KARSAN

2024 TSRS COMPLIANT SUSTAINABILITY REPORT

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About the Report

Karsan Otomotiv Sanayii ve Ticaret A.Ş. ('Karsan' or 'Company') hereby makes public its information and evaluations regarding its activities and sustainability performance for the period 1 January – 31 December 2024 in accordance with Turkish Sustainability Reporting Standards (TSRS 2). The report aims to present the company's sustainability performance with a transparent and holistic approach and provides detailed information about climate-related risks, opportunities, strategic goals, governance, risk management, criteria and objectives, in particular. They are used in the report within the scope of transition period exemptions and only climate-related risks and opportunities are included. It is recommended that the report be considered in conjunction with the consolidated financial reports for 2024 and this includes the activities in the consolidated financial statements.

When the report was being prepared, the results obtained from the greenhouse gases emissions inventory, the strategic planning documents and the existing corporate risk assessment inventories helped shape the preparation process. The statements and insights provided by the managerial staff offered valuable input to the report's sections on governance and strategy. The preparation process also utilised both national and international sources, which were cross-referenced during the analysis and verification phases to strengthen the report's consistency and reliability.

Preparation also took into consideration the sectoral supplementary guide "Supplementary Volume 63: Automobiles" published under TSRS 2. Following these guidelines, the explanation titles and metrics specific to Karsan's field of activity were analysed and included in the report. This enabled sector-specific dynamics and priorities to be reflected in the report. At the same time, use was also made of the Standards of the Sustainability Accounting Standards Board (SASB) of the International Sustainability Standards Board (ISSB).

Auditing

Operating in the electric vehicle sector, Karsan's sustainability performance for 2024 was subject to an independent limited assurance audit following in line with the principles of transparency and reliability.
The independent limited assurance audit was performed by PwC Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik A.Ş. and adhered to the following international standards:

- GDS 3000 – General Standards for Assurance Audits Other Than Historical Financial Information
- GDS 3410 – Assurance Audits for Greenhouse Gas Declarations

Audit Scope and Field of Application

As a result of the audit of the 2024 sustainability declarations, limited assurance was given that the reported data were free of material inaccuracies and were reliable. The Independent Limited Assurance Declaration prepared in line with the audit results is included in the Appendices section of the report.

Transition Exemptions

Karsan made use of specific transition exemptions defined in accordance with Articles E3, E4, E5 and E6 of TSRS 1 and C3, C4 and C5 of TSRS 2. Details of the exemptions applied are given below:

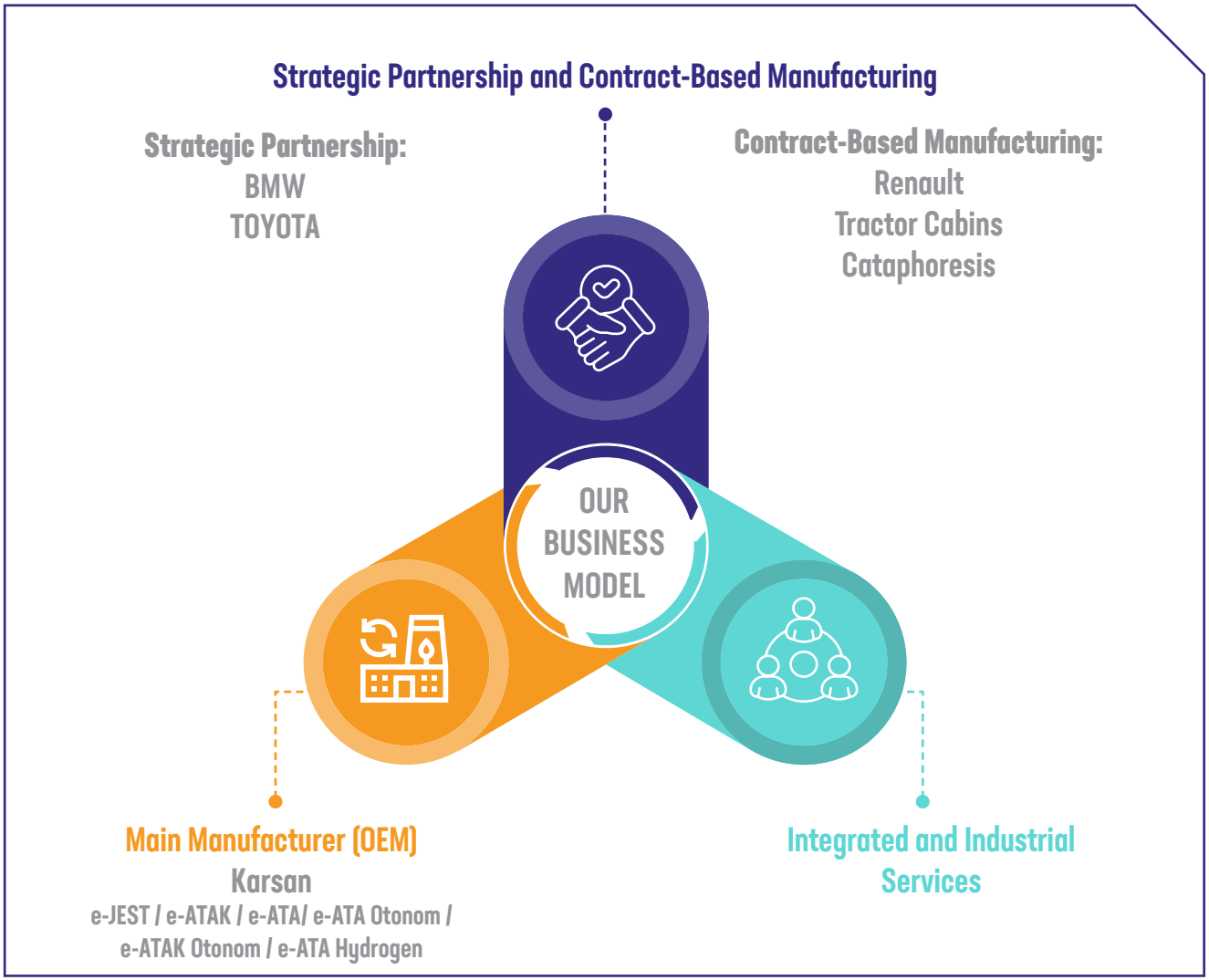
- Scope 3 greenhouse gas emissions are not disclosed in this report under the exemption granted for the first two years.
- Comparative figures for the previous reporting periods are not included in this period.
- The first reporting period focuses solely on climate-related risks and opportunities and does not include detailed explanations of sustainability risks and opportunities.
- Financial disclosures on sustainability were prepared and made public after the financial statements were published. There was no need for corrections in any of the financial disclosures for this period in line with the information obtained during the reporting period.

About Karsan

Karsan has been active in the Turkish automotive industry for 58 years and has been making commercial vehicles, including its own make and models, for the world's leading brands at its modern facilities since the day it was founded. Making commercial vehicles since 1981, Karsan has a factory in Hasanağa in Bursa with the capacity to make ~20,000 vehicles in a single shift per year. The Hasanağa Factory was designed with the flexibility to make all kinds of vehicle from passenger cars and heavy lorries to minivans and buses. It is located 30 km from Bursa city centre and is situated on 203,000 m^2 of land, 99000 m^2 of which is covered.

The only independent, multi-brand vehicle manufacturer in the Turkish automotive industry, Karsan works with its business associates and licence providers aiming to be active in all passenger transportation segments by developing derivatives of new and current products in line with its vision of being one step ahead in the future of mobility. Maintaining its activities to develop and market 'innovative products and services' in the public transportation sector 'from idea to market', Karsan aims to strengthen the Main Manufacturer/OEM business line, in particular.

Maintaining its activities to develop and market 'innovative products and services' in the public transportation sector 'from idea to market', Karsan aims to strengthen its main manufacturer/OEM business line, in particular. Karsan manages the entire automotive value chain from R&D and production to marketing, sales and after-sales operations. Karsan makes the Jest and Atak models under its own brand name. Karsan developed the e-JEST model in 2018, the e-ATAK model in 2019, and the Autonomous e-ATAK, the world's first Level 4 driverless bus, in 2021 in collaboration with the Turkish tech company ADASTEC. It became the first and only company in Europe to offer a range of entirely electric vehicles from 6 metres to 18 metres by successively placing the all-electric e-ATA family of 10m, 12m and 18m models on the market that same year, and the e-ATA HYDROGEN models in 2022. Karsan has been building Megan Sedan cars for Renault since 2022 and by the end of 2023 it had become the first European bus manufacturer to enter the Japanese market with its right-hand-drive e-JEST model.



About Karsan

Karsan's Value Chain

By placing its environmental sustainability principle at the centre of its business model, Karsan has adopted a form of value chain management with end-to-end responsibility. Starting with design and material selection, it is transforming all its operations, including R&D, production, logistics, after-sales services and recycling to make them low-carbon-footprint compatible. Making electric and hydrogen-powered powered vehicles under its own brand as the 'Main Manufacturer", Karsan also has different production models that offer strategic partnerships and integrated services. Karsan assesses its value chain in 7 consecutive steps.

01. Design and Material Selection
Part of its R&D team, the design unit uses advanced material techniques and designs our products using materials that are largely recyclable.

02. R&D and Prototyping
Our R&D team uses 3D modelling techniques to turn the examples from the design unit into prototypes. This work creates sustainable product prototypes. Once the prototyping work is complete, procurement begins, and the internal units are briefed on the product.

03. Procurement of Raw Materials and Components
This is the process of obtaining products at the best price and quality and under the best terms. When selecting suppliers, our procurement team observes the ESG (Environmental, Social, Governance) criteria and adopts responsible supply chain management.

04. Product Logistics and Distribution
Our logistics and distribution processes are managed effectively to ensure that our products reach customers on time and safely.

05. Production
Our products are formed on our production lines using the raw materials received and following our design criteria. All our production processes use 100% renewable energy sources.

06. Raw Materials and Logistics
The raw materials and components from the suppliers are integrated into the storage and production processes. Our logistics team applies such methods as milk-run and reverse logistics, which reduce carbon emissions.

07. Sales and Distribution
Our sales team runs an effective distribution plan, taking into account customer demands and deadlines.

08. After-Sales Services
Our After-Sales Services units manages all repair/ maintenance, replacement and return processes once the product is delivered. This step ensures that products are continually improved by regularly analysing customer feedback and statutory requirements.

09. End-of-Life Management and Recycling
A sustainable cycle is formed by considering end-of-life management for our products, their recycle rates, and secondary use alternatives, particularly when it comes to ELV and battery recycling.

