheim (TPI)	207.68	205.28	281.03
USA - San Marcos (AHT)	270.05	214.04	298.44
USA - Santa Ana (Axiom)	1,227.01	1,258.54	1,560.65
Italy - Microtex	-	-	814.72
<b>TOTAL</b>	<b>344,816.33</b>	<b>391,486.99</b>	<b>357,403.17</b>

KORDSA EMISSIONS (Scope 1&2&3)			
Kordsa Plants (tCO <sub>2</sub> e)	2020	2021	2022
<b>TOTAL</b>	<b>1,504,937.97</b>	<b>2,481,617.13</b>	<b>2,714,845.04</b>

This year we made some revisions in calculations for 2019-2020-2021 years.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



## KORDSA MATERIALS MANAGEMENT

Materials	Plants	2020	2021	2022
TCF Chemical Ratio	Dipping NY - Türkiye	0.92	0.94	0.93
	Dipping PE - Türkiye	0.82	0.97	0.94
	Dipping - USA / Laurel Hill	0.93	1.05	1.04
	Dipping - Brazil	0.81	0.98	0.99
	Dipping TCF1 - Indonesia	0.97	0.90	0.91
	Dipping TCF2 - Indonesia	0.93	0.87	0.86
	Dipping - Thailand	0.97	0.97	0.96
Materials	Plants	2020	2021	2022
NY Salt / Flake Ratio	NY Yarn Line 1 - Türkiye	0.90	0.97	0.91
	NY Yarn Line 2 - Türkiye	1.04	0.99	0.84
	PE Yarn - Türkiye	0.98	1.00	1.00
	NY Yarn - USA / Chattanooga	0.58	1.02	1.07
	Yarn - Brazil	0.98	1.82	1.82
	NY Yarn - Indonesia	1.00	0.92	1.01
	PE Yarn - Indonesia	0.96	1.00	1.01
Materials	Plants	2020	2021	2022
SEC Chemical Ratio	SEC - Türkiye	0.66	1.23	1.18
	SEC - Brazil	0.92	0.95	0.92

## REUSED MATERIALS (Reuse Ratio)

Materials	Plants	2020	2021	2022
Steel Shells	Türkiye - İzmit	50%	51%	49% ✓
	USA -Laurel Hill	86%	100%	56%
	Indonesia	41%	82%	89% ✓
	Thailand	84%	82%	81%
	Brazil	93%	99%	93%
Tubes	Indonesia	28%	26%	21% ✓
	USA - Chattanooga	14%	0.1%	0% ✓
	Brazil	84%	73%	84%
Carton Separators	Türkiye - İzmit	16%	18%	12% ✓
	Indonesia	13%	9%	7% ✓
	USA - Chattanooga	38%	45%	46% ✓
Wooden Pallets	Türkiye - İzmit	33%	37%	32% ✓
	Indonesia	19%	16%	15% ✓
	USA - Chattanooga	73%	44%	53% ✓

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022



# 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
Türkiye-Izmit*	2020	1,483	2,174	3,658	Türkiye- Izmit*	2020	1,902	585	1,170	0	3,658
	2021	1,734	4,119	5,852		2021	3,737	593.698	197	1,324.993	5,853
	2022	2,280.78 ✓	4,897.85 ✓	7,178.31 ✓		2022	4,542.91 ✓	724.86 ✓	1,907.35 ✓	1.97 ✓	7,177.08 ✓
Türkiye - Istanbul (CTCE)	2020	63	9	72	Türkiye - Istanbul (CTCE)	2020	9	11	0	62	82
	2021	66.28	2.77	69		2021	2.78	0	0,62	65.65	69.05
	2022	84.22	1.92	86.14		2022	1.92	0	0	84.22	86.14
Indonesia*	2020	648	1,997	2,645	Indonesia*	2020	2,184	0	458	3	2,645
	2021	973.98	2,924	3,898		2021	2,965	0.64	426.14	505.52	3,897
	2022	797.02 ✓	2,780.78 ✓	3,577.81 ✓		2022	2,839.20 ✓	0.70 ✓	463.18 ✓	274.72 ✓	3,577.81 ✓
Thailand	2020	50	1,428	1,478	Thailand	2020	1,355	92	31	0	1,478
	2021	54.3	1,717	1,771		2021	1,652.03	100	19.06	0	1,771.09
	2022	64.81	1,682.98	1,747.79		2022	1,600.38	122.42	25.71	0	1,748.51
Brazil	2020	0	949	949	Brazil	2020	824	69	55	0	949
	2021	78.0	1,445.7	1,523.6		2021	1,306.2	86.8	130.6	0	1,523.6
	2022	33.27	1,342.21	1,375.47		2022	1,166.75	92.46	116.26	0	1,375.47

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# 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
USA - Chattanooga*	2020	2	225	227	USA - Chattanooga*	2020	25	165	0	1	191
	2021	1	107.93	108.94		2021	26.41	81.84	0.16	0.46	108.87
	2022	1.42 ✓	227.05 ✓	228.47 ✓		2022	108.67 ✓	118.83 ✓	0.30 ✓	0.67 ✓	228.47 ✓
USA - Laurel Hill	2020	1	312	313	USA - Laurel Hill	2020	268	45	0	0	313
	2021	0.09	47.71	47.80		2021	0.18	47.55	0	0.068	47.80
	2022	1.76	497.19	498.95		2022	16.19	47.59	0	435.16	498.94
USA - Quakertown (FDI)	2020	0	218.23	218.23	USA - Quakertown (FDI)	2020	32.45	218.23	0	0	218.23
	2021	0	93.42	93.42		2021	31.06	62.356	0	0	93.42
	2022	0	110.01	110.01		2022	45.06	64.95	0	0	110.01
USA - Anaheim (TPI)	2020	5	756	761	USA - Anaheim (TPI)	2020	5	756	0	0	761
	2021	0.57	527.98	528.6		2021	0.57	527.98	0	0	528.55
	2022	0	360.90	360.90		2022	0	360.90	0	0	360.90
USA - San Marcos (AHT)	2020	0	13	13	USA - San Marcos (AHT)	2020	3	10	0	0	13
	2021	0.615	12.5	13.12		2021	2.20	9.40	0	0	11.60
	2022	0	15	18.63		2022	5.25	13.38	0	0	18.63
USA - Santa Ana (Axiom)	2020	50	497	547	USA - Santa Ana (Axiom)	2020	150	277	0	69	497
	2021	38.11	308.53	346.6		2021	20.66	312.96	12.84	0	346.64
	2022	35.59	478.63	514.22		2022	48.19	441.29	16.12	8.62	514.22
Italy - Microtext**	2020	-	-	-	Italy - Microtext**	2020	-	-	-	-	-
	2021	-	-	-		2021	-	-	-	-	-
	2022	80.04	263.36	343.41		2022	182.02	0	0	160.71	342.73

## KORDSA TOTAL GLOBAL WASTE DATA

Waste By Type (tonnes)	2020	2021	2022
Hazardous Waste	2,302	2,947	3,378
Non-Hazardous Waste	8,578	11,306	12,657
<b>Total Waste</b>	<b>10,879</b>	<b>14,253</b>	<b>16,036</b>
Waste By Disposal Method (tonnes)	2020	2021	2022
Recycle	6,725	9,744	10,556
Landfill	2,010	1,823	1,987
Energy Recovery	1,715	786.8	2,528
Incineration	136	1,897	966
<b>Total Disposed Waste</b>	<b>10,587</b>	<b>14,251</b>	<b>16,038</b>

### Explanations Regarding Data:

2020, 2021-2022 data includes all sites.

\*2022 data is verified by PWC.