Governance

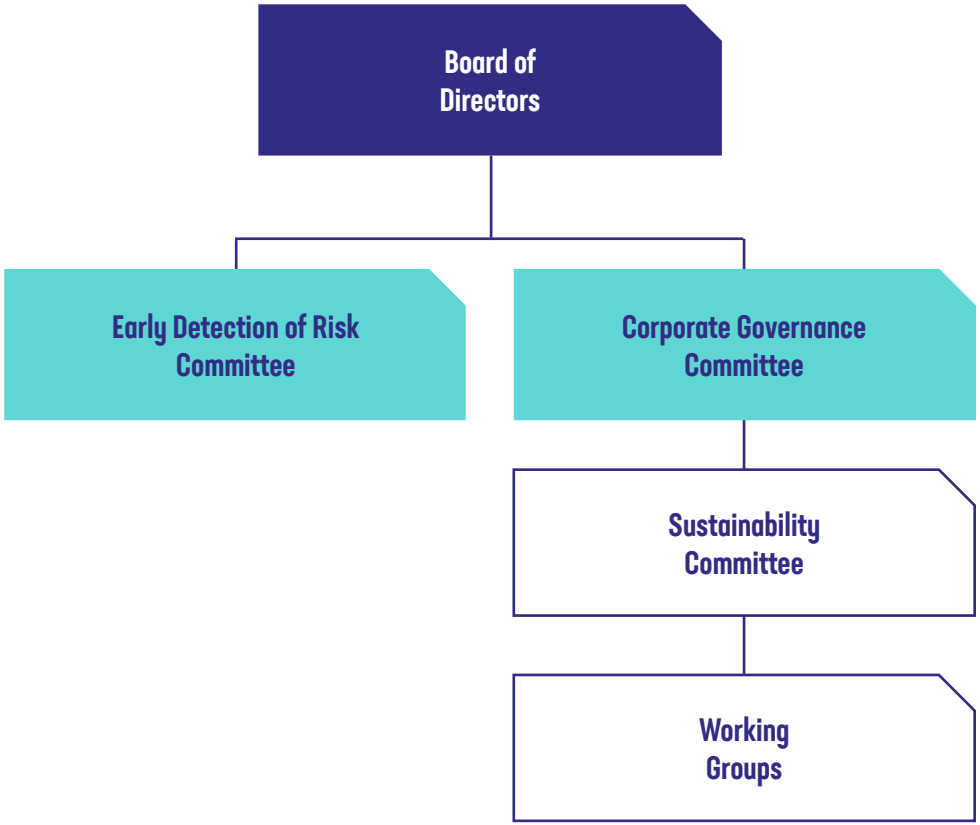
This section explains the governance process and controls created by Karsan to monitor, manage and audit environmental, social and governance (ESG) topics as part of sustainability. Karsan has adopted a multi-layered, systematic and corporate governance structure for the purpose of incorporating sustainability into its business strategies and operational processes. This structure is shaped by the bodies and procedures whose sustainability-related responsibilities are clearly defined. It ensures that sustainability topics are treated with a holistic approach with the help of the related committees and management units starting with the Board of Directors.

The Old Structure and the New Structure Adopted in 2025

Sustainability management in Karsan was conducted within the Corporate Governance Committee, which was immediately subordinate to the Board of Directors until 2025. Back then, the Corporate Governance Committee undertook such fundamental functions as determining sustainability priorities, defining related strategies and objectives, directing implementation programmes and monitoring sustainability performance.

In 2025 a more streamlined approach was adopted and a new Sustainability Committee was formed, chaired by the CEO. The new committee structure operates subordinate to the Corporate Governance Committee and provides out strategic directions in line with this body. The goal behind this change was to integrate sustainability management more effectively into both the senior management structure and operational processes. This section explains the governance structure that went into effect in 2025.

Karsan Sustainability Governance Structure



Governance

Sustainability Committee President: CEO					
Committee Members	**Production Director**	**R&D AGM**	**Procurement and Supply Chain AGM**	**HR Director**	**CFO**
Working Group	Operational Impact and Carbon Management Working Group	Lifecycle and Innovation Working Group	Green Supply Working Group	Social Impact and Inclusivity Working Group	Risk and Sustainable Finance Working Group

Committee/Board	Responsibilities
Early Detection of Risk Committee	Assessing the impact of climate risks, sustainability risks, market fluctuations and regulation changes on Karsan's finances
Corporate Governance Committee	Determining sustainability and climate goals, formulating investment strategies and policies and directing sustainability strategies at Board of Directors level.
Sustainability Committee	Determining short-, medium- and long-term sustainability strategies, tracking progress towards sustainability and climate objectives and conducting annual assessment processes, assessing the impacts of sustainability and climate risks on the business model and offering suggestions as to how they can be managed, reviewing the performance reports of the sub-working groups and offering strategic direction
Working Groups	Improving operational processes to achieve set sustainability objectives, following performance indicators, supporting the integration of sustainability strategies into field operations

Governance

The Oversight and Auditing Roles of the Board of Directors and Related Committees
Sustainability management at Karsan is a two-tier operation. While the Board of Directors undertakes the role of final strategic direction and oversight, the Sustainability Committee chaired by the CEO is responsible for implementing decisions at the operational level.

This two-tier structure is configured to ensure that sustainability management and ESG topics are managed effectively in Karsan. Sustainability governance is addressed at Board of Directors level and is conducted via the committees assigned to integrate sustainability topics and the management bodies. As well as being in the position of directing sustainability work at the strategic level, the Board of Directors audits the process via the Corporate Governance Committee.

The Corporate Governance Committee plays a central role in tasks such as determining sustainability and climate objectives, shaping investment strategies, monitoring performance and overseeing reporting processes. It is responsible for submitting assessment reports to the Board of Directors regularly. The corporate Governance Committee can make use of external consulting services when necessary. The Sustainability Committee and the sub-working groups operate subordinate to the Corporate Governance Committee and guide their work as directed by the committee. This body ensures that the focus on sustainability is integrated into the company's high-level governance processes.

The highest level of oversight for climate-related topics at Karsan is provided by the Board of Directors. The Board of Directors provides strategic guidance on climate-related issues and supervises the effectiveness of the processes via its subordinate committees. As part of this, the monitoring of climate risks and opportunities at the corporate level is conducted under the responsibility of the Corporate Risk Unit. The unit monitors contributes to the risk management system by monitoring related risks and opportunities, analysing them, and sharing them with senior management when necessary. This unit reports the analysis results to the Early Detection of Risk Committee.

In addition, the Corporate Risk Unit is part of the Sustainability Committee and lends its expertise to climate-related technical assessments. This structure has enabled a system of monitoring and reporting to be established that extends from the Board of Directors down to the operational units.

Early Detection of Risk Committee for its part oversees the potential impacts of climate risks (physical and transitional risks), sustainability risks, market fluctuations and regulation changes on Karsan's financial structure. The identification, analysis, and technical monitoring of said risks falls to the Corporate Risk Unit, which takes its findings and analysis outcomes and reports them to the Early Detection of Risk Committee. The committee is responsible for evaluating these reports and developing strategic warnings and recommendations for the Board of Directors.

The Board of Directors and related committees are briefed regularly on developments concerning sustainability topics and take strategic decisions based on the latest figures obtained in the environmental, social and governance fields.

In addition, the Board of Directors and the related committees consider not only the environmental impacts, but also the potential impacts of these elements on operational efficiency, cost structure and growth targets from a holistic perspective when assessing climate-related risks and opportunities. It is accepted that there may be short-term cost increases with some climate investments in the decision-making processes, but these investments will create financial and environmental benefits in the long term. For example, the SPP investment, which is planned to be commissioned in 2026, offers a strategic opportunity in terms of reducing electricity costs and reducing carbon emissions in the long term, although it requires capital expenditure at the start. While making this investment decision, multidimensional factors such as its impact on production costs, prevention of financial burdens arising from CBAM (Carbon Border Adjustment Mechanism) and export competitiveness were considered together.

Governance

Managing Sustainability Issues at the Operational Level: Sustainability Committee

The implementation of sustainability strategies at the operational level is carried out by senior management led by the CEO and the related units. The Sustainability Committee operates under the chairmanship of the CEO and consists of the CFO, Legal and Internal Audit Director, Production Director, R&D Assistant General Manager, Procurement and Supply Chain Assistant General Manager, Human Resources Director and Working Group representatives.

This Committee is responsible for determining short, medium and long-term sustainability strategies, shaping policies for climate-related risks and opportunities, and monitoring related performance indicators. It meets periodically, reviews the performance of the sub-working groups and reports the results to the Corporate Governance Committee.

Sub-Working Groups and Operational Integration

To ensure that Karsan's sustainability strategies are implemented at the operational level, sub-working groups specializing in 5 main areas operate as follows:

- Operational Impact and Carbon Management
- Life Cycle and Innovation
- Responsible Supply Chain
- People and Culture
- Risk and Sustainable Finance

These groups make improvements to operational processes in their respective fields, monitor performance indicators and coordinate the implementation of sustainability strategies on the ground. Groups are responsible for regularly reporting their work to the Sustainability Committee and providing data for strategic decision-making processes. The goal here is to establish an inclusive governance network at both the central and operational levels.

Integration of Job Descriptions into Policies

At Karsan, responsibilities related to sustainability and climate are defined and performed governed by specific internal regulations and committee working principles. The duties and powers of the Sustainability Committee are clearly stated in the 'Sustainability Committee Duties and Working Principles' document, which also formalises how climate-related responsibilities are performed at the senior management level.

In addition, the Corporate Governance Committee's Working Principles and Procedures document includes additional responsibilities related to sustainability and climate-related issues. Related policy and procedure documents are accessed through Karsan's corporate website and shared with the public following the principles of transparency and accountability.

Management Level Information Practices

A briefing session on climate-related risks and opportunities was held at Karsan at the Board of Directors and senior management levels in 2025.

In addition, the Company's long-term strategic roadmaps covering the years 2025, 2030, 2035 and 2050 are reviewed and updated within the scope of the Corporate Strategy Workshops held attended by the CEO and Assistant General Manager (AGM) level managers every year. The projects carried out in the field of sustainability, the scope of these studies and their effects on Karsan are shared in detail with senior management at presentations made in this regard. Through these presentations, sustainability and climate titles are integrated into business strategies, and governance mechanisms are supported by providing up-to-date and data-based information flow to decision-makers.

Governance

Integration Into Management Systems

Starting in 2024, Karsan began to add assessments related to the ISO 14001 Environmental Management System and ISO 50001 Energy Management System to integrate climate-related risks into corporate audit processes. Climate-related risks and opportunities are among the topics evaluated in the Internal Audit practices carried out within the framework of these systems.

Internal Audit practices are carried out in a way that covers all units, including the General Directorate, and allows environmental and energy performance-related risks as well as climate-related issues to be reviewed with respect to process compliance.

Developing Authorities and Competencies

The powers and competencies of the persons and units responsible for the execution of climate-related strategies at Karsan are supported by various training and expertise mechanisms.

'Sustainability Basic Training' is mandatory for all employees, regardless of their level, through Karsan Academy as part of the onboarding process. This provides basic awareness across the organization, including senior management.

Corporate Sustainability Specialist-certified professionals work within the company and make technical contributions to climate-related issues. In addition, a total of three days of training structured as 1 day of general information and 2 days of internal auditor training are implemented for process owners within the scope of ISO 14001 and 50001 systems; this is carried out by the Training Unit

Integration of Climate-Related Issues into Pricing Policy

Climate-related performance targets are expected to be integrated into Karsan's Remuneration Policy by 2025. This integration process was discussed in detail at the Sustainability Workshop held in July 2025. In line with the roadmaps to be formed by the related working groups, the decision was made to initiate KPI determination under the leadership of the C-level managers in charge of the committees. The KPIs to be determined are planned for review together with the 'sustainability ambassadors' selected from each team, integrated into the OKR (Objectives and Key Results) system, and then included in the performance cards of both employees and senior management.

Currently, sustainability is included in senior management evaluations under the Performance Management System (PMM), and the CEO's goal of 'Entering the Top 25% in the Included ESG Evaluations and Ratings' is defined in the individual KPI set. There are 7 main projects under this objective, and activities are regularly monitored and evaluated for each project. In addition, environmental performance in the field of energy and waste is monitored and relevant indicators are reported to the CEO monthly. Carbon emissions are monitored annually.

Strategy

This section reveals Karsan's strategic approach to risks and opportunities due to climate change and explains the relationship of these elements to the business model, decision-making processes and goals. Under the TSRS 2 standard, the integration of transitional and physical risks into financial planning processes is addressed, along with the reflections of these impacts over the short, medium, and long term. This section also evaluates the resilience of existing strategies against the different climate pathways defined within the scope of the climate scenario analyses that have been made.

Karsan's Climate Change Approach and Transition Plan

Karsan's Environment and Climate Policy, Environment and Climate Change Policy aims to reduce environmental impacts in three key areas: supply chain, company operations and product life cycle. Practices such as energy efficiency, waste reduction and emission control are now commonplace in the production processes. On a product basis, a strong innovation policy is followed to develop vehicles with a low-carbon footprint and reduced environmental impact with a life-cycle approach.

Karsan built its short, medium, and long-term climate strategies on this structure and completed its SBTI preparation and feasibility work in 2025. The goal is to approve science-based emission reduction targets by making an official application to the SBTI in 2026 and to create a decarbonisation roadmap accordingly. Although the company has not yet fully published a 'climate transition plan', work to this end continues as an integral part of the corporate strategy. In this journey, Karsan plans to accelerate its climate-oriented transformation work in the coming period in many areas from workforce competencies and production infrastructure to supplier interactions and product development priorities.

Karsan is strategically transforming its production infrastructure to increase resilience to climate change risks and future-proof its business model. Projects for the development of special vehicles for the North American market, the design of the right-hand drive driver area for the UK market and the production of right-hand drive vehicles for the Japanese market were carried out with the aim of opening up to new markets and adapting to different geographical/regulatory conditions; prototype vehicles were produced in line with these projects, operational needs were determined and the relevant production lines were restructured and made available. In addition, as part of the battery transition optimisation studies conducted to adapt to the transition to electric vehicles, the existing production line has been converted in a way that is conducive for battery assembly and thus it has now possible to make both internal combustion and electric vehicles on the same line.

Direct Reduction and Operational Transformation Investments

Karsan's approach to reducing direct emissions is supported by ISO 14064-1 compliant greenhouse gas monitoring systematics and implemented in a holistic framework with modernisation and efficiency projects carried out under the ISO 50001 Energy Management System.

Renewable Energy Investment:
The roof-mounted SPP investment began in 2025, and the facility is planned to come online in 2026. A 3.5 MW call letter was received as part of the rooftop SPP project. The goal of this investment is to meet the energy needs of a significant part of the production facilities and to significantly reduce Scope 2 emissions. That being said, as of April 2024, 100% of the electricity consumption of all operations in Bursa is supplied from I-REC certified renewable sources. Based the projections made for the SPP investment, it is predicted that it will meet approximately 18% of the current total electricity consumption. This rate equates to a production amount corresponding to 98% of the electricity consumption in the production of Karsan-branded vehicles. The goal here is to provide a direct and measurable reduction in greenhouse gas emissions from Scope 2 with renewable energy investments.

Energy Management and Efficiency:
Under the ISO 50001 Energy Management System, 11 critical energy points, which constitute 65% of the total energy consumption determined in Karsan production facilities, are monitored through the SCADA-supported monitoring system and analyses are made to increase process efficiency in these areas. With this system, instant corrective actions can be taken by detecting losses in energy-intensive areas, thus improving production processes.

With the 'Dark Factory' practice implemented in 2024, energy consumption during production stops is reduced, thus unnecessary energy consumption is minimised. With the energy efficiency projects carried out in the same period, 1.212 GJ in energy savings were achieved corresponding to a financial gain of approximately TRY 921,000.

In order to increase energy efficiency, 27 systematic improvement studies have been carried out as part of the e-matrix projects, and energy consumption has been made more traceable and sustainable with these studies. In addition, the energy and carbon monitoring system currently in use at the production plants is being enhanced so as to support instant decision-making processes by integrating it with AI-supported digital technologies in the coming years.

Strategy

Product-Based Decarbonisation and Technology Investments
Karsan's climate strategy is based on developing zero-emission mobility solutions with electric and hydrogen vehicle technologies, going beyond direct carbon emissions.

Electric and Hydrogen Vehicles:
Electric vehicle models such as e-JEST, E-ATAK and E-ATA are actively used in more than 20 countries in Europe; Türkiye's first mass-produced hydrogen bus has been introduced to the market with the e-ATA HYDROGEN model. The strategic collaboration with Toyota supports global knowledge transfer in fuel cell technology and reinforces Karsan's integration with global expertise in hydrogen vehicle technologies. As part of this collaboration which has been in place since 2022, Toyota's 30-plus years of fuel cell experience is embodied in Karsan's e-ATA HYDROGEN model. By 2025, this partnership will be extended to a broader market with mass-produced hydrogen vehicles.

Not only this but it uses regeneration technology to increase energy savings and extend the range in electric vehicles. This system provides energy savings of up to 15% under standard driving conditions. Vehicles can now travel approximately 45 km more without requiring charging. Operational efficiency is also increased.

R&D Applications and LCA/EPD Integration:
R&D expenditures rose 120% in 2024 compared to 2023 corresponding to TRY 393 million, 100% of which was earmarked for the development of electric, hydrogen and autonomous vehicles. Engineering efforts to lighten vehicle designs have been prioritised in line with the low-carbon mobility vision. Reducing vehicle weight, reducing unit energy consumption, and increasing range capacity are considered critical elements in terms of operational efficiency and reducing carbon emissions.

R&D studies began in 2024 looking at advanced engineering materials, composite building elements and virtual analysis simulations to reduce vehicle weight. As a result of these studies, design principles based on honeycomb structural forms, which are widely used in the aerospace and automotive sectors, have been adopted. Optimized structural designs have been developed with high-strength and low-density material selections, and the use of lighter, high-strength components in the body and carrier systems has been increased. The strategies that were implemented have increased the energy efficiency of the vehicles.

In addition, all R&D activities are supported by life cycle analysis (LCA). LCA studies of the e-ATA 12 (electric and hydrogen) and e-ATA 18 models were completed in 2024; LCA of the e-JEST 6 m, e-ATAK 8 m and autonomous e-ATAK models are planned for 2025.

LCA results show that a large part of the environmental impact is due to the supply chain. Emissions per passenger-km are calculated as 0.018 kg CO_2e for e-ATA 12, 0.041 kg CO_2e for hydrogenated e-ATA 12, 0.027 kg CO_2e for e-ATA 18. 95% of the models are recyclable.

Life Cycle Analysis Results

	e-ATA 12	e-ATA 18
Emission per passenger-km (kg CO_2e)	0.018	0.027

By converting these analyses into a product-based Environmental Product Declaration (EPD), the goal is to systematise sustainable design and carbon reduction opportunities. Karsan has obtained EPD certification for e-ATA 18 and aims to obtain certification for the 10 m, 12 m, 6 m, 8 m and autonomous models by the end of 2025. In doing to, Karsan aims to be the brand with the most EPD certificates for electric vehicles in Türkiye and the first to obtain EPD certification for an autonomous vehicle.

Strategy

Recycling and Secondary Life:
Karsan aims to reach a recycled material and secondary use rate of 20% in the vehicles it makes by 2030. In line with this goal, studies are carried out especially on the recovery of battery components and modular recycling solutions.

The recycled material and biodegradable content ratio in product development processes has become an important evaluation criterion in line with various foreign market requirements such as European Union tender systems. Accordingly, R&D projects aim to increase the content of recycled and biodegradable materials, especially body parts.

Pilot studies have been developed looking at textile solutions with biodegradable plastic injection parts obtained from olive pulp. In addition, new supplier collaborations are planned for biodegradable plastic alternatives that can be integrated into production. On the supply chain side, information activities are planned to increase awareness.

The LCA (Life Cycle Analysis) studies have been calculated that an average of 95% of the vehicles are recyclable. These results reveal the importance of recycling capacity in reducing the environmental impact of products in end-of-life processes. However, right now, the proportion of recycled or reused materials used in the production of the products has not yet been calculated. Identifying and monitoring this ratio will be one of the priority areas in Karsan's sustainability strategy in the coming period.

Supply Chain Transformation and Indirect Impact Management
Karsan is working to integrate ESG criteria into business processes throughout the value chain to reduce indirect emissions.

Sustainable Procurement and Supplier Development:
According to Karsan's product-based carbon footprint results, suppliers are responsible for approximately 35% of their carbon footprint. 38 suppliers account for approximately 50% of the aforementioned 35% impact. Accordingly, Karsan integrates environmental, social and governance (ESG) criteria into its procurement processes to bring about the sustainable transformation of the supply chain. Under the Green Procurement Project, which was initiated in 2023, an infrastructure was established to evaluate the environmental, technological and social performances of the suppliers; a Green Procurement Workshop was organised at the start and the expectations and development areas in this field were discussed.

As of 2024, a comprehensive ESG Valuation Survey for suppliers has been developed. In this survey, supplier performance is analysed through criteria such as carbon emission, gender equality, energy management, and environmental risk management.

In addition, supplier training programmes are planned to support this transformation with the goal of increasing both existing awareness and technical capacity.

Logistics and Localisation Strategy:
Distribution models such as reverse logistics and milk-run provide both a cost and carbon footprint advantage. Studies are being conducted to reduce Scope 3 emissions from logistics by reducing supply distances with localisation policies.

Strategy

Climate-Related Risk and Opportunity Disclosures

Climate change has a transformative impact on global regulatory frameworks, financial markets, and supply chains. Offering zero-emission, intelligent and automated mobility solutions, Karsan takes a systematic approach to assessing climate-related risks and integrating opportunities into its business model to ensure the long-term resilience of its operations. Within the scope of physical and transition risks, factors such as the impact of extreme weather events on production processes, regulatory restrictions on carbon emissions and supply chain vulnerabilities are constantly analysed. Furthermore, the increasing demand for low-carbon transportation, the increase in the market positions of low-carbon transportation solutions, and green financing opportunities offer strategic opportunities that can make the business model more resilient and competitive.

Climate-based risks and opportunities were also assessed for their potential impact on Karsan's financial performance. However, it was not possible to calculate the quantitative effects related to the risks and opportunities declared in the 2024 reporting period due to the current data limitations and measurement uncertainty. For this reason, climate risks were primarily assessed according to the impact-probability matrix defined in the Corporate Risk Management procedure; only risks in the categories of 'significant' (15-20 points) and 'moderate' (8-12 points) were included. In addition, in accordance with the financial reporting systematic, the measurable financial effects of these risks were also taken into account; 1% of the revenue was taken as the threshold value to consider the financial impacts significant. Only the financial impact calculation for the Carbon Border Adjustment Mechanism (CBAM) risk has been carried out, and it is predicted that the said impact will remain below 1% of the revenue in the short and medium term but may exceed this threshold in the long term.

Having said that, during the 2024 reporting period, the risks and opportunities related to climate change were analysed, and no risk or opportunity element that could cause a significant change in the book values of the assets and liabilities in the financial statements was found. Likewise, in line with projections for the next reporting period, no climate-related development that would require a significant adjustment in financial values is expected.

Karsan Defined Terms:
Karsan considers the risks and opportunities related to climate change as strategic factors that directly affect business continuity and competitive advantage. These timeframes are also structured so as to be integrated into Karsan's financial and strategic planning cycles.

Terms	Explanations
Short Term (0-1 Year)	The short-term period includes a rapid assessment of operational risks and opportunities. In this period, issues such as energy efficiency projects, carbon footprint calculation infrastructure installation, instant actions to comply with regulations (e.g. SKDM) are prioritised. Short-term climate impacts are handled in parallel with annual budgeting, activity targets and performance monitoring systems, and are monitored over current assets, short-term liabilities or operating expenses in the financial statements.
Medium term (1- 5 years)	This is the period when Karsan's strategic transformation goals are implemented, and climate-related investments are brought to life. For example, the SPP investment, which is planned to come online in 2026, the decarbonisation of operational energy sources and the harmonisation of the product portfolio with environmental regulations are handled in this context. At the same time, practices such as setting science-based targets, supply chain sustainability, and production efficiency projects such as SBTI also coincide with the medium term. These effects are integrated into capital investments and cash flow projections and guide the assumptions of the long-term financial statements. This period also requires product and process transformation to be fully aligned with the 2030 goals of the European Green Deal.
Long Term (5-10 Years)	The long-term period is the time in which structural transformation takes place and systemic innovations towards Karsan's net-zero target are put in place. Transformation projects such as hydrogen vehicle investments, autonomous vehicle investments, battery recovery and secondary life technologies, supply chain electrification, infrastructure modernizations are prioritised in this term. The impact of such investments is reflected in long-term asset planning, strategic product portfolio structuring and R&D budgets. At the same time, 2030 is a strategic milestone as it is the completion year of the medium-term goals, and the achievement of these goals is a prerequisite for the long-term climate vision.