\*\* Composite company joined Kordsa in 2022

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



KORDSA WATER MANAGEMENT DATA					
Water Withdrawals (m³)	Years	Fresh Surface Water	Groundwater-Renewable	Third Party Sources	Total Withdrawals
Türkiye - Izmit*	2020	0	522,358	34,206	556,564
	2021	0	543,094	70,049	613,143
	2022	0 ✓	579,681 ✓	143,145 ✓	722,826 ✓
Türkiye - Istanbul (CTCE)	2020	0	0	7,799	7,799
	2021	0	0	7,285	7,285
	2022	0	0	8,448	8,448
Indonesia*	2020	351,733	0	0	351,733
	2021	517,049	0	0	517,049
	2022	536,181 ✓	0 ✓	0 ✓	536,181 ✓
Thailand	2020	0	0	84,162	84,162
	2021	0	0	99,378	99,378
	2022	0	0	90,619	90,619
Brazil	2020	0	111,243	6,630	117,873
	2021	0	114,331	7,879	122,210
	2022	0	109,350	9,847	119,197
USA - Chattanooga*	2020	1,683,631	0	79,674	1,763,305
	2021	2,218,447	0	64,647	2,283,094
	2022	2,138,601 ✓	0 ✓	72,821 ✓	2,211,422 ✓
USA - Laurel Hill	2020	0	0	5,860	5,860
	2021	0	0	3,549	3,549
	2022	0	61.81	7,366	7,428
USA - Quakertown (FDI)	2020	0	0	1,315	1,315
	2021	0	0	1,148	1,148
	2022	0	0	1,159	1,159
USA - Anaheim (TPI)	2020	0	0	4,434	4,434
	2021	0	0	3,845	3,845
	2022	0	0	5,181	5,181
USA - San Marcos (AHT)	2020	2.34	0	651.09	653.43
	2021	2.34	0	273.99	276.33
	2022	0	0	1,929	1,929
USA - Santa Ana (Axiom)	2020	0	0	6,676	6,676
	2021	0	0	4,759	4,759
	2022	0	0	4,844	4,844
Italy - Microtex **	2020	-	-	-	-
	2021	-	-	-	-
	2022	0	0	1,810	1,810

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



KORDSA WATER MANAGEMENT DATA					
Water Discharges (m <sup>3</sup> )	Yıl	Fresh Surface Water	Third-Party Destinations	Other	Total Discharges
Türkiye - İzmit	2020	0	295,322	0	295,322
	2021	0	283,300	0	283,300
	2022	0 ✓	274,658 ✓	0	274,658 ✓
Türkiye - İstanbul (CTCE)	2020	0	7,019	0	7,019
	2021	0	6,556	0	6,556
	2022	0	7,603	0	7,603
Indonesia	2020	45,624	0	0	45,624
	2021	31,672	0	0	31,672
	2022	44,951 ✓	0 ✓	0	44,951 ✓
Thailand	2020	0	67,330	0	67,330
	2021	0	79,503	0	79,503
	2022	0	72,495	0	72,495
Brazil	2020	0	28,164	0	28,164
	2021	0	28,151	0	28,151
	2022	0	31,950	0	31,950
USA - Chattanooga	2020	734,010	817,209	0	1,551,219
	2021	772,277	1,102,777	0	1,875,053
	2022	726,723	1,324,557	0	2,051,280
USA - Laurel Hill	2020	0	2,442	0	2,442
	2021	0	2,442	0	2,442
	2022	0	7,428	0	7,428
USA - Quakertown (FDI)	2020	0	1,315	0	1,315
	2021	0	1,117	0	1,117
	2022	0	1,124	0	1,124
USA - Anaheim (TPI)	2020	0	3,990	0	3,990
	2021	0	3,462	0	3,462
	2022	0	4,663	0	4,663
USA - San Marcos (AHT)	2020	0	585	0	585
	2021	0	272	0	272
	2022	0	1,736	0	1,736
USA - Santa Ana (Axiom)	2020	0	6,008	0	6,008
	2021	0	4,283	0	4,283
	2022	0	4,360	0	4,360
Italy - Microtex **	2020	-	-	-	-
	2021	-	-	-	-
	2022	0	1,629	0	1,629
Recycled Water (m <sup>3</sup> )	Year	Amount	Total 2020	Total 2021	Total 2022
Türkiye - İzmit	2020	145,671	184,101	219,130	263,697
	2021	180,247			
	2022	224,769			
Indonesia	2020	38,430			
	2021	38,880			
	2022	38,928			

Explanations Regarding Data: 2020, 2021 and 2020 data include all sites. \*2020, 2021 and 2022 data are verified by PWC. \*\* Composite company joined Kordsa in 2022

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



## ADDITIONAL ENVIRONMENTAL DATA

Other Emissions	Years	Unit	Türkiye - Izmit	Türkiye - Istanbul (KTMM)	Indonesia	Thailand	Brazil	USA - Chattanooga	USA - Laurel Hill	USA - Quakertown (FDI)	USA - Anaheim (TPI)	USA - San Marcos (AHT)	USA - Santa Ana (Axiom)
NOx Emissions	2022	Tons	54.75	-	9.33	24.29	11	35.23	5.19	No measurement	No measurement	No measurement	0.944
	2021	Tons	154.01	-	15.39	384	16	36.72	4.20	No measurement	No measurement	0.55	0.84
	2020	Tons	154.01	-	0.008	0.0001	15	32.06	3.51	No measurement	No measurement	0.55	0.72
Sox Emissions	2022	Tons	3.88	-	1.37	6.42	0.19	0.22	0.031	No measurement	No measurement	No measurement	0.0041
	2021	Tons	1.25	-	4.23	131	1.2	0.264	0.025	No measurement	No measurement	0	0.0039
	2020	Tons	1.25	-	0.001	0.000043	4.13	0.22	0.02	No measurement	No measurement	0	0.00331
VOC Emissions	2022	Tons	172.44	0.00014	No measurement	0.111414	0.07	1.94	8.28	No measurement	No measurement	No measurement	1.656
	2021	Tons	12.24	0.063	No measurement	261	0.17	4.47	3.76	No measurement	No measurement	2.4	1.684
	2020	Tons	12.24	0.063	No measurement	0.049	0.97	3.59	3.72	No measurement	No measurement	2.4	1.049
Environmental Fines	2022	USD	0	0	0	0	0	0	0	0	0	0	0
	2021	USD	0	0	0	0	0	0	0	0	0	0	0
	2020	USD	0	0	0	0	0	0	0	0	0	0	0

E-Wastes	Years	Unit	Türkiye - Izmit	Türkiye - Istanbul (KTMM)	Indonesia	Thailand	Brazil	USA - Chattanooga	USA - Laurel Hill	USA - Quakertown (FDI)	USA - Anaheim (TPI)	USA - San Marcos (AHT)	USA - Santa Ana (Axiom)
E-wastes collect separately	2022	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	2021	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	2020	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
E-wastes send to recycle	2022	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	2021	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	2020	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
E-waste amount*	2022	Tons	4,922.4	0	0.7	0.08	1.56	0.23	0	0	0	0	0.04
	2021	Tons	9.10	0	0.84	0.11	0	0.69	0	0	0	<1	0.07
	2020	Tons	11.38	0	1.6	0.06	1.34	0.79	0	0	0	<1	0.05

\*Managing the end-of-life of our e-wastes one of our environmental priorities since those wastes are strictly harmful to both environment and people's health. According to the act, e-wastes require proper disposal through an accredited treatment and recycling facility. We have been implemented E-waste initiatives for Kordsa's facilities. During the 2022, we recycle 4,925 tons of e-waste.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ENVIRONMENTAL PERFORMANCE INDICATORS



ADDITIONAL ENVIRONMENTAL DATA													
Water Pollutants	Years	Unit	Türkiye - izmit	Türkiye - İstanbul (KTMM)	Indonesia	Thailand	Brazil	USA - Chattanooga	USA - Laurel Hill	USA - Quakertown (FDI)	USA - Anaheim (TPI)	USA - San Marcos (AHT)	USA - Santa Ana (Axiom)
Wastewater treatment system	2022	Yes/No	Yes	No	Yes	Yes	No	No	No	No	No	No	No
	2021	Yes/No	Yes	No	Yes	Yes	No	No	No	No	No	No	No
	2020	Yes/No	Yes	No	Yes	Yes	No	No	No	No	No	No	No
Conduct analysis on wastewater	2022	Yes/No	Yes	No	Yes	Yes	No	No	No	No	No	No	No
	2021	Yes/No	Yes	No	Yes	Yes	No	No	No	No	No	No	No
	2020	Yes/No	Yes	No	Yes	Yes	No	No	No	No	No	No	No
BOD	2022	tons	No measurement	No	8.32	4.26	-	-	-	-	-	-	-
	2021	tons	970.57	-	0.000136	0.000848	-	-	-	-	-	-	-
	2020	tons	No measurement	-	0.00021	0.00077	-	-	-	-	-	-	-
COD	2022	tons	83.228	-	27.03	10.48	-	-	-	-	-	-	-
	2021	tons	32,521.82	-	0.000564	0.000207	-	-	-	-	-	-	-
	2020	tons	9,462.12	-	0.00056	0.0019	-	-	-	-	-	-	-
Total suspended solids (TSS)	2022	tons	30.252	-	4.12	2.76	-	-	-	-	-	-	-
	2021	tons	3,410.42	-	0.000136	0.000393	-	-	-	-	-	-	-
	2020	tons	7,383.05	-	0.00013	0.00037	-	-	-	-	-	-	-
T-N	2022	tons	27.192	-	12.1	3.25	-	-	-	-	-	-	-
	2021	tons	936.20	-	0.00027757	0.000746	-	-	-	-	-	-	-
	2020	tons	301.23	-	0.00015	0.00067	-	-	-	-	-	-	-
T-P	2022	tons	1,163	-	No measurement	No measurement	-	-	-	-	-	-	-
	2021	tons	No measurement	-	No measurement	No measurement	-	-	-	-	-	-	-
	2020	tons	No measurement	-	No measurement	No measurement	-	-	-	-	-	-	-
<b>Total Water Pollutant Emission: 214.16 tons</b>													