Strategy

DISCLOSURES ON CLIMATE-RELATED RISKS

Probability	High
Impact	Serious
Term	Short-Medium

Risk 1: Carbon Border Adjustment Mechanism and Carbon Tax	
Risk Type: Transition Risk	
Karsan-Specific Risk Disclosure	The European Union's Carbon Border Adjustment Mechanism (CBAM), which will enter into force by 2026, has the potential to affect Karsan's export activities to Europe indirectly and directly. CBAM covers not only final products, but also carbon-intensive inputs such as steel and aluminium used in production and related supply chain emissions. Although Karsan does not directly export such materials, it is included because it uses these components in its own production. Although the use of assumed data provisionally recognised by the EU for 2024 has been exempted from penal sanctions, the provision of actual data will be mandatory by 2025. This increases the risk that working with suppliers who cannot provide carbon data will lead to financial sanctions. As of today, only 65 out of 1,083 suppliers are covered by CBAM, and this number is expected to increase rapidly. Accordingly, Karsan's spare parts distribution operations based in Germany are also affected by carbon pricing. In addition, the ETS and Climate Law regulations envisaged to be implemented in Türkiye may increase the costs of the electricity and raw material used in production and place indirect cost pressures on Karsan. Since hydrogen technology is among the 7 priority sectors of the European Union, hydrogen-powered vehicles can also be covered by the Carbon Border Adjustment Mechanism (CBAM). Considering Karsan's hydrogen vehicle production capacity, it needs to be prepared for the financial impact of CBAM in this field as well. In terms of electric vehicles, although there is currently no clear date, it is expected to be covered by 2030 in line with the expectations of the sector.
Stage in the Value Chain Where the Risk Occurs:	Raw Material and Component Supply / Production / Product Logistics and Distribution
Impact of Risk on Business Model and Value Chain:	These carbon pricing risks impact many critical stages throughout Karsan's value chain. First, carbon-intensive inputs used in the supply of raw materials and components are covered by the CBAM. This complicates the monitoring and management of supplier-derived emissions. Dependence on electricity and heat energy in production creates a direct carbon cost due to ETS; at the same time, it makes it necessary to turn to alternatives with lower energy density in production planning. Logistics activities face cost increases due to carbon pricing, especially in transportation to EU countries and in Germany-based spare parts distribution. Finally, carbon costs may be reflected throughout the spare parts supply chain in secondary markets and after-sales services.
Expected Impact of Risk on Karsan's Financial Status, Financial Performance and Cash Flows:	The proliferation of carbon pricing systems such as CBAM and Türkiye ETS imposes cost pressures throughout Karsan's value chain. With the end of the default data period, it became mandatory to obtain real carbon data from suppliers, which increased the risk of penal sanctions. Failure to obtain this data may increase the product-based carbon tax burden and risk weakening price competitiveness. Energy costs arising from ETS cause a cost increase due to electricity consumption in production and may adversely affect gross profit margin and sales revenues. Carbon-intensive inputs such as steel and aluminium also create additional loads that limit the competitive advantage. Spare parts and hydrogen-fuelled vehicles are expected to be covered by CBAM in 2026 and electric vehicles in 2030, and these developments require Karsan to re-evaluate its investment priorities and pricing strategies. Carbon Border Adjustment Mechanism (CBAM) and carbon tax practices are the only transition risk whose financial impact can be assessed quantitatively. In the short-medium term (2025-2028), the ratio of the total carbon tax cost to the revenue remains below 1%. Considering the current carbon price increase trend and potential regulatory expansion in export markets, current models predict that this cost will approach 1% of the revenue if it is also taxed on electric vehicles in 2030.
Risk Response / Reducing Actions in Strategic Decision Making:	Karsan carries out product-based carbon footprint calculations in accordance with ISO 14067 standard and supports reduction plans for carbon-intensive inputs with its internal carbon pricing system. The process of collecting carbon data for suppliers covered by CBAM has begun, and the goal is to switch to actual data-based calculation by 2025. Accordingly, a detailed action plan consisting of nine headings such as internal team information, supplier commitments, creation of declaration lists according to GTIP codes and establishment of data entry infrastructure has been prepared. All actions are still in the planning phase and have not been implemented. The related sub-working groups are continuing their readiness work in this regard. In addition, life cycle (LCA) based carbon cost analyses of the products are being conducted and supplier data sharing processes are being designed to reduce the penalty risks under CBAM.

Strategy

DISCLOSURES ON CLIMATE-RELATED RISKS

Probability	Moderate
Impact	Serious
Term	Short-Medium

Risk 2: Regulatory Compliance Obligation (Product Regulations)	
Risk Type: Transition Risk	
Karsan-Specific Risk Disclosure	The tightening of the European Union's environmental regulations, particularly the European Battery Regulation, directly affects Karsan's battery-powered electric vehicle product range. This regulation includes the carbon footprint performance classification of batteries, digital traceability, use of recycled materials and extended manufacturer responsibility. As of August 2026, it will be mandatory to declare the carbon footprint of electric vehicle batteries and to comply with the upper carbon limits determined starting in 2028. In addition, as of February 2027, the 'Digital Battery Passport' practice will begin for batteries and product-based traceability will be provided. The batteries used by Karsan in electrification projects will need to be certified in line with traceability and sustainability criteria. In addition, the recycled content obligation will come into force as of August 2031, and Karsan will need to ask battery manufacturers to use a certain amount of recycled material. Under the Extended Producer Responsibility (EPR), Karsan will be responsible for the waste management, reuse and recycling of the batteries in the vehicles it sells in the EU market.
Stage in the Value Chain Where the Risk Occurs:	Design and Material Selection / Supply of Raw Materials and Components Production / End-of-Life Management and Recycling
Impact of Risk on Business Model and Value Chain:	These regulations require Karsan to reconsider its battery supply chain structure. Suppliers' carbon performance, products' LCA (life cycle) data, percentage of recycled content and digital traceability capability are among Karsan's product development criteria. The obligations under the EPR require restructuring the business model in accordance with the principles of the circular economy by including the after-sales and post-product life phases in the company's area of responsibility.
Expected Impact of Risk on Karsan's Financial Status, Financial Performance and Cash Flows:	Lack of compliance documentation may impede Karsan's product access to the EU market. This may pose a risk of both exclusion from public tenders and loss of direct sales. The digital infrastructure, data management, consultancy and testing processes required to comply with regulations can increase costs. In the medium term, while these costs put pressure on profitability, they may require long-term investment and product strategies to be rescheduled in accordance with these regulations. If the regulations are not fully complied with, there may be risks of secondary harm such as product recalls and reputational damage. The quantitative effects of this risk on Karsan's financial performance remain uncertain at this stage. This measurement uncertainty is due to the fact that the financial burdens that will arise as a result of the European Battery Regulation (such as infrastructure investments, testing and certification costs, supply chain adaptation expenses) have not yet been clarified and the fact that details for implementing the regulations are gradually entering into force.
Risk Response / Reducing Actions in Strategic Decision Making:	Karsan is actively conducting readiness work for the European Battery Regulation. Coordination has been established with the technical units for the Digital Battery Passport, and sub-working groups focused on battery management formed with R&D and SSH teams. In addition, a document was obtained for the 18-meter e-VAN model as part of the EPD (Environmental Product Declaration) process with the goal of obtaining certification for the 6 vehicle models by the end of the year. Material procurement is being restructured to increase the proportion of recycled content to 20%, and secondary use and recovery-oriented strategies are being developed for battery components. Cooperation with external stakeholders on battery waste management and reuse is being considered in order to prepare for the obligations under the EPR.

Strategy

DISCLOSURES ON CLIMATE-RELATED RISKS

Probability	High
Impact	Moderate
Term	Medium

Risk 3: Risk of Supply Chain Transformation Failure	
Risk Type: Transition Risk	
Karsan-Specific Risk Disclosure	Karsan is restructuring its supply chain according to sustainability criteria to comply with European Union regulations. This includes the reassessment of suppliers to meet the requirements of practices such as recycled content obligations, EPD (Environmental Product Declaration), Battery Passport and CBAM (Carbon Border Adjustment Mechanism). However, the difficulty in finding green suppliers, the inability of existing suppliers to provide sufficient environmental performance data, or temporary pauses in production capacities may cause deviations in production planning, delays in material supply and a corresponding increase in operating costs.
Stage in the Value Chain Where the Risk Occurs:	Raw Material and Component Supply / Raw Material and Component Logistics / Production
Impact of Risk on Business Model and Value Chain:	Karsan's business model is now shaped by criteria such as not only cost and quality, but also carbon emission performance, circularity potential, EPD compliance and digital traceability capacity. Failure of suppliers to meet these criteria poses strategic risks that may cause significant operational and commercial disruptions in Karsan's value chain.
Expected Impact of Risk on Karsan's Financial Status, Financial Performance and Cash Flows:	Transformation disruptions in the supply chain may result in extended lead times, decreased customer satisfaction and order losses. Finding new suppliers to replace non-compliant suppliers can be time-consuming and costly. Furthermore, carbon taxes at the border under CBAM , could lead to a direct reduction in Karsan's export revenues and a deterioration in the cash cycle. In addition, customer expectations and tender conditions for the realization of electric vehicle production processes with completely renewable energy sources are becoming increasingly common. Karsan is expected to produce using 100% renewable energy sources not only in its own operations, but also across the supply chain. The spread of the relevant requirements in the medium term will make the need for transformation in the supply chain even more critical. The quantitative effects of this risk on Karsan's financial performance remain uncertain at this time. This measurement uncertainty is due to difficulties in accessing the necessary environmental data due to the fact that the methods for reflecting the ultimate financial burdens under CBAM are not yet clear and the traceability systems in the supply chain are not sufficiently mature.
Risk Response / Reducing Actions in Strategic Decision Making:	Karsan has determined that approximately 35% of its total emissions originate from its suppliers and has initiated data-based improvement programmes in this field. To begin with, environmental performance analyses were conducted for 38 groups of suppliers, accounting for half of their emissions. With a supplier commitment letter developed specifically for CBAM, the obligation is imposed to report carbon emission data from suppliers, to ensure the accuracy of the data and to accept compensation for losses incurred due to violations. The goal here is to obtain letters of commitment from all relevant suppliers. Training and consultancy support is also planned for the form entry process. In this way, not only the obligations but also the implementation capacity are developed simultaneously. Transparent data sharing is carried out with suppliers with cooperation in place to establish verification and monitoring systems.

Strategy

DISCLOSURES ON CLIMATE-RELATED RISKS

Probability	Moderate
Impact	Serious
Term	Long

Risk 4: Risk of Failure to Develop Products Meeting Sustainability Criteria	
Risk Type: Transition Risk	
Karsan-Specific Risk Disclosure	In line with customer demands, the products are evaluated not only from a technical and economic standpoint, but also within the framework of environmental criteria such as carbon footprint, recycled content ratio, environmental product declaration (EPD), digital traceability. These criteria form the prerequisites for entry to tenders. If sufficient integration cannot be achieved for these criteria in Karsan's R&D and product development processes, there may be a risk that the developed products will not be offered in public tenders and fleet purchases. In addition, failure to turn the technological provisions of the regulations into products in a timely manner may lead to the postponement or withdrawal of product launches. This may damage customer confidence and market position.
Stage in the Value Chain Where the Risk Occurs:	Design and Material Selection / R&D and Prototyping / Sales and Distribution
Impact of Risk on Business Model and Value Chain:	Impact of Risk on Business Model and Value Chain: Insufficient capacity to develop products that meet sustainability standards can weaken Karsan's identity as a manufacturer of low-carbon and green vehicles. The use of components that do not follow green supply chain principles may jeopardise the product compliance with regulations and reduce the company's chance of being preferred for public and private sector projects. In the long run, the lack of product life cycle data and digital traceability infrastructures may require transformation of the business model.
Expected Impact of Risk on Karsan's Financial Status, Financial Performance and Cash Flows:	Failure to take part in new customer projects, removal of existing customers from the supplier list and elimination from bidding processes may directly result in loss of turnover. The ROI period on R&D investments may be prolonged and project profitability may decrease. Failure to meet digital certifications and sustainability-based product criteria may cause products to lose their competitiveness in the market. This may lead to irregularity in the collection flow and fluctuations in the cash position in the medium-long term. The quantitative effects of this risk cannot be calculated precisely at this time. This uncertainty is due to the fact that environmental data and traceability infrastructure is still developing at the product level, with customer demands and sustainability criteria in tenders varying by sector and region.
Risk Response / Reducing Actions in Strategic Decision Making:	Karsan focuses on making its product portfolio completely zero-emission by increasing its investments in electric and hydrogen vehicles. Product-based carbon footprint calculations are being made for vehicles in accordance with ISO 14067 standard and the scope of EPD certification is being expanded. Digital traceability solutions are being developed for the electrical product range, LCA and material analysis are being conducted together with R&D and sustainability teams. Green mobility-oriented business models are supported with integrated customer solutions such as fleet management, battery recycling and charging infrastructure compatibility.

Strategy

DISCLOSURES ON CLIMATE-RELATED RISKS

Probability	High
Impact	Moderate
Term	5 Years

Risk 5: Water Stress Risk	
Risk Type: Physical Risk	
Karsan-Specific Risk Disclosure	Karsan-Specific Risk Disclosure: Karsan's production facilities in Bursa are at risk of water stress as a result of the decrease in water resources due to climate change, a decrease in flow rates in underground wells and an increase in production numbers. Total water draw in 2024 reached 350,826 m³, almost three times higher than 2022. The effect here of contract-based production, especially with high-volume customers such as Renault, is great. When the use of groundwater was 76%, it was directed to the premium quality city mains water from the organized industrial zone due to increasing consumption. Yet, the risk of disruption in water supply increases in the long term due to the decrease in capacity of existing wells, the cancellation of some wells and the increase in industrial demand in the region. With groundwater resources diminishing, especially in the main production facility in Akçalar, this may threaten production continuity and operational safety.
Stage in the Value Chain Where the Risk Occurs:	Production / End-of-Life Management and Recycling
Impact of Risk on Business Model and Value Chain:	Failures, decrease in system efficiency and production stops may occur in processes that are highly dependent on water. Interruptions in water-heavy production areas, such as three-shift paint plants, may jeopardise the sustainability of contracted productions.
Expected Impact of Risk on Karsan's Financial Status, Financial Performance and Cash Flows:	Increased water and energy costs may increase production costs and reduce operating profitability. Production interruptions due to water shortages may cause delays in delivery times and risks to revenue continuity. Operational crises may increase the need for short-term financing; compensation costs may be an issue in cases of disruption in contracted production agreements. The quantitative effects of this risk cannot be calculated precisely at this time. This uncertainty is due to the fact that the regional infrastructure risks related to water supply continuity and the predictions on how the increase in water supply costs will be shaped have not yet been clarified. In addition, the fact that variables such as the frequency and duration of production stops depend on the scenario makes it difficult to calculate the financial impacts.
Risk Response / Reducing Actions in Strategic Decision Making:	Karsan has achieved approximately 8% water savings with wastewater recovery by installing reverse osmosis systems in order to increase water efficiency. In-plant water consumption is optimised with sensor automation systems. Resources are constantly monitored with digital water monitoring systems, and wastewater recycling projects are utilised jointly with the organised industrial zone. In addition, the decrease in underground water resources forced the transition to mains water, thus ensuring continuity of production. With these technical measures, the company is attempting to reduce the effect of uncertainties in water supply.

Strategy

DISCLOSURES ON CLIMATE-RELATED OPPORTUNITIES

Probability	Very High
Impact	Very High
Term	Medium-Long

Opportunity 1: Low-Carbon Vehicles	
Karsan-Specific Opportunity Disclosure:	The transition from internal combustion engines to zero-emission vehicles is accelerating globally. This transformation has gained momentum in parallel with carbon-neutral targets, especially in European Union regulations, public tender conditions and urban transportation. For example, the European Union plans to ban the sale of internal combustion vehicles by 2035. By adopting this transition as a strategic growth area, Karsan has introduced electric and hydrogen models such as e-JEST, e-ATAK and E-ATA HYDROGEN to the market and sold them in more than 20 countries. It has also strengthened its ability to develop products with technical projects such as range extension, battery efficiency, and vehicle life cycle (LCA) analyses. This transformation offers Karsan the opportunity to enter new markets, benefit from public incentives and gain a competitive advantage in the field of sustainability.
Stage in the Value Chain Where the Risk Occurs:	R&D and Prototyping / Production, Sales / Distribution
Impact of Risk on Business Model and Value Chain:	Karsan's business model is turning from its classic manufacturer identity into a green technology brand that offers mobility solutions. The product portfolio has been diversified with the focus on electrification; R&D-oriented processes in areas such as battery, hydrogen and range optimization have been moved to the centre of the value chain.
Expected Impact of Risk on Karsan's Financial Status, Financial Performance and Cash Flows:	While the increase in the sales volume of zero-emission vehicles increases net sales revenues, having a product range that complies with European regulations makes access to public tenders easier and stabilises incentive revenues and operating cash flows. The 'clean vehicle' criterion is becoming a competitive edge for Karsan., particularly when it comes to EU public bus purchases. As it falls under the scope of trade secrets, detailed numerical information about the financial impact of this opportunity is not shared in order to protect the company's competitive edge.
Opportunity Response / Management and Implementation in the Strategic Decision-Making Process:	The electric model portfolio (e-JEST, e-ATAK, e-ATA HYDROGEN, etc.) has been expanded with sales made in more than 20 countries. In line with the strategy of opening up to new markets, R&D investments have been increased, and the production of hydrogen vehicles has begun. Range extension and battery efficiency projects are being carried out in line with European regulations and fleet electrification is being supported.

Probability	High
Impact	Very High
Term	Short-Medium

Strategy

DISCLOSURES ON CLIMATE-RELATED OPPORTUNITIES

Opportunity 2: Renewable Energy	
Karsan-Specific Opportunity Disclosure:	Given the pressure of increasing energy costs and carbon taxes, the transition to renewable energy has become an important opportunity area for Karsan. Especially when it comes to alignment with the net zero target, using renewable sources to supply the energy used in the production of electric vehicles enables the company to reduce operating costs and proactive comply with environmental regulations. With the use of 100% renewable energy in public tenders and customer demands in Europe becoming an increasingly critical criterion, Karsan is gaining a competitive edge with its investments in this field.
Stage in the Value Chain Where the Risk Occurs:	Production
Impact of Risk on Business Model and Value Chain:	SPP investments and the transition to renewable energy will not only reduce carbon emissions but also make the company's production processes more resilient. In line with customers' demands for green energy in the supply chain, Karsan's business model can be positioned to meet these expectations.
Expected Impact of Risk on Karsan's Financial Status, Financial Performance and Cash Flows:	While the SPP investment is aimed at achieving a significant reduction in energy costs, future financial pressures can be reduced by hedging against the carbon tax risk. In addition, the predictability of energy expenses against fluctuations in electricity prices can provide stability in long-term cash flow management. With the inclusion of the automotive sector in the scope of CBAM by 2028, renewable energy investments will contribute directly to the financial structure by ensuring that the company is significantly exempted from carbon costs. The numerical effects of this opportunity vary depending on the scenario due to the variability in energy costs and carbon prices, and technical details containing competitive advantage are not disclosed since they are trade secrets.
Opportunity Response / Management and Implementation in the Strategic Decision-Making Process:	Karsan received a call letter for the roof-type SPP investment and started work on it. This capacity is sufficient to meet a significant portion of the production of electric vehicles. The use of 100% renewable electricity is currently documented with I-REC certificates; the ISO 50001 energy management system is being actively implemented.

Strategy

DISCLOSURES ON CLIMATE-RELATED OPPORTUNITIES

Probability	High
Impact	High
Term	Medium

Opportunity 3: New Funding Models (Grants and Incentives)	
Karsan-Specific Opportunity Disclosure:	Under the green agreement, financial instruments and grants for sustainability-oriented investments in Europe and Türkiye have diversified and new resource opportunities have emerged for R&D, production and transformation projects. With these developments, Karsan can gain the upper hand by strengthening the investment cycle and balancing the use of equity with the potential of accessing these financing sources, in turn accelerating the transition to electric and hydrogen vehicles in the period ahead.
Stage in the Value Chain Where the Risk Occurs:	R&D and Prototyping / Production, Sales / Distribution
Impact of Risk on Business Model and Value Chain:	With the active pursuit of green financing and incentive mechanisms, investment projects can be carried out more effectively both in terms of time and cost; external grant supports create a variety of funds in the business model.
Expected Impact of Risk on Karsan's Financial Status, Financial Performance and Cash Flows:	Supporting investments with grants and incentives instead of equity reduces the pressure on operating capital and allows the company to bring forward long-term investment plans. These resources alleviate the financing burden on the balance sheet and make cash flows more predictable. However, the quantitative effects of this opportunity cannot be calculated precisely at this stage due to the competitive nature of the fund application procedures, the uncertainty of the evaluation periods and the fact that the grant/incentive amounts to be provided have not yet been clarified.
Opportunity Response / Management and Implementation in the Strategic Decision-Making Process:	Applications for national/international resources such as the European Green Deal and TUBITAK in Türkiye and Horizon Europe are made systematically. Karsan has put together a team specialised in project development and funding for sustainability-based projects and has completed its applications to support mechanisms such as SAYEM, Erasmus+ and YEVDES. A roadmap for new funding opportunities was prepared in 2024 and is being followed.

Strategy

Scenario Analysis

Karsan conducted a climate scenario analysis for risks and opportunities in the 2024 reporting period to evaluate the potential effects of climate change on activities, the business model and long-term strategies. This analysis is a preliminary study based on qualitative assessments to understand the current situation, addressing the transitional and physical risks together.

As part of the study, the basic scenarios (NZE and STEPS) of the International Energy Agency (IEA) representing different carbon reduction pathways were taken as a reference, and the company's positioning regarding energy transition, production infrastructure, supply chain and compliance capacity was evaluated. Physical risks, on the other hand, were associated with climate parameters such as water stress, heat waves and temperature increase specific to the facility locations and analysed with global climate modelling tools (WRI Aqueduct, Climate Impact Explorer, World Bank Climate Change Knowledge Portal).

Scenario analysis was not limited to a desk-based study; rather, it was conducted through a multi-stakeholder workshop attended by representatives of the units concerned. The exposure levels of different units to scenarios, business model resilience in the light of climate scenarios, investment decisions and risk priorities were evaluated in this workshop.

Although the analysis is mainly based on qualitative data, the goal is to develop quantitative modelling techniques and to make scenario-based financial impact analyses in the coming period.

Physical Scenarios

Karsan based its analysis of physical climate risks on evaluating impacts both regionally and on the plant. Physical risks such as water stress, temperature increase and heat waves that may be caused by climate change were analysed based on the following global models and tools.

Analyses were based on RCP (Representative Concentration Pathways) and SSP (Shared Socioeconomic Pathways) scenarios defined as per the IPCC's 6th Assessment Report (AR6). The SSP1-2.6 and RCP4.5 scenarios used in the analysis represent low-emission pathways aimed at limiting the global temperature increase in the 1.5°C-2°C band, while scenarios such as SSP5-8.5 and RCP8.5 model high-risk futures based on uncontrolled emission increase:

- **Aqueduct Water Risk Atlas (WRI):** Water stress projections for 2030 and 2050 in all production and management facilities were evaluated under both optimistic and pessimistic climate scenarios (RCP 4.5 and RCP 8.5).
- **Climate Impact Explorer:** Average air temperature change and associated heat risk for the Organized Industrial Factory in Bursa and the General Directorate in Istanbul were analysed in different RCP scenarios for 2030 and 2050.
- **World Bank Climate Knowledge Portal:** Heat wave risk categories (very low to extreme risk) were examined in SSP126, SSP245, SSP370 and SSP585 scenarios for Bursa and Istanbul locations.
- **Analysis Time Slots:** Near-term (2020-2039), medium-term (2040-2059) and long-term (2060-2079) projections are included.