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# ANNEXES



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# SUSTAINABILITY MATERIALITY COMMUNICATIONS



## 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

### 2021

- Kordsa Executive Lead Team / Review Meetings on strategy, material topics and targets

### 2022

- Our Employees (including BoD and ELT) / Sustainability Performance Evaluation and Materiality Survey
- Multiple External Stakeholders / 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](#)

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



# 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
	Yammer	To enhance CEO communication and sharing developments about the Kordsa with employees	As needed
	Strategy Meeting	During this meeting, the CEO provided employees with insights into Kordsa's strategic direction and roadmap	Once 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
	Human Resources Employee Meetings	Communicating developments in human resources, remuneration, and fringe benefits	Several times a year
<b>Customers</b>	Sustainability Survey	Sustainability Strategy	Once a year
	Sustainability Report	Sustainability Performance	Once 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>	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 vital 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

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# EMPLOYEE SUSTAINABILITY SURVEY



## Employee Sustainability Survey Performance Section Results

Performance Topic	2020 (%)	2022 (%)	Change (%)	No Idea (%)	Comments and Actions
Manages of business processes in line with corporate governance principles which are transparency, fairness, accountability and responsibility	79	77	-2	7	<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 are not taking any specific actions on these issues.</p> <p>Evidently, there has been a favorable change in how corporate governance principles are perceived. Last year, there was a notable decline of 8%, indicating a need for improvement.</p> <p>However, this year, there has been an improvement of 6%. This year's survey highlights business ethics and compliance as notable areas for improvement. We attribute this outcome to incidents that occurred during the year.</p> <p>We believe that a considerable portion of our employees have not been fully informed about our company's performance in emission reduction, energy efficiency, as well as water &amp; waste management. In fact, the percentage of respondents with no opinion on these matters, ranges from 13% to 15%.</p> <p>It is apparent that we need to conduct activities to enhance employee awareness about our projects that focus on boosting internal communication opportunities and ensuring gender equality. Further details about our efforts in this regard can be found in our report's Employees and Community section.</p>
Adequacy of policies, trainings and audits on compliance including anti-bribery, anti-corruption and anti-competitive behavior	85	80	-5	7	
Efforts to enhance raw material and material efficiency, including the utilization of recycled or reused materials	68	72	+4	10	
Adequacy of efficiency investments, projects, and alongside other measures to reduce overall energy consumption	66	65	-1	15	
Adequacy of emission reduction projects and other measures for mitigating greenhouse gases to combat climate change	61	63	+2	17	
Adequacy of practices to manage waste and wastewater to prevent environmental pollution	67	71	+4	13	
Adequacy of practices to manage and efficiently use water resources	66	68	+2	14	
Adequacy of measures sufficient to oversee and secure health and safety of its employees	86	82	-4	3	
Adequacy of the policies, audits, and training conducted for suppliers within the scope of protecting human/employee rights and the environment/natural resources.	72	73	+1	12	
Adequacy of policies, trainings and audits on human rights in its locations	81	82	+1	6	
Adequacy of employee communication channels to share their ideas and opinions with the management	78	73	-5	4	
Adequacy of personal development and training programs provided for its employees	65	66	+1	5	
Adequacy of recruitment, placement and waging practices to support equal opportunities for women & men, and employee diversity	74	69	-5	5	
Adequacy of social development investments for the local community	67	65	-2	13	

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

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# EMPLOYEE SUSTAINABILITY SURVEY



## Employee Sustainability Survey Performance Section Results

Performance Topic	2020 (%)	2022 (%)	Change (%)	No Idea (%)	Comments and Actions
Adequacy of economic performance to create economic, social, and environmental value for external stakeholders as a whole.	-	77	-	10	<p>This year, the economic value creation assessment involving all major stakeholders was expanded. Separate inquiries were made for employees, customers, shareholders, and investors. Our analysis of these outcomes is presented at the end of our report's table.</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 forecasts, scenario studies, and carbon management strategies regarding the financial impacts of climate change-related risks and opportunities in the short, medium, and long terms	-	72	-	11	
Adequacy of additional benefits provided to employees and the overall quality of the working environment	-	60	-	3	
Credibility and reputation among residents in regions in which the facilities are located	-	75	-	11	
Adequacy of environmentally friendly products developed through R&D and innovation studies	-	75	-	11	
Adequacy of personal data and corporate information security established through technology and digitalization efforts	-	82	-	7	
Impact/importance of the economic value created for employees	-	62	-	6	
Impact/importance of the economic value created for customers	-	82	-	8	
Impact/importance of the economic value created for shareholders	-	74	-	14	
Impact/importance of the economic value created for investors	-	73	-	15	

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# OHS COMMITTEES



[About the Report](#)

[Messages to Our Stakeholders](#)

[Corporate Profile](#)

[Strategy and Governance](#)

[Sustainability Management](#)

[Sustainability Facilitators at Kordsa](#)

[Economy and Growth](#)

[Environment and Climate](#)

[Employees and Community](#)

[Performance Indicators](#)

[Annexes](#)

KORDSA  
SUSTAINABILITY REPORT  
2022

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 training 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 (Türkiye)

DEİK Foreign Economic Relations Board / Member of General Board

DEİK Türkiye - USA Business Council / Member of Executive Council

DEİK Türkiye - Indonesia Business Council / Member of Executive Council

DEİK Türkiye - Thailand Business Council / Member of Executive Council

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

DEİK Türkiye - Brazil Business Council / Member of Executive Council

TURKCHAM - Turkish Chamber of Commerce / Board Member - Indonesia

## TÜRKİYE

UN Global Compact

Borsa İstanbul Sustainability Index

DEGUDER Earthquake Reinforcement Association

ERTA Integrated Reporting Türkiye Association

Foreign Economic Relations Board

İTHİB Turkish Textile Employer's Associations

İTKİB İstanbul Textile and Apparel Exporters' Association

İSO İstanbul Chamber of Industry

İTO İstanbul Chamber of Commerce

KALDER Quality Association

Kocaeli Chamber of Industry

Kocaeli Chamber of Commerce

Turkish Composites Manufacturers Association

LES Türkiye Technology and License Executives Society

MKK Central Registry Agency

SAHA İstanbul - Defense, Aviation and Space Cluster

TBCSD Turkish Business Council of Sustainable Development

Sustainability Academy

TAEK Turkish Atomic Energy Authority

TAYSAD Automotive Vehicles Suppliers Association

TEDAR Supply Chain Management Association

TEGEP Training and Development Platform

TEID Turkish Ethics and Reputation Association

TIDE Türkiye Internal Audit Institute

TMMOB Chamber of Mechanical Engineers

TTSİS Turkish Textile Industry Employers' Union

Tunneling Association

THBB Turkish Ready Mixed Concrete Association

TÜSİAD Turkish Industry and Business Association

TÜYİD Turkish Investor Relations Society

YÜD Board of Directors Association

## 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

Sustainability  
Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# UNGC CONTENT INDEX



## UN Global Compact Principles

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

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# INDIRECT IMPACTS FOR UN 2030 SUSTAINABLE DEVELOPMENT GOALS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA SUSTAINABILITY REPORT 2022

SDG	Kordsa's Indirect Impacts
	In our mother production facility, which is located in Izmit, we support and empower students to receive education in better conditions with our school renovation projects in the poor areas.
	Thanks to the rapid and comprehensive Covid-19 protection measures we took in 2020, our two facilities in Türkiye received TSE COVID-19 Safe Production Certificate after detailed audits.
	With our solar energy investments in our facilities, we produce the energy that will be required for the use of the public instead of pulling it from the grid.
	With our school renewal projects, we support the students here to receive education under the conditions of the wealthier segments and reduce inequalities. We end all forms of discrimination within the company with our diversity and inclusion programs.
	We carry out waste, water, materials, and energy management practices in our plants through we keep our environmental impacts on the cities we live in and the communities living here under control.
	There is no direct sea outfall in any of our facilities. All legal regulations and requirements are applied on wastewater management.
	The scope of studies in Conservation of Biological Diversity is available on our <a href="#">website</a> .
	Kordsa Board of Directors carries out its activities with a corporate governance approach based on the principles of transparency, accountability, fairness, and responsibility.

# GRI CONTENT INDEX



For the Content Index - Essentials Service, GRI Services reviewed that the GRI content index is clearly presented, in a manner consistent with the Standards, and that the references for disclosures 2-1 to 2-5, 3-1 and 3-2 are aligned with the appropriate sections in the body of the report. The service was performed on the English version of the report.

<b>Statement of use</b>	Kordsa has reported in accordance with the GRI Standards for the period [01.01.2022-31.12.2022].
<b>GRI 1 used</b>	GRI 1: Foundation 2021
<b>Applicable GRI Sector Standard(s)</b>	No applicable Sector Standards available.

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR DIRECT ANSWERS	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
<b>General disclosures</b>						
<b>GRI 2: General Disclosures 2021</b>	2-1 Organizational details	Page 158	A gray cell indicates that reasons for omission are not permitted for the disclosure or that a GRI Sector Standard reference number is not available.			
	2-2 Entities included in the organization's sustainability reporting	Page 158				
	2-3 Reporting period, frequency and contact point	Page 4				
	2-4 Restatements of information	No restatements				
	2-5 External assurance	Page 154-155				
	2-6 Activities, value chain and other business relationships	Page 11-12				
	2-7 Employees	Page 113-114				
	2-8 Workers who are not employees	Page 10				
	2-9 Governance structure and composition	Page 22-23				
	2-10 Nomination and selection of the highest governance body	Page 23				
	2-11 Chair of the highest governance body	Page 6				
	2-12 Role of the highest governance body in overseeing the management of impacts	Page 18, 22				
	2-13 Delegation of responsibility for managing impacts	Page 35				
	2-14 Role of the highest governance body in sustainability reporting	Page 35				
	2-15 Conflicts of interest	No conflicts of interest reported.				
	2-16 Communication of critical concerns	No critical concerns raised.				
	2-17 Collective knowledge of the highest governance body	Page 23				
	2-18 Evaluation of the performance of the highest governance body		Evaluation of Performance	Information unavailable	No evaluation	
	2-19 Remuneration policies	<a href="#">Remuneration Policy</a>				
	2-20 Process to determine remuneration	<a href="#">Remuneration Policy</a>				
	2-21 Annual total compensation ratio	<a href="#">Remuneration Policy</a>				
	2-22 Statement on sustainable development strategy	Page 15-20				
	2-23 Policy commitments	Page 25, 35, 39, 64, 74, 78, 81, 86, 92, 94, 96				
	2-24 Embedding policy commitments	Page 25, 35, 39, 64, 74, 78, 81, 86, 92, 94, 96				
	2-25 Processes to remediate negative impacts	Page 46-61, 74-87				
	2-26 Mechanisms for seeking advice and raising concerns	Page 24				
	2-27 Compliance with laws and regulations	Page 24-27				
	2-28 Membership associations	Page 141				
	2-29 Approach to stakeholder engagement	Page 37-42				
	2-30 Collective bargaining agreements	Page 94-95				

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



GRI STANDARD	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
<b>Material topics</b>						
<b>GRI 3: Material Topics 2021</b>	3-1 Process to determine material topics	Page 18-19	A gray cell indicates that reasons for omission are not permitted for the disclosure or that a GRI Sector Standard reference number is not available			
	3-2 List of material topics	Page 20				
<b>Economic Performance (Sustainable Growth)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 66				
<b>GRI 201: Economic Performance 2016</b>	201-1 Direct economic value generated and distributed	Page 112				
	201-4 Financial assistance received from government	Page 112				
<b>Procurement Practices (Sustainable Supply Chain)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 70-71				
<b>GRI 204: Procurement Practices 2016</b>	204-1 Proportion of spending on local suppliers	Page 70				
<b>Anti-Corruption (Business Ethics and Compliance)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 24-25				
<b>GRI 205: Anti-corruption 2016</b>	205-1 Operations assessed for risks related to corruption	Page 24-25				
	205-2 Communication and training about anti-corruption policies and procedures	Page 25				
	205-3 Confirmed incidents of corruption and actions taken	Page 117				
<b>Materials (Raw and Other Materials)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 75				
<b>GRI 301: Materials 2016</b>	301-1 Materials used by weight or volume	Page 76, 128				
	301-2 Recycled input materials used	Page 52, 76, 128				
<b>Energy (Energy Management)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 78				
<b>GRI 302: Energy 2016</b>	302-1 Energy consumption within the organization	Page 78, 123-124				
	302-4 Reduction of energy consumption	Page 78, 123-124				
	302-5 Reductions in energy requirements of products and services	Page 79-80				
<b>Water and Effluents (Water and Wastewater Management)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 86				
<b>GRI 303: Water and Effluents 2018</b>	303-1 Interactions with water as a shared resource	Page 86				
	303-2 Management of water discharge-related impacts	Page 86				
	303-3 Water withdrawal	Page 88, 131				
	303-4 Water discharge	Page 132				
<b>Biodiversity (Biodiversity Conservation)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 18				
<b>GRI 304: Biodiversity 2016</b>	304-2 Significant impacts of activities, products and services on biodiversity	Page 18				



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



GRI STANDARD	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
<b>Emissions (Emission (Carbon) Management)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 81				
<b>GRI 305: Emissions 2016</b>	305-1 Direct (Scope 1) GHG emissions	Page 82, 125				
	305-2 Energy indirect (Scope 2) GHG emissions	Page 82, 125				
	305-3 Other indirect (Scope 3) GHG emissions	Page 82, 126				
	305-5 Reduction of GHG emissions	Page 81				
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Page 133				
<b>Waste (Waste Management)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 83				
<b>GRI 306: Waste 2020</b>	306-1 Waste generation and significant waste-related impacts	Page 83				
	306-2 Management of significant waste-related impacts	Page 83-85				
	306-3 Waste generated	Page 129-130				
	306-4 Waste diverted from disposal	Page 129-130				
	306-5 Waste directed to disposal	Page 129-130				
<b>Supplier Environmental Assessment (Sustainable Supply Chain)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 70-71				
<b>GRI 308: Supplier Environmental Assessment 2016</b>	308-1 New suppliers that were screened using environmental criteria	Page 70				
	308-2 Negative environmental impacts in the supply chain and actions taken	Page 70				
<b>Employment (Employment and Labor Practices)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 90				
<b>GRI 401: Employment 2016</b>	401-1 New employee hires and employee turnover	Page 115				
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Page 103				
	401-3 Parental leave	Page 114				
<b>Occupational Health and Safety</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 91				
<b>GRI 403: Occupational Health and Safety 2018</b>	403-1 Occupational health and safety management system	Page 91				
	403-2 Hazard identification, risk assessment, and incident investigation	Page 91				
	403-3 Occupational health services	Page 91				
	403-4 Worker participation, consultation, and communication on occupational health and safety	Page 91, 93				
	403-5 Worker training on occupational health and safety	Page 92, 121				
	403-6 Promotion of worker health	Page 93				
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Page 93				
	403-8 Workers covered by an occupational health and safety management system	Page 91				
	403-9 Work-related injuries	Page 118-120				

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



GRI STANDARD	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
<b>Training and Education (Talent Management and Organizational Development)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 101				
<b>GRI 404: Training and Education 2016</b>	404-1 Average hours of training per year per employee	Page 101, 116				
	404-2 Programs for upgrading employee skills and transition assistance programs	Page 101-102				
	404-3 Percentage of employees receiving regular performance and career development reviews	Page 99				
<b>Diversity and Equal Opportunity (Equal Opportunity and Diversity)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 104				
<b>GRI 405: Diversity and Equal Opportunity 2016</b>	405-1 Diversity of governance bodies and employees	Page 22, 114				
<b>Non-Discrimination (Human Rights)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 94				
<b>GRI 406: Non-discrimination 2016</b>	406-1 Incidents of discrimination and corrective actions taken	Page 117				
<b>Freedom of Association and Collective Bargaining (Human Rights)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 94				
<b>GRI 407: Freedom of Association and Collective Bargaining 2016</b>	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Page 94-95				
<b>Child Labor (Human Rights)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 94				
<b>GRI 408: Child Labor 2016</b>	408-1 Operations and suppliers at significant risk for incidents of child labor	Page 94				
<b>Local Communities (Community Development)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 109				
<b>GRI 413: Local Communities 2016</b>	413-1 Operations with local community engagement, impact assessments, and development programs	Page 109-110				
<b>Supplier Social Assessment (Sustainable Supply Chain)</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 70-71				
<b>GRI 414: Supplier Social Assessment 2016</b>	414-1 New suppliers that were screened using social criteria	Page 70				
	414-2 Negative social impacts in the supply chain and actions taken	Page 70				
<b>Own Material Topic- Information-Data Security and Privacy</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 64				
<b>Own Material Topic- Corporate Governance</b>						
<b>GRI 3: Material Topics 2021</b>	3-3 Management of material topics	Page 22				