Scenario analyses are based on multi-model averages where different climate model results are blended, allowing for the spatial risk profile to be evaluated for each facility.

Strategy

Physical Risk Profile of Karsan Facilities

Water Stress

According to the Aqueduct analysis, Karsan's production facilities in Bursa Hasanağa and offices in Istanbul are already operating under high water stress (between 40-80%). This situation remains at similar levels in both optimistic and pessimistic scenarios for 2030 and 2050. In the 2050 pessimistic scenario, in particular, 'extremely high water stress' (> 80%) occurs in the region where the Istanbul office is located. This finding is critical for long-term operational continuity and water management.

Temperature Rise and Heat Risk

The assessments made via Climate Impact Explorer predicted that the average temperature increase in Bursa by 2050 will exceed 3.5°C in the RCP8.5 scenario. This increase has a direct impact on employee health, energy consumption, production efficiency, and process stability.

Heat Waves

Analyses carried out in line with the World Bank Climate Knowledge Portal data show that the plants in Istanbul and Bursa may face increased heat wave risk in the long term. Medium scenarios such as SSP245 and SSP370 determined that the 'medium risk' level would be reached in both provinces in the post-2060 period. The more negative climate scenarios such as SSP5-8.5 show that the facilities in Bursa in 2080 and later switch to the 'high risk' category. This reveals that physical risks are not only limited to events such as floods and drought, but also that thermal stress due to temperature increase should be taken into account. Furthermore, the fact that Istanbul remains in relatively lower risk categories reveals the effect of geographical location and microclimate differences.

Karsan's Compliance Strategy Against Physical Risks

Water Stress Management

Karsan's production facility in Bursa Hasanağa and offices in Istanbul are already operating under high water stress. Climate projections for 2030 and 2050 show that this level of stress will continue to increase. Therefore, water supply security is a priority on Karsan's long-term strategic agenda. A significant part of the water used in production is obtained from underground water wells, and a decrease has been observed in these resources in recent years, especially in the production plant in Akçalar. The plant is being supported with premium quality water from the Organised Industrial Zone (OIZ) to eliminate this risk. At the same time, alternative supply and recovery strategies are being developed for interruptions to water supply.

Reverse osmosis technology is actively used in all production facilities and ensures both increased water quality and reduced consumption and chemical use. As of 2025, the project, which is planned to be carried out jointly with the Bursa Hasanağa Organised Industrial Zone (HOSAB), aims to re-treat wastewater and use it as premium quality production water.

Temperature Rise and Heat Waves

Karsan's production facility in Bursa is at risk of a temperature increase of over 3.5°C by 2050, according to the RCP8.5 scenario. This increase directly impacts employee health, production processes, energy consumption and operational efficiency. In current conditions, high temperature levels are being observed in some production areas (for example, paint shop), which has made the need for air conditioning of production environments even more important. Studies are being conducted here to increase the efficiency of air conditioning systems, strengthen natural ventilation opportunities and provide space-based cooling solutions. The shift work system limits the effects of high temperatures on employees.

In line with the scenario findings, current Emergency Action Plans for fire, earthquake, heavy snowfall and similar disaster scenarios are also being reconsidered in the context of physical risks caused by climate change. Karsan has procedures defined within the framework of the Emergency Work Action Guidelines. These guidelines are planned to be revised to cover climate-related events such as heat waves, sudden rainfall and interruptions in water supply in more detail.

Transition Scenarios

Two basic transition scenarios developed by the International Energy Agency (IEA) in accordance with the automotive and public transport sector in which Karsan operates were preferred for the scenario analysis and used to evaluate Karsan's strategic resilience to transition risks. The NZE and STEPS scenarios represent different transition pathways compatible with global climate commitments; the reason for choosing these scenarios is that they offer Karsan the means to comparatively evaluate the resilience of the business model both in aggressive regulatory environments and in environments with limited policy intervention. Both scenarios offer different levels of speed, scope and regulatory intensity in the transition to a low-carbon economy. The NZE scenario represents a rapid and high-impact transformation, while the STEPS scenario represents a more gradual transition with limited implementation of existing policies.

Strategy

1. IEA NZE 2050 Scenario Assumptions

This scenario is based on the global net zero emission target by 2050 and envisages rapid and radical changes in the energy system. Its assumptions are:

- Sales of internal combustion engine vehicles ending by 2035 (Climate Policies)
- Carbon prices to reach $90/tonne by 2030 (Climate Policies)
- Rapid increase in electric vehicle (EV) sales; Battery production capacity to reach >6.5 TWh by 2030 (Macroeconomic Trends / Technological Developments)
- Prioritisation of public transportation, bicycle, pedestrian and shared transportation instead of automobiles in urban transportation (National/Regional Variables)
- Rapid dissemination of publicly supported EV charging infrastructure and inclusion of users without special charging access (Energy Use-Infrastructure)
- Activation of regulatory and technological supports for technologies that enable smart integration of EVs with the energy grid (Technological Developments / Energy Use)
- Promoting the use of low-emission materials in automotive supply chains; reducing emission intensity in the design of vehicle parts (Macroeconomic Trends / Technological Developments)

2. IEA STEPS Scenario Assumptions

This scenario envisages a gradual transition that develops based on countries' current policies and commitments. The time frame is predominantly based on the 2020-2050 period; a transition is foreseen where policy interventions are limited, especially in the short and medium term (2020-2035), and the transformation is slow and controlled. The assumptions are:

- Carbon pricing remains limited and only applied in specific regions (Climate Policies)
- Slower progress of EV transformation; long-term demand for internal combustion engine vehicles (Macroeconomic Trends/ Technological Developments)
- Gradual and controlled reduction of fossil fuel consumption (Energy Use)
- Low rate of dissemination of charging infrastructure; in particular, households without special charging facilities lagging behind in the transition process (National/Regional Variables-Infrastructure)
- Although renewable energy investments are increasing, they are not fast enough to meet net zero targets (Climate Policies / Energy Use)
- Slower development in battery and critical mineral supply chains and more cautious progress of the investment environment (Macroeconomic Trends / Technological Developments)

Strategic Assessment and Adaptation Capacity of Karsan under Transition Scenarios

Karsan has built a structure that is strategically resistant to both scenarios. To adapt to the rapid transformation foreseen in the NZE scenario, it has increased its electric product portfolio from 18% in 2020 to 88% by 2024 and plans to increase this further. This structure guarantees compliance with the regulations that are hardened in the NZE scenario; at the same time, it creates a cost advantage in environments where carbon costs increase. In the STEPS scenario, this rapid transformation offers Karsan a significant competitive advantage and strengthens its position in the market with products having lower emissions and higher environmental performance compared to those of its competitors.

The strategic preparation process is also supported by financial resources. Within the scope of the investment budget for 2024, funding of approximately EUR 40,000 has been allocated for EPD documents, water recovery systems and SBTI preparation. In addition, various external financing sources were accessed in the same year, and these supports were integrated into the financial planning of sustainability investments. EUR 35 million in loans were obtained from the IFC, of which EUR 25 million was used to finance electric vehicle R&D expenditures made earlier. The SPP investment cannot be disclosed due to confidentiality conditions.

Production Infrastructure: The production facility in Hasanağa has been flexible in terms of the production of electric and hydrogen vehicles; carbon-intensive production lines with the risk of standing idle in the NZE scenario have been disabled. At the same time, the product portfolio has been flexibly adapted according to the dynamics of the market, while preserving the diversity of production capacity in the STEPS scenario.

Energy Supply and Carbon Cost Management: Karsan's location is advantageous for both scenarios. As of 2024, 63% of the electricity used is supplied from I-REC-certified renewable sources, and the energy need will be met by renewable energy production with the solar power plant to come online in 2026. To begin with, a call letter was received for 3.5 MW installed power (D.C.) for the investment, and the installed power of the facility increased to approximately 4.6 MW with the increase in panel capacity. In the NZE scenario, if carbon prices rise to $90/tonne, these investments will serve as an important lever to offset carbon costs. In the STEPS scenario, the ROI period and contribution of the investment are more predictable and stable because in this scenario, the effects on carbon costs are relatively manageable and the risk is lower because the transformation takes place more slowly.

Strategy

Supply Chain Management: Through life cycle analysis, Karsan has determined that most of the environmental impacts come from non-producer sources; it has initiated improvement projects in inputs having high environmental impact by collecting greenhouse gas data directly from Tier-1 suppliers. The goal in the NZE scenario is to reduce the financial burden imposed by practices such as CBAM; in the STEPS scenario, data management is an element that provides a competitive edge.

R&D and Innovation Investments: Karsan also addresses the transition process from an opportunity perspective. As of 2024, R&D investments came to TRY 393 million, an increase of 120% on the previous year. Focus was placed on numerous projects from battery management systems to second life technologies. THE e-ATA hydrogen model developed in cooperation with Toyota represents an important step in the transition to hydrogen public transportation and has been included in mass production planning for after 2025. These technological investments both ensure the preservation of market leadership in the STEPS scenario and strengthen the company's capacity to comply with carbon regulations in the NZE scenario.

Circular Economy Practices: In both scenarios, Karsan stands out in terms of resource efficiency and cost control. With the system we have put into use in our OIZ Spare Parts Warehouse, we have prevented the formation of 3.46 tonnes of packaging waste and ensured 100% recycling of packaging wastes through loss analysis. In addition, secondary life materials are now being used in seat fabrics in line with LCA outputs. Such practices are becoming increasingly critical in terms of compliance with the regulations in the NZE scenario, and they also support operational efficiency in the STEPS scenario.

Association of Scenario Analyses with Risk and Opportunities

Risk / Opportunity Area	Risk / Opportunity Category	Associated Scenario
CBAM-Based Carbon Cost Increase	Transition Risk	Transition - NZE (increase in carbon prices by 2050)
Water Stress	Chronic Physical Risk	Physical – Aqueduct Water Risk Atlas (WRI) water stress scenarios Transition-STEPS (increase in water stress and extreme weather events)
Low-Carbon Vehicles	Product / Service Opportunity	Transition -NZE (Growth of the electric vehicle market and the spread of carbon-neutral technologies)
R&D and New Technologies	Product / Service Opportunity	Transition – NZE (innovative transport solutions after 2030 and the spread of electric and alternative fuel vehicles)
Renewable Energy	Resource / Productivity Opportunity	Transition - NZE & STEPS (increase in renewable energy investments)

Risk Management

Karsan's risk management framework provides an integrated structure that supports proactive decision-making and ensures business continuity. Corporate Risk Management is based on the systematic assessment, management and continuous monitoring of risk exposure levels.

Governance Structure and Responsibility Sharing

Risk management activities at Karsan are coordinated by the Corporate Risk Management and Internal Audit Management operating under the umbrella of the Legal and Internal Audit Directorate subordinate to the CEO. This body is responsible for managing everything from identifying risks to monitoring in cooperation with all departments. Process owners in all units of the organisation identify, assess and report risks in their operational contexts. Departments provide regular feedback to the Corporate Risk Management unit by not only defining the risk but also monitoring it according to the determined risk responses. Identified risks are analysed by the Corporate Risk Management Unit and presented to senior management.

The Early Detection of Risk Committee operates within the body of the Board of Directors. It assesses the identified strategic, financial, operational, legal/compliance and reputation risks and addresses sustainability and climate-oriented risks under the strategic risk category. Karsan's risk management aims to ensure that risks that may affect our corporate strategies and objectives, including shareholders, are anticipated, their impact and likelihood are evaluated in accordance with the company's risk appetite, and the necessary activities in terms of risk and crisis management are planned and monitored. Reporting here is made to the Board of Directors once a year via the Early Detection of Risk Committee. Measures to be taken in the light of the committee's recommendations are reported to the Board of Directors. The Committee conducts regular meetings during the annual activity period and periodically monitors risk inventory updates and priority risk analyses.

BOARD OF DIRECTORS

At Karsan, we are dedicated to strengthening our ethical commitments and continuously enhancing our corporate integrity.