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



## Kordsa 2022 Sustainability Report – Reporting Principles

This reporting principles (“principles”) provides information on the data collection and calculation methodologies for the indicators in the scope of independent assurance included in Kordsa Teknik Tekstil A.Ş.’s (“Kordsa”, “the Company”) Sustainability Report for 2022. Unless otherwise stated, the indicators within the scope of the assurance phase include data from Kordsa’s Türkiye-Izmit, Indonesia and America-Chattanooga locations. These indicators include social indicators, environmental indicators and economic indicators. It is the responsibility of the Company management to ensure that appropriate procedures are in place to prepare these indicators, in all material respects, in accordance with the principles.

The information in this guide covers the FY 22 fiscal year ending December 31, 2022, and only the relevant operations in Türkiye and the World for which the Company is responsible, as detailed in the “Key Definitions and Scope of Reporting” section, and excludes information

related to group companies, subsidiaries 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:

Type	KPI	Scope
Social Indicators	Number of Employees by Gender (#)	In the reporting period, this indicator refers to the number of all employees by gender. All global locations of Kordsa are covered in this KPI.
	Number of Employees by Age and Gender (#)	In the reporting period, this indicator refers to the company’s employees under the age of 30, between the ages 30-50 and over the age of 50. Furthermore, it refers to the breakdown of men and women for each age range as well. All global locations of Kordsa are covered in this KPI.
	Number of Employees in the Management Team by Gender (#)	In the reporting period, this indicator refers to the distribution of number of men and women working in management level of the Company. Management categories are divided as the Company’s top management (ELT), director, manager, engineer and specialist, supervisor, technician, civil servant (white collar) and operator. All global locations of Kordsa are covered in this KPI.
	Number of Employees Hired (#)	In the reporting period, it refers to the total number of employees hired during the reporting period. In addition, this indicator includes gender, management level and age breakdown within the total number of employees hired. All global locations of Kordsa are covered in this KPI.
	Number of Employees Left (#)	In the reporting period, this indicator refers to the total number of employees left by age and gender. All global locations of Kordsa are covered in this KPI.
	Employee Turnover Rate (%)	This indicator refers to the ratio of the number of employees who quit their jobs declared by the Company to the Social Security Institution with a Declaration of Leaving Work to the total number of employees during the reporting period. All global locations of Kordsa are covered in this KPI.
	Training Hours (hour)	In the reporting period, this indicator refers to the total of training hours given by the Company to its employees. Those trainings are categorized as business development, personal development, occupational health and safety and other. All global locations of Kordsa are covered in this KPI.
	Number of Employees Received Ethical Trainings (#)	In the reporting period, this indicator refers to the number of employees who received ethical trainings from the Company. All global locations of Kordsa are included in this KPI.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# KORDSA 2022 REPORTING GUIDANCE



Type	KPI	Scope	
<b>Social Indicators</b>	The Number and Rate Of Recordable Case	In the reporting period, this indicator refers to the sum of all fatal accidents, high severity accidents (excluding fatal accidents and registered accidents), registered accidents and total working hours.	
	Ratio Of Targeted Suppliers Who Have Gone Through A Sustainability Assessment Survey (%)	In the reporting period, this indicator refers to the percentage of suppliers who have been targeted by the Company and have completed online sustainability audits to the total suppliers.	
	Ratio Of Targeted Raw Material Suppliers Audited In Line With Annual Scheduled Audit Plan (%)	In the reporting period, this indicator represents the percentage of field inspections planned by the Company for raw material suppliers.	
	Number Of Suppliers Evaluated In The Scope Of Human Rights (#)	In the reporting period, it represents the number of suppliers which are evaluated by the Company, within the scope of human rights. All global locations of Kordsa are included in this KPI.	
<b>Environmental Indicators</b>	Electricity Consumption (kWh)	In the reporting period, this indicator refers to total electricity purchased for air conditioning, lighting, use of electrical devices and other electricity requiring operations, in the locations within the scope. The purchased electricity is followed by using invoices received from service provider institutions.	
	Natural Gas Consumption (SM <sup>3</sup> )	In the reporting period, this indicator refers to total natural gas purchased for heating, kitchenery and other natural gas requiring operations, in the locations within the scope. The purchased natural gas is followed by using invoices received from service provider institutions.	
	LPG Consumption (kg)	In the reporting period, this indicator refers to LPG purchased in the locations within the scope. The purchased LPG is followed by using invoices received from service provider institutions.	
	Diesel Consumption (L)	In the reporting period, this indicator refers to the amount of diesel consumed for generators and company vehicles in the locations within the scope. The purchased diesel is followed by using invoices received from service provider institutions.	
	Gasoline (L)	In the reporting period, this indicator refers to amount of gasoline consumed for company vehicles in the locations within the scope. The purchased gasoline is followed by using invoices received from service provider institutions.	
	Ratio of Electricity Consumption from Renewable Sources to Total Electricity Consumption (%)	In the reporting period, this indicator refers to the ratio of the company's electricity consumption from renewable sources (I-REC Certificate purchases and renewable energy consumption) to its total electricity consumption. All global locations of Kordsa are included in this KPI.	
	<b>Scope 1 &amp; 2 Emissions</b>		
	Scope 1 Emissions (tCO <sub>2</sub> e)	In the reporting period, it refers to total greenhouse gas emissions produced as a result of consumption of energy sources such as natural gas, gasoline, diesel, propane, fuel oil and gasoline, use of refrigerant gas and fire extinguishers. All global locations of Kordsa are included in this KPI.	
	Scope 2 Emissions – Location Based (tCO <sub>2</sub> e)	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 all Kordsa's global locations during the reporting period.	
	Scope 2 Emissions – Market Based (tCO <sub>2</sub> e)	This indicator means the emission of greenhouse gases due to the use of purchased electricity at all Kordsa's global locations during the reporting period.	

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# KORDSA 2022 REPORTING GUIDANCE



Type	KPI	Scope
<b>Environmental Indicators</b>	<b>Other Environmental Performance Indicators</b>	
	Water Withdrawal (m <sup>3</sup> )	During the reporting period, in the company's relevant locations, received from; <ul style="list-style-type: none"> <li>• Surface Water</li> <li>• Ground Water and</li> <li>• 3rd Party Service Providers</li> </ul> Those are followed by using meter readings and invoices from service providers.
	Wastewater Discharge (m <sup>3</sup> )	In the reporting period, it refers to discharges of wastewater produced by the Company's İzmit/Türkiye and Indonesia locations, to receiving environment (surface water) and wastewater channel. Those discharges are followed by using meter reading records.
	Wastes (ton)	In the reporting period, it refers to the total amount of solid and liquid waste produced in the relevant locations of the Company, according to disposal method (Recycling, landfill, energy recovery and incineration) and hazard structure (hazardous, non-hazardous).
	Re-Used Material Rate (%)	In the reporting period, it refers to rate of reusing of materials shown as below, in the relevant locations; <ul style="list-style-type: none"> <li>• Steel Hub (Türkiye-İzmit and Indonesia),</li> <li>• Coils (Indonesia, US-Chattanooga),</li> <li>• Cardboard Separator (Türkiye- İzmit, Indonesia and US-Chattanooga) and</li> <li>• Wooden Pallet (Türkiye- İzmit, Indonesia and US-Chattanooga)</li> </ul>
<b>Economic Indicators</b>	Ratio Of Sustainable Products Revenues To Total Revenue (%)	In the reporting period, it refers to the rate of revenue gained from products and services which is defined as sustainable (the methodology based on the European Union Sustainable Finance Taxonomy study was taken into account), to the total revenue. All global locations of Kordsa are covered in this KPI.
	Number of Sustainable Products (#)	In the reporting period, it refers to the number of products and services produced by the company, and which are also defined as sustainable (the methodology based on the European Union Sustainable Finance Taxonomy study was taken into account). All locations of Kordsa are included in this KPI.
	R&D Expenditures Including Capex and Opex (TL)	In the reporting period, it refers to the expenses made by the Company within the scope of R&D activities. All global locations of Kordsa are included in this KPI.
	Ratio Of Sustainability-Oriented R&D Budget To Total R&D Budget (%)	In the reporting period, it refers to the sustainable focused R&D budget planned to the total R&D budget. All global locations of Kordsa are included in this KPI.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



## DATA PREPARATION

### Social Indicators

#### Employee Turnover Rate

The calculations are made by using the formula below. When calculating total employee hours, the average number of employees during the reporting period is taken into account.

#### Formulas:

Employee Turnover Rate:  $\text{Number of Employees Left (Resignations and Termination of Employment Contract)} / \text{Total Employees} * 100$

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

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 recordable accidents): Recordable accidents resulting in permanent disability or amputation

Recordable 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 requires 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:  $\text{Number of accidents with lost workday} + \text{Number of accidents requiring medical treatment} + \text{Number of accidents causing restricted work}$

Recordable Case Severity Rate =  $(\text{Number of lost workdays due to Accident} / \text{Total Working Hours}) * 200,000$

Recordable Case Frequency Rate:  $(\text{Number of recordable incidents} / \text{Total working hours}) * 200,000$

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

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

Ratio of targeted suppliers who have gone through a sustainability assessment survey (%) =  $(\text{Number of Suppliers Who Have Gone Through Sustainability Assessments During the Year} / \text{Number of Suppliers Expected to be Assessed on Sustainability Issues During the Year}) * 100$

Ratio of targeted raw material suppliers audited in line with annual scheduled audit plan (%) =  $(\text{Number of Raw Material Suppliers Who Have Been Audited in the Reporting Year} / \text{Number of Raw Material Suppliers Expected to be Audited in the Reporting Year}) * 100$

#### Number of suppliers evaluated in the scope of Human Rights (#)

The results of audits, assessments, and surveys, including human rights issues, conducted by Kordsa in all its global operations within the scope of its suppliers. Accordingly, the results of the sustainability audit conducted by Kordsa, the evaluation result report provided by the organization and the results of the sustainability surveys conducted by Kordsa were monitored.

### Environmental Indicators

#### Energy Consumption by Fuel Type

Within the scope of energy consumption data, primary energy and fuel sources including electricity, natural gas, LPG, diesel and gasoline are reported.

Electricity consumption and natural gas consumption data are obtained from service providers' meters and invoices. LPG and diesel fuel consumption is obtained from service providers' invoices for generators and company-owned vehicles. Gasoline consumption is obtained from service providers' invoices for company-owned vehicles.

Since common area consumption is included in the total amount in the shared invoices for Türkiye-Izmit electricity consumption.

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

The Company uses the following conversion factors in its energy consumption calculations:

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

#### Scope 1 and 2 Emissions

Scope 1 and Scope 2 emissions are calculated in accordance with ISO 14064-1, "Greenhouse Gas Protocol: Corporate Calculation and Reporting Standard" in accordance with ISO 14064-1.

CO<sub>2</sub> equivalent factors consisting of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs (refrigerant gas), fire extinguishers emissions were used in the calculations. The emission factors used are detailed in the table below. CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O conversion factors are based on the "DEFRA (UK Department for Environment, Food and Rural Affairs) 2022 Emission Factors" (<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2022>) published by the UK government for Türkiye-Izmit and Indonesia locations. US-Chattanooga plant natural gas conversion factors are based on the "Emission Factors for GHG Inventories" published by the US EPA (United States Environmental Protection Agency). CO<sub>2</sub> equivalent factors resulting from the emissions of HFCs (refrigerants) and fire extinguishers are based on the 5th Assessment Report (AR5) published by the International Panel on Climate Change (IPCC).

Emissions of electricity consumed from the grid were calculated using the CO<sub>2</sub> emission factors published by the International Energy Agency in 2022 for the respective locations. For the US-Chattanooga location, the "EPA Power Profiler Zipcode Tool" published by the EPA (United States Environmental Protection Agency) was used.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# KORDSA 2022 REPORTING GUIDANCE



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)	2.66134	0.00026	0.03720	2.69880
Gasoline (kg/lt)	2.32567	0.00732	0.00671	2,33970
Natural Gas (kg/m <sup>3</sup> )	2.02774	0.00274	0.00107	2.03135
LPG (kg/lt)	2.93518	0.00228	0.00183	2.93929
Refrigerant gases– R123				79
Refrigerant gases– R134A				1300
Refrigerant gases– R410A				1923.5
Fire extinguisher– CO <sub>2</sub>				1

Emission Factors – Scope 2 (kg/kWh)	kgCO <sub>2</sub> -e/kWh
Electricity (renewable energy)	0.00

Electricity emission factors for operations outside the US are taken from IEA data, as this data is licenced it cannot be shared on this document.

About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022





About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## Other Environmental Performance Data

Within the scope of water withdrawal data, the total amount of water consumed at the relevant locations of the Company has been calculated.

It covers groundwater and municipal water in Izmit, Türkiye; surface water in Indonesia; and surface water and municipal water in Chattanooga, USA.

Water consumption data for Türkiye-Izmit and Indonesia locations were obtained from purchase invoices and consumption reports. In the US-Chattanooga location, municipal water consumption was obtained from water purchase invoices, and water withdrawn from the river was obtained from flow meter reading records located at the entrance of the facility.

The Izmit, Türkiye location discharges its wastewater to the wastewater canal and the Indonesia location discharges to the receiving environment (surface water). Both companies discharge their wastewater based on evidence of wastewater meter readings located at the facility discharge point.

Within the scope of waste management, waste disposal amounts were calculated based on waste declaration forms and internal records obtained from the relevant locations of the Company.

Reused materials consist of steel shells, carton separators, pallets and cylindrical tubes used in the Company's production processes. Reused materials are considered as materials recovered from the customer. This amount is calculated by subtracting purchased materials from the materials used in production.

### Formulas:

Reused material rate (%) = (Amount of non-product materials used in production and then procured from customers for reuse) \*100 / Total amount of materials used in production)

### Economic Indicators

The following definitions and formulas are used in the calculation of economic indicators.

### Sustainable Products and Services

The methodology based on the European Union Sustainable Finance Taxonomy study was taken into consideration in the classification of sustainable products. In this context, the environmental impacts of the Company's financial activities are evaluated under mitigation, transition, and enabler categories. Category definitions are given below.

**Mitigation:** It covers products and services that provide benefits related to the direct reduction of environmental resource use and carbon emissions.

**Transition:** It covers products and services that are resource and/or carbon-intensive in nature, but related to the transition to more sustainable technologies.

**Enabler:** It covers products and services that create a positive environmental impact on customer operations or are provided as inputs to sustainable industries.

In 2022, the Company has a total of 64 sustainable products grouped in these categories: 18 in composite production, 14 in construction materials and 32 in tire products.

Sustainable product and service revenues represent the Company's revenues from products and services that fall under the above-mentioned sustainable products and services. The income of the products determined as sustainable was obtained through the product-based sales lists, and the total income from the related product types was calculated within the scope of this indicator. In the reporting year

The ratio of sustainable product and service revenues to total revenue is calculated by dividing the total revenue from sustainable products and services by the Company's total revenues in the reporting period. Its total revenue represents the total revenue earned by the Company as of the end of the reporting year and stated in the Kordsa Annual Report published as of 31.12.2021.

### Formulas:

Ratio of Sustainable Product and Service Revenues to Total Revenue = Sustainable Product and Service Revenues / Total Revenue

### R&D Expenditures

R&D expenditure represents the Company's R&D expenditures including Capex and Opex in the reporting period. In this indicator, the total amount is calculated from the expenditures made within the Company's approved budget.

Sustainability-oriented R&D budget refers to the sustainability-oriented R&D budget of the Company in the reporting period. In these indicators, the total amounts are formed from the expenditures made within the approved budget of the Company.

### Formulas:

Ratio of Sustainability-Oriented R&D Budget to Total R&D Budget (%) = Sustainability-Oriented R&D Budget / Total R&D Budget

## 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

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



## 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. (the "Company" or "Kordsa") to perform a limited assurance engagement in respect of the Selected Sustainability Information (the "Selected Information") stated in the Kordsa Sustainability Report 2022 (the "Sustainability Report 2022") for the year ended 31 December 2022 and listed below.