Evaluating the opinions and recommendations of the Early Detection of Risk Committee

EARLY RISK DETECTION COMMITTEE

Reviewing risk management in compliance with CMB Corporate Governance Principles

Submitting reports to the Board of Directors containing opinions and recommendations on the company's risks

CORPORATE RISK MANAGEMENT AND INTERNAL AUDIT DEPARTMENT

Defining and ensuring the implementation of corporate risk management methodologies

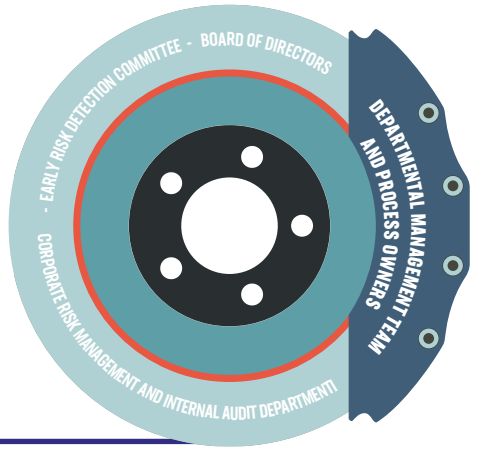
Providing guidance for the implementation of risk management

Conducting training and awareness activities

Ensuring coordination in risk management processes, monitoring, and analyzing processes to manage risks effectively

Reporting to the Board of Directors and senior management through the Early Detection of Risk Committee

RISK MANAGEMENT MECHANISM



DEPARTMENTAL MANAGEMENT TEAM AND PROCESS OWNERS

Ensuring the identification, assessment, response, and monitoring of risks related to processes in alignment with the defined risk management methodologies

Reviewing risks in line with current developments and ensuring the implementation of appropriate control activities

Reporting risks related to departments and processes to the Corporate Risk Management and Internal Audit department

Risk Management

Corporate Risk Management Process

Karsan conducts risk management in four main stages:

The process of risk identification is supported by annual risk workshops and business unit-based interviews and is carried out taking into account current internal and external context analyses. Risks are reassessed within the framework of direct field observations, internal audit findings and regulatory changes.

During the risk analysis phase, specialist teams help score the impact and probability of each risk and the 'Corporate Risk Map' is updated. This evaluation takes into account the root causes, triggers and possible consequences of the risk; risks that may affect each other are clustered and handled from a systematic perspective.

Risks are monitored through the central system, change analysis is carried out and feedback is provided to the departments concerned.

Risk Categories and Materiality Approach

Risks at Karsan are evaluated under a comprehensive classification system and grouped under five main headings: financial, operational, strategic, compliance/legal and reputational. Sustainability and climate risks are evaluated under the title of strategic risk and play a critical role in terms of Karsan's business continuity, competitiveness and compliance with stakeholder expectations.

The process of risk assessment is structured in accordance with the ISO 31000 framework and the internal documented risk management procedure. Each identified risk is scored over 'impact' and 'probability' values, and a 'risk score' is created by multiplying these two parameters. These scores are prioritised according to the following matrix:

Risk Definition

Identification of Uncertainties Related to Company Strategies and Objectives According to Risk Categories and Determination of Root Causes

→

Risk Assessment

Evaluation of the Impact and Probability of Identified Risks and Root Causes According to the Risk Matrix

→

Risk Management

Responding to Risks Based on Risk Scores in Relation to the Company's Risk Appetite: Accept, Mitigate, Avoid, or Transfer
Planning Activities in Response to Risk Mitigation

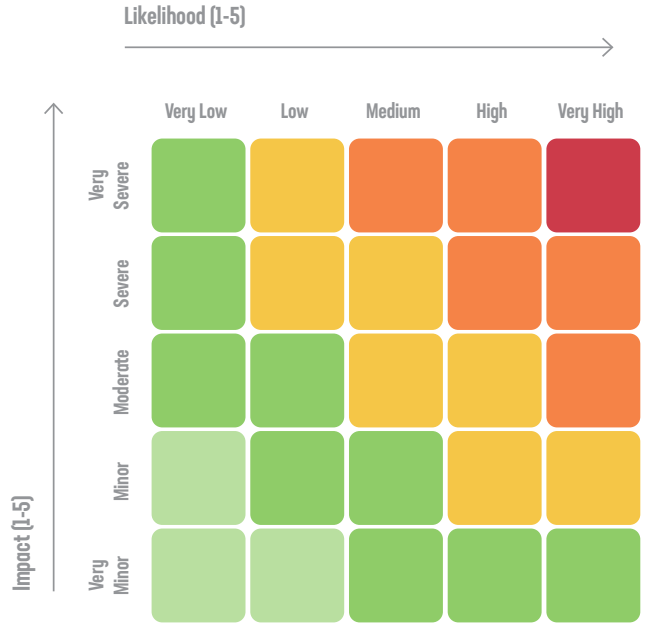
→

Risk Monitoring and Reporting

Monitoring Planned Activities and Reporting the Risk Inventory Based on Priority Risks

Risk Management

Risk Response Matrix



Risk Level	Description
Intolerable Risk (25 Points)	Work does not start, or current activity is halted until the identified risk has been reduced to an acceptable level. If it is not possible to reduce the risk despite the measures taken, the activity is prevented.
Significant Risk (15- 20 Points)	Work does not start, or current activity is halted until the identified risk has been reduced to an acceptable level. If the risk is related to the continuation of the work, urgent measures should be taken, and the decision should be taken to continue work as a result of these measures.
Moderate Risk (8- 12 Points)	Control activities should be initiated to reduce the identified risks. Responding to control methods for risk reduction can take time.
Tolerable Risk(3- 6)	Additional control processes may not be needed to eliminate identified risks. However, existing controls should be maintained and supervised.
Insignificant Risk (1-2)	There may be no need to plan control activities to eliminate the identified risk and to keep records of the activities to be carried out.

This structure makes it easier to make a systematic comparison of risks, prioritise action plans and manage monitoring cycles.

Management Approach to Climate-Related Risks and Opportunities

For Karsan, the impact of climate risks has gone beyond operational processes with the acceleration of sectoral transformation and tightening of regulations, reaching a level that will directly affect the financial structure, market position and strategic plans of the company. A 5x5 'Impact-Likelihood Matrix' applied under the Corporate Risk Management system is used in the analysis of climate risks and opportunities. While determining the impact score, financial impact, operational disruption, reputation and legal/compliance dimensions are taken into account, and the probability score is evaluated in terms of the frequency of occurrence of the risk, exposure time and degree of controllability. Regulatory trends, technological developments, and stakeholder expectations were used to identify climate-related opportunities. The identified opportunities were prioritised according to their financial contribution potential, degree of applicability and strategic compliance criteria.

Karsan's climate-related risk and opportunity assessment processes are structured within the scope of the Corporate Risk Management Procedure in accordance with the ISO 31000 risk management framework and are carried out in coordination with the Corporate Risk Management and Internal Audit Unit. The main inputs used in these processes consist of the Integrated Management System (ISO 14001 and ISO 50001), environmental and energy monitoring systems, internal audit findings, stakeholder feedback, regulations of regulatory authorities and insights obtained in annual risk workshops. In addition, Karsan's CDP responses, TSRS obligations, European Union regulations (e.g. CBAM and Battery Regulation), sectoral analyses and supply chain compliance assessments are also included as data sources at this time.

Accordingly, climate risks are structured and managed under strategic risks within the scope of Karsan's Corporate Risk Management system. All assessments of climate risks and opportunities are integrated into the overall risk management methodology, which includes steps such as impact and likelihood scoring and risk score generation. Efforts are underway to position climate-based issues on the same risk map together with other financial, operational and compliance risks and integrate them holistically into the monitoring and reporting processes. The goal here is to fully integrate climate risks into the existing corporate risk map with the completion of the relevant systemic developments.

In particular, the increase in carbon costs, supply chain sustainability compliance, physical climate impacts and changing customer expectations are among the main climate risks identified by Karsan. The European Union's practices such as the Carbon Border Adjustment Mechanism (CBAM) and the Battery Regulation will affect the company's export strategies, product development cycle and financial projections.

Risk Management

That being said, Karsan adopts the approach of transforming sustainability-oriented transformation into strategic opportunities. With the development of electric and hydrogen vehicle technologies, a carbon-neutral product portfolio is being created. R&D investments made in this vein are supported by environmental product declarations (EPD), life cycle analysis (LCA) and digital traceability systems. On the production side, 100% renewable energy is the goal with the SPP investment, thus reducing the carbon footprint and saving costs. In addition, with its sustainability-based project portfolio, Karsan is able to finance a significant part of its energy, digitalisation and environmental investments with external sources such as funds, grants and loans by increasing its capacity to access national and international funds. EUR 35 million of loans were obtained from the IFC in 2024, of which EUR 25 million was used to finance electric vehicle R&D expenditures made earlier. Funds were also raised within the scope of two different TUBITAK support programmes adopted in 2024. Under these projects, studies were initiated focusing on artificial intelligence-based production systems and international R&D collaborations. In addition, grant support was received from the World Bank and carried out via the Turkish Development Bank to support the employment of women. Correspondingly:

In particular, low-carbon vehicles, new financing mechanisms, the use of renewable energy, and patentable technologies have been identified as priority areas of opportunity.

Climate-related risks and opportunities are continuously monitored by the Corporate Risk Management Unit; action plans are revised when necessary and regularly reported to the Board of Directors.

Karsan conducts studies to predict different impact levels for both physical and transition risks by integrating scenario analysis into risk assessment processes to better manage climate-related uncertainties. The scenarios used were based on the RCP and SSP scenarios defined within the scope of IPCC's AR6 and the International Energy Agency's (IEA) NZE and STEPS transition scenarios; correspondingly, both the physical effects of climate change and the regulatory risks for the transition to a low-carbon economy were evaluated. The details of these analyses are given in the 'Strategy' section of the TSRS report.

Monitoring, Assurance and Reporting

Risk management at Karsan is not only limited to the identification and evaluation steps, but is also supported by the principles of monitoring, assurance and reporting. The Risk Management Unit trains risk managers in companies as part of corporate risk management throughout the year and contributes to risk studies by receiving support from the sector concerned and subject matter experts when necessary.

Risks that fall into the high and very high-risk category are actively monitored until they are pulled down to the targeted exposure level, lose their validity or occur. When the specified conditions are met, the risks in question are removed from the risk portfolio. Risks at a lower risk level are also included in the regular monitoring process and kept under constant control.

In line with the monitoring periods adopted by the Board of Directors, re-assessments are carried out at the frequency determined for high and very high risks and action plans are updated in line with these assessments.

In line with the monitoring intervals approved by the Board of Directors, studies are carried out to re-evaluate high and very high risks; In this direction, the effectiveness of action plans is reviewed, and the necessary updates are carried out. In addition, the activities of the Early Detection of Risk Committee are also evaluated by the independent audit within the framework of the Turkish Commercial Code and the regulations of the Capital Markets Board.

Internal Audit and Continuous Improvement

Internal audit activities at Karsan are structured to support the corporate risk management process. The annual internal audit plan approved by the Audit Committee is prepared based on priority risk areas; nonconformities are detected through process-based examinations and corrective-preventive recommendations are developed. In addition, risk-oriented Internal Audit planning is carried out on the priority issues determined in relation to the company's risk management activities with the goal of providing an effective internal control system configuration with the action plans created as a result of the Internal Audit activities. Violations, notifications and complaints regarding the activities of the company are also evaluated and examined by the Corporate Risk Management and Internal Audit Unit in cooperation with the respective units and are reported and concluded together with the recommendations for ensuring the effective control of the activities. The Audit Committee periodically monitors all internal control and internal audit activities and reviews and approves the annual audit plans.

Feedback is received from all stakeholders and suggestions for improvement are collected in order to encourage the continuous development of the Corporate Risk Management system. In the activity reports prepared at the end of the year, the lessons learned from the risk management activities implemented in the previous year, the identified good practice examples and areas for improvement are analysed, and the results of this analysis are shared with all the stakeholders concerned throughout the group. In addition, periodic training courses are organized to increase risk awareness throughout the company as part of the Corporate Risk Management process. This increases the risk management competence of the process owners and strengthens the corporate risk culture.