### Selected Information

The scope of the Selected Information for the year ended 31 December 2022, which is subject to our limited assurance work, set out in the pages 49,76,113,115,116,117,118,119,122,123,124,125,128,129,130,131 and 132 of the Sustainability Report 2022 with the sign is summarized below:

### Social Indicators

- Number of Employees by Gender (#)
- Number of Employees by Age and Gender (#)
- Number of Employees in the Management Team by Gender (#)
- Number of Employees Hired (#)
- Number of Employees Left (#)
- Employee Turnover Rate (%)
- Training Hours (hour)
- Number of Employees Received Ethical Trainings (#)
- The number and rate of recordable case
- Ratio of targeted suppliers who have gone through a sustainability assessment survey (%)
- Ratio of targeted raw material suppliers audited in line with annual scheduled audit plan (%)
- Number of suppliers evaluated in the scope of Human Rights (#)

### Environmental Indicators

- Electricity Consumption (kWh)
- Natural Gas Consumption (SM<sup>3</sup>)
- LPG Consumption (kg)
- Diesel Consumption (L)
- Gasoline (L)
- Ratio of Electricity Consumption from Renewable Sources to Total Electricity Consumption (%)
- Scope 1 Emissions (tCO<sub>2</sub>e)
- Scope 2 Emissions – Location Based (tCO<sub>2</sub>e)
- Scope 2 Emissions – Market Based (tCO<sub>2</sub>e)
- Water Withdrawal (m<sup>3</sup>)
- Wastewater Discharge (m<sup>3</sup>)
- Wastes (ton)
- Re-Used Material Rate (%)

PwC Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik A.Ş.  
Kılıçali Paşa Mah. Meclis-i Mebusan Cad. No:8 İç Kapı No:301 Beyoğlu/İstanbul  
T: +90 212 326 6060, F: +90 212 326 6050, [www.pwc.com.tr](http://www.pwc.com.tr) Mersis Numaramız: 0-1460-0224-0500015



### Economic Indicators

- Ratio of sustainable products revenues to total revenue (%)
- Number of Sustainable Products (#)
- R&D Expenditures Including Capex and Opex (TL)
- Ratio of sustainability-oriented R&D budget to total R&D budget (%)

Our assurance was with respect to the Selected Information marked with "" in the in the Sustainability Report 2022 and we have not performed any procedures with respect to earlier periods or any information other than Selected Information marked with in the Sustainability Report 2022 and, any other elements included in the Sustainability Report 2022 and, therefore, do not express any conclusion thereon.

### Criteria

The criteria used by the Company to prepare the Selected Information is set out in section "Kordsa Sustainability Report 2022–Reporting Principles" (the "Reporting Principles") on pages 148,149,150,151,152 and 153 of the Sustainability Report 2022.

### The Company's Responsibility

The Company is responsible for the content of the Sustainability Report 2022 and the preparation of the Selected Information in accordance with the Reporting Principles. 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 Principles.



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022



In particular, the conversion of different energy measures to MWh and energy used to carbon emissions is based upon, inter alia, information and factors generated internally and/or derived by independent third parties as explained in the Reporting Principles. Our assurance work did not include examination of the derivation of those factors and other third-party information.

#### Our Independence and Quality Management

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 Management 1, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### 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 Principles. 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 (Revised) 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 Company's Selected Information for the year ended 31 December 2022, is not properly prepared, in all material respects, in accordance with the Reporting Principles.

#### Restriction of use

This report, including the conclusion, has been prepared for the Board of Directors of the Company as a body, to assist the Board of 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 Sustainability Report 2022 for the year ended 31 December 2022, to enable the Board of 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 Board of 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.

Mehmet Cenk Uslu, SMMM  
Partner

Istanbul, 24 October 2023

# KORDSA 2022 SCOPE 3 GHG VERIFICATION REPORT AND CERTIFICATE



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Facilitators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

	<b>VERIFICATION STATEMENT ANNEX</b>	Statement No	«Statement»
		Statement Dt	04.07.2023
		Year	2022

<b>Company Name</b>	KORDSA TEKNİK TEKSTİL A.Ş.		
<b>Company Address</b>	Alikahya Fatih Mah. Sanayici Cad. No:90 41310 İzmit / Kocaeli / Turkey		
<b>Scope</b>	Manufacture of Technical Textiles		
<b>Reporting Period</b>	01.01.2022 – 31.12.2022		
<b>Verification Body</b>	QSI Belgelendirme, Muayene ve Test Hizmetleri Ltd. Şti		
<b>Address</b>	Mira Ofis, Beytepe Mah. 5397 Sokak, B1 Blok D:2, Çankaya, Ankara		
<b>Phone</b>	+90 312 472 60 67	<b>Fakx</b>	+90 312 472 60 68
<b>Web</b>	<a href="http://www.qsi.com.tr">www.qsi.com.tr</a>	<b>E-Mail</b>	<a href="mailto:info@qsi.com.tr">info@qsi.com.tr</a>
<b>Lead Verifier</b>	Okay Kayhanlı		
<b>Verifier/s</b>	--		
<b>Independent Reviewer</b>	Bengi Çiftçi		
<b>The Aim &amp; Scope of the Verification</b>	Independently and objectively monitoring the compliance of the emissions, indirectly controlled by the establishment, with the requirements of the GHG Protocol Scope 3 Corporate Value Chain (Scope 3) Accounting and Reporting Standard		
<b>Method Used</b>	Based on Calculation		
<b>Control Methode</b>	Operational Control		
<b>Level of Assurance &amp; Materiality</b>	Limited Assurance Level		
<b>Verification Result</b>	QSI confirms that the greenhouse gas statement report of the organization is prepared in accordance with the requirements of GHG Protocol for the above-mentioned verification period according to TS EN ISO 14064-3 standard & ISO 17029:2019 and ISO 14065:2020 principles.		
<b>Assessment by Verification Criteria</b>	The assessment made by the verification team suggests that the greenhouse gas report meets the verification criteria.		

Sayfa 1

	<b>VERIFICATION STATEMENT ANNEX</b>	Statement No	«Statement»
		Statement Dt	04.07.2023
		Year	2022

## 1- Organisational Boundary

Facility Name	Country	Address
Kordsa Turkey	Turkey	Alikahya Fatih Mah. Sanayici Cad. No:90 41310 İzmit / Kocaeli
Composite Technologies Center Of Excellence	Turkey	Sanayi Mah. Teknopark Bulvan No:1/1B PK 34906 Kurtköy / Pendik / İstanbul
Chattanooga	USA	Kordsa, Inc. 4501 North Access Road Chattanooga TN 37415-9990
Laurel Hill	USA	Kordsa, Inc. 17780 Armstrong Road Laurel Hill NC 28351
Fabric Development, Inc.	USA	1217 Mill Street PO Box 462 Quakertown, PA 18951
Textile Products, Inc.	USA	2512-2520 W. Woodland Drive Anaheim, CA 92801-2636
Advanced Honeycomb Technologies Corporation	USA	1015 Linda Vista Drive, Building C San Marcos, California. 92078
Axiom Materials, Inc.	USA	2320 Pullman St, Santa Ana, CA 92705
Brazil	Brazil	Kordsa Brasil S.A. Rua Eteno, nº 3832 Polo Industrial de Camaçari Camaçari, BA, CEP 42810-000
Indonesia	Indonesia	PT Indo Kordsa Tbk Jl. Pahlawan, Desa Karang Asem Timur, Citeureup,
Thailand	Thailand	Thai Indo Kordsa Co., Ltd. Rojana Industrial Park, 1/61 Moo 5 Khanham Subdistrict, Uthai District Ayutthaya 13210
Microtex Composites S.r.l.	Italy	Via del Pozzo San Sebastiano, 15/c – 51100 Pistoia (PT)

## 2- Reporting Boundary

- ✓ C1-Purchased Goods and Services
- ✓ C2-Capital Goods
- ✓ C3-Fuel and Energy Related Activities
- ✓ C4-Upstream Transportation and Distribution
- ✓ C5-Waste Generated in Operations
- ✓ C6-Business Travel
- ✓ C7-Employee Commuting
- ✓ C8-Upstream Leased Assets
- ✓ C9-Downstream Transportation and Distribution

Sayfa 2

# KORDSA 2022 SCOPE 3 GHG VERIFICATION REPORT AND CERTIFICATE



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

	<b>VERIFICATION STATEMENT ANNEX</b>	Statement No	«Statement»
		Statement Dt	04.07.2023
		Year	2022

- ✓ C10- Processing of Sold Products
- ✓ C11-Use of Sold Products
- ✓ C12- End-of-Life Treatment of Sold Products
- ✓ C13-Downstream Leased Assets
- ✓ C14-Franchises
- ✓ C15-Investments

**Category 2, 8, 11, 14 & 15 were assessed to be not relevant for the reporting year.**

**3- Verification Explanation**

The purpose of the verification is to establish a reasonable trust level opinion on the above-mentioned greenhouse gas statements, including:

- a) Compliance with the requirements of GHG Protocol,
- b) The acceptability of the emissions calculated in 2022.

The verification activities are based on TS EN ISO 14064-3:2019. In this context, the following verification activities were carried out;

- Reviewing of documentation, controls and methods, including other verification reports,
- Preparation of the risk assessment and verification plan,
- Evaluation of greenhouse gas information management, documentation, records, controls and methods of the organization,
- Documentation of verification findings and observations in the verification report,
- Assessment and documentation of non-conformities and reconciliations of observations in the verification report,
- Preparing the verification statement and completing the verification.

During the verification process, a risk assessment was made, a sample plan and a verification plan were created, and within the framework of this planning, documents were reviewed and site visits were made for the following purposes;

- Selection and management of greenhouse gas information and data,
- Processes for collecting, processing, combining and reporting greenhouse gas information and data,
- Processes and systems created for the accuracy of greenhouse gas information and data,
- Studies conducted to design and maintain the greenhouse gas information system,
- Systems and processes that ensure the continuity of the greenhouse gas information system,
- Other systems supporting greenhouse gas information system
- Results of previous evaluations, if available and applicable

Findings determined during the document review and site visit were presented to the organization with the Greenhouse Gas Verification Correction Table. The purpose of presenting the verification findings is to agree on the greenhouse gas statement and to identify the issues that need to be clarified.

Sayfa 3

	<b>VERIFICATION STATEMENT ANNEX</b>	Statement No	«Statement»
		Statement Dt	04.07.2023
		Year	2022

Correction actions (CA) have been reported and adjusted within the reporting period.

In addition, the verification team requested an explanation from the organization in cases where there was not enough or enough clear information to decide that the report meets the requirements of GHG Protocol.

The responses sent by the organization regarding the explanation and correction activities were evaluated and it was determined that the deficiencies that required explanation and correction were corrected.

The verification activity results and the verification report were subjected to a technical review and approved by the technical reviewer.

**4- Greenhouse Gas Information System and Control**

In order to carry out the greenhouse gas information system and controls by the organization, a document system that explains how to document and archive including information management system activities consistent with the intended use of the greenhouse gas statement, which ensures the accuracy and completeness of the greenhouse gas statement and complies with the relevant principles of TS EN ISO 14064-1:2018 has been prepared.

Data collection, processing and reporting processes have been verified by field audits.

**5- Evaluation of Greenhouse Gas Statement**

The evidences obtained in the evaluation of the controls are sufficient according to the greenhouse gas data, information and the criteria of the current greenhouse gas program and support the greenhouse gas statement.

Total Scope 3 GHG Emissions	: 2,357,441.87 tonnes of CO <sub>2</sub> eq
C1-Purchased Goods and Services	: 1,798,520.41 tonnes of CO <sub>2</sub> eq
C3-Fuel and Energy Related Activities	: 109,787.19 tonnes of CO <sub>2</sub> eq
C4-Upstream Transportation and Distribution	: 93,743.10 tonnes of CO <sub>2</sub> eq
C5-Waste Generated in Operations	: 1,613.57 tonnes of CO <sub>2</sub> eq
C6-Business Travel	: 1,828.80 tonnes of CO <sub>2</sub> eq
C7-Employee Commuting	: 4,521.80 tonnes of CO <sub>2</sub> eq
C9-Downstream Transportation and Distribution	: 12,697.47 tonnes of CO <sub>2</sub> eq
C10- Processing of Sold Products	: 282,502.73 tonnes of CO <sub>2</sub> eq
C12- End-of-Life Treatment of Sold Products	: 50,887.60 tonnes of CO <sub>2</sub> eq
C13-Downstream Leased Assets	: 1,339.62 tonnes of CO <sub>2</sub> eq

**Approving The Report on Behalf Of QSI**  
**Okay KAYHANLI**

QSI Belgelendirme  
Muayene, Test Hizmetleri Ltd. Şti.  
Belçim, 1. Kat, F11 Sokak  
Mira Ofis Bld. Beşiktaş / Beşiktaş / İstanbul / Türkiye  
Tel: +90 312 472 90 88 / +90 312 472 90 88  
Jokimbiye No: 39505779365  
Mersis No: UCB6057539500019

Sayfa 4

# CONTACTS

## HEAD OFFICE

Alikahya Fatih Mahallesi Sanayi Caddesi No:90 41310 Izmit/Kocaeli/Türkiye  
Tel: +90 262 316 70 00 Fax: +90 262 316 70 70

## Composite Technologies Center of Excellence

Sanayi Mahallesi Teknopark Bulvarı  
No:1/1B 34906 Pendik / Istanbul / Türkiye  
Tel: + 90 216 300 10 00

## EUROPE, MIDDLE EAST, AND AFRICA

### Türkiye

Kordsa Teknik Tekstil A.Ş.  
Alikahya Fatih Mahallesi Sanayi Caddesi  
No:90 41310 Izmit/Kocaeli  
Tel: +90 262 316 70 00 Fax: +90 262 316 70 70

### Italy

Mixrotex Composites S.r.l.  
Via del Pozzo San Sebastiano, 15/c – 51100 Pistoia (PT) – Italy  
Tel: + 03 578 460 48 10

## NORTH AMERICA

### USA - Chattanooga

Kordsa Inc.  
4501 North Access Road  
Chattanooga, TN 37415-9990  
Tel: + 1 423 643 8300 Fax: + 1 423 643 2726

### USA - Laurel Hill

Kordsa Inc.  
17780 Armstrong Road Laurel Hill, NC 28351  
Tel: + 1 910 462 2051 Fax: + 1 910 462 5040

### USA - Quakertown

Fabric Development, Inc.  
1217 Mill Street PO Box 462 Quakertown, PA 18951  
Tel: +1 (215) 536-1420 Fax: +1 (215) 536-1154

### USA - Anaheim

Textile Products, Inc.  
2512-2520 W. Woodland Drive Anaheim, CA 92801-2636  
Tel: +1 714 761 0401 Fax: +1 714 761 2928

### USA - San Marcos

Advanced Honeycomb Technologies Corporation  
1015 Linda Vista Drive, Building C San Marcos, CA 92078  
Tel: +1 760 744 3200 Fax: +1 760 744 4205

### USA - Santa Ana

Axiom Materials, Inc.  
2320 Pullman St. Santa Ana, CA 92705, USA  
Tel: +1 949-623-4400 Fax: +1 (949) 261-6009

## SOUTH AMERICA

### Brazil

Kordsa Brazil S.A.  
Rua Eteno, No 3832 Polo Industrial  
de Camaçari Camacari, Bahia/Brazil  
GSM: 42810-000  
Tel: + 55 71 2104-4500 Fax: + 55 71 2104-4701

## ASIA PACIFIC

### Indonesia

PT Indo Kordsa Tbk  
PT Indo Kordsa Polyester  
Jl. Pahlawan, Desa Karang Asem Timur, Citeureup, Bogor 16810  
Tel: + 62 21 875 21 15 Fax: + 62 21 875 39 27

### Thailand

Thai Indo Kordsa Co. Ltd.  
Rojana Industrial Park, 1/61 Moo 5 Khanham Subdistrict,  
Uthai District Ayutthaya 13210  
Tel: + 66 35 330 221 to 9 Fax: + 66 35 330 230

### China

Sales and Marketing Office  
Room 1601-8, No. 688 Nanjing West Road Shanghai



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

# REPORT CONTACTS



About the Report

Messages to Our Stakeholders

Corporate Profile

Strategy and Governance

Sustainability Management

Sustainability  
Faciliators at Kordsa

Economy and Growth

Environment and Climate

Employees and Community

Performance Indicators

Annexes

KORDSA  
SUSTAINABILITY REPORT  
2022

## REPORT CONTACT

**Nevra Aydoğan**

Sustainability and Marketing Communications Director

[Nevra.Aydogan@kordsa.com](mailto:Nevra.Aydogan@kordsa.com)

<https://www.kordsa.com>

<http://reinforcer.com/en/>



<https://www.facebook.com/Kordsa/>

facebook: @Kordsa



<https://twitter.com/KordsaOfficial?lang=en>

Twitter: @KordsaOfficial



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

Instagram: @kordsaofficial



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

Youtube: @kordsa



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

## DISCLAIMER

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.