Metrics and Targets

Karsan supports its emission management and mitigation strategies in the fight against climate change with measurable indicators. This section presents Karsan's key metrics for greenhouse gas emissions, emission calculation approaches, internal carbon pricing practices, and medium- and long-term mitigation targets.

Climate-Related Metrics

Emission Metrics and Calculation Approach

Greenhouse gas emissions were measured in accordance with the GHG Protocol Corporate Standard (2004), and the control approach was used when calculating emission. The methodology used in the previous years continued in the 2024 reporting period. As of the 2024 reporting period, the greenhouse gas emission calculations were based on verifiable emission data of three production facilities in Bursa and the head office location in Istanbul. For foreign subsidiaries (Karsan Europe, Karsan Domestic and Foreign Trade Inc., Hervouet Corporate Industry SAS (HCI), Karsan North America LLC), since there was no direct measurement data in the current period, employee-based proportioning methodology was applied. Accordingly, the total greenhouse gas emissions of Bursa and Istanbul locations were divided by the total number of employees in the same locations, and the per capita emission value was calculated; this emission factor was applied to the number of employees in the affiliates and allocated to the relevant subsidiaries. The employee-based proportioning method was used to ensure that the emissions of subsidiaries with limited activity scale and data accessibility are included in the reporting holistically.

The calculations for each emission source were carried out based on the respective activity data and the results were reported in tonnes of CO_2 equivalent (tCO_2e). The emission factors and global warming potential (GWP) coefficients used in the calculation of emissions were obtained from internationally valid sources depending on the type of emission source. The inputs and assumptions used (e.g., lower calorific values of fuels, average consumption coefficients and emission factors) were preferred because they are based on internationally accepted sources, verifiable, up-to-date and compatible with the sectoral context. The same methodology was consistently applied in previous reporting periods, and its validity has been confirmed in independent third-party verifications. This is why the same approach was maintained in order to maintain the methodological continuity.

Emission factors are taken from the following sources:

- *IPCC 2006 Guidelines for National Greenhouse Gas Inventories*
- *DEFRA Emission Factors*
- *IEA (2021) Emission Factors*

Greenhouse gas emission values as of the 2024 reporting period:

Emission Type (tCO_2e)	Bursa (Operations)	Istanbul (Administration Building)	Subsidiaries	Consolidated
Scope 1	8,074	34	72	8,180
Scope 2 (Location based)	12,562	198	113	12,873
Scope 2 (Market based)	**4,647**	**198**	**113**	**4,968**
Total	**20,636**	**242**	**185**	**21,053**

Since April 2024, Karsan has been using 100% renewable energy sources in its 3 different locations in Bursa and certifying them with the IREC certificate. When we look at 2024, we see that 63% of electrical energy is met from renewable sources. Market-based Scope 2 emissions are calculated in the light of this data.

In 2024, total carbon emissions came to 21,053 tons of CO_2e, including 8,180 tonnes of CO_2e Scope 1 emissions and 12,873 tonnes of CO_2e location-based Scope 2 emissions. 39% of the emissions are Scope 1 and 61% are Scope 2.

Metrics and Targets

Energy Consumption (GJ)	2024
Natural gas (Bursa)	146,457
Natural gas (Istanbul)	758
Natural gas (Subsidiaries)*	1,304
Electricity (Bursa)	106,776
Electricity (Istanbul)	1,692
Electricity (Subsidiaries)*	1,090
Other	-
Total	**258,077**

In 2024, a total of 258,077 GJ of energy was consumed, 54% of which was natural gas and 46% electricity.

Internal Carbon Pricing

Under the internal carbon pricing system, a shadow price of 120 €/tonne CO*22 was applied in 2023 in order to cost carbon emissions in production. In 2024, the carbon pricing system was expanded to increase financial feasibility in energy and carbon-reducing projects, and internal pricing was integrated into our strategic decision mechanisms. Under the internal carbon pricing system, 8 projects were focused on in 2024. When preparing the feasibility reports for the projects and SPP projects from the Energy Survey feasibility report, the internal carbon cost was treated as the shadow price. The carbon cost was also predictively changed until 2030, and accordingly, its effect on carbon emissions was calculated with a time series analysis.

**Included subsidiaries: Karsan Europe, Karsan İç ve Dış Ticaret A.Ş., Hervouet Corporate Industry SAS (HCI), Karsan North America LLC*

Per internal carbon pricing practices, various projects have been implemented in order to increase energy efficiency and reduce carbon emissions. Energy savings have been achieved by preventing air leaks in production processes, replacing energy-intensive equipment with more efficient ones, and making improvements in compressor systems. With the LED conversion in production facilities, energy consumption due to lighting has been reduced and the use of renewable energy has been increased by installing photovoltaic systems. These projects were evaluated as per the internal carbon pricing model and supported by financial feasibility analyses.

Vulnerability and Compliance Assessment

As a result of the current assessments made in relation to climate-related transition risks and physical risks, no vulnerability has been detected in the company assets. However, analyses on this subject are planned to be developed with more comprehensive studies in the coming periods

Karsan positions transformation opportunities in the field of low-carbon transportation among its main strategic priorities. As of 2024, the electric product portfolio has reached 88% of total production, indicating that 88% of the company's operating activities can be considered as assets compatible with climate-related opportunities.

Relevant Climate-Related Targets

The climate targets set by Karsan cover all operational activities in line with the company's sustainability strategy. Targets holistically address areas such as production processes, energy use, supply chain management and product life cycle and impact all of Karsan's activities, including both the direct and indirect management of greenhouse gas emissions. The established climate objectives and the methodology for these objectives have not yet been validated by a third party. However, greenhouse gas emission data has been verified and reported by an independent third-party organization every year since 2023.

Karsan's climate-related goals are shaped in line with both international climate policies and sectoral transformation dynamics. Short, medium and long-term emission reduction targets have been determined in line with the 1.5 °C temperature increase limit set in the Paris Agreement and Türkiye's 2053 net zero emission target. When setting the targets, the decarbonisation trends of the automotive sector, the regulations within the scope of the European Green Deal, customer expectations and investor demands were also taken into account. Although the SBTI process has not yet been formally initiated, Karsan plans to be involved in the SBTI approval process by 2026 in order to ensure methodological compliance. Accordingly, the current targets are structured to be compatible with the transition expectations of the sector.

Metrics and Targets

The medium and long-term targets set form the basis of the company's net zero journey, and no traceable interim targets have yet been established for these targets. The sub-working groups will provide operational elaboration and set milestones, and the target architecture supported by monitoring, measurement and reporting mechanisms will be further clarified in the coming period.

Target	Scope	Term	Base Year	Target Type
Resetting Gross Scope 1 and 2 greenhouse gas emissions (2030)	Scope 1-2	Medium	2024	Absolute Reduction
Reaching net zero in all emissions (gross Scope 1, 2, 3 GHG emissions) (2050)	Scope 1-2-3	Long	2024	Absolute Reduction
Increasing the recycling/secondary life rate in products to 20% (2030)	Scope 3	Medium	2024	Density
Resetting gross Scope 1 and 2 greenhouse gas emissions from strategic suppliers (2035)	Scope 3	Long	2024	Absolute Reduction
Resetting gross Scope 1 and 2 greenhouse gas emissions from all suppliers (2050)	Scope 3	Long	2024	Absolute Reduction

Determining Climate Targets

Karsan set its climate-related targets as of the end of 2024 in order to comply with the principles of emission reduction and circular economy in the fight against climate change. In determining these targets, the company's operational priorities, technology road maps and sector trends were taken as a basis; care was taken to ensure that the targets were realistic but ambitious. Accordingly, 2024 is defined as the base year for all targets.

A Sustainability Workshop was held in 2025 attended by senior management to increase the institutional capacity for the development of target sets. Decisions were taken in this workshop to divide the targets into sub-components, support them with performance indicators and create traceable road maps until the target date. In particular, the goal of resetting Scope 1 and 2 emissions by 2030 contributes to Karsan's acceleration of its policies on energy efficiency, renewable energy investments and reduction of fossil fuel use.

The metric, which is part of the product life cycle and aims to use recycled or secondary life materials at a rate of 20% by 2030, sheds light on the current situation, which cannot yet be measured systematically, and is a deciding factor for the integration of circular design principles into corporate strategies. Likewise, with the setting of targets for the supply chain, primary data-based supplier footprint calculations and the creation of mitigation road maps are being systematised.

Following and Monitoring Climate Targets

Responsibilities for implementing and monitoring Karsan's climate goals have been assigned to the relevant sub-working groups established under the Sustainability Governance Body. These groups are the main coordination units that manage implementation of the targets and provide data based on reporting. Senior managers leading the working groups are responsible for monitoring each goal. Targets are monitored annually. The process of monitoring targets is not only limited to monitoring their realisation; it is also used as a basic tool for institutional learning and strategy updating. There are future plans to expand the monitoring system through more detailed metrics supported by milestones and to support it with KPIs.

As of the reporting period, no carbon offsetting mechanism (e.g. carbon credit) towards the net-zero carbon emission target has been used. Karsan primarily relies on direct and absolute emission reduction in its emission reduction strategy. However, policy alternatives for the use of carbon credits can be considered in line with this strategy in the future.

Appendix 1: Sectoral Metrics

Based on the Guidelines for the Sector-Based Implementation of TSRS 2, sectoral indicators and certain activity metrics specific to Karsan's activities in the automotive sector are regularly monitored and reported.

Volume 63 – Automobiles

Subject	Metric	2024			
		Vehicle Name	**Battery**	**Hydrogen Tank**	**Diesel**
Fuel Economy and Driving Phase Emissions	Sales weighted average passenger fleet fuel economy by region	e-JEST 6 m	SORT-2: 30.087 kW/100 km	-	13.351 L/100 km
		e-ATAK 8 m	SORT-2: 58.113 kW/100 km	-	28.91 L/100 km
		e-ATA 10 m	SORT-2: 74.31 kW/100 km	-	-
		e-ATA 12 m	SORT-2: 76.856 kW/100 km	-	-
		e-ATA 18 m	SORT-2: 110.69 kW/100 km	-	-
		e-ATA 12 m Hydrogen	SORT-2: 66.73 kW/100 km	SORT-2: 7.23 kg/100 km	-
	Number of zero-emission vehicles (ZEV) sold	266			
	Number of hybrid vehicles sold	Not available.			
Fuel Economy and Driving Phase Emissions	Number of add-on hybrid vehicles sold	Not available.			

Activity Metric	2024
Number of commercial vehicles produced	45.764*
Number of commercial vehicles sold	45.768

**Renault-branded vehicles are included*

Appendix 2: Independent Limited Assurance Statement

INDEPENDENT PRACTITIONER'S LIMITED ASSURANCE REPORT ON KARSAN OTOMOTİV SANAYİİ VE TİCARET A.Ş. AND ITS SUBSIDIARIES SUSTAINABILITY INFORMATION IN ACCORDANCE WITH TURKISH SUSTAINABILITY REPORTING STANDARDS

To the General Assembly of Karsan Otomotiv Sanayii ve Ticaret A.Ş.

We have undertaken a limited assurance engagement on Karsan Otomotiv Sanayii ve Ticaret A.Ş. (the "Company") and its subsidiaries (collectively referred to as the "Group"), sustainability information for the year ended 31 December 2024 in accordance with Turkish Sustainability Reporting Standards 1 "General Requirements for Disclosure of Sustainability-related Financial Information" and Turkish Sustainability Reporting Standards 2 "Climate Related Disclosures" ("Sustainability Information").

Our assurance engagement does not extend to information in respect of earlier periods or other information linked to the Sustainability Information (including any images, audio files, document embedded in a website or embedded videos).

Our Limited Assurance Conclusion

Based on the procedures we have performed as described under the 'Summary of the work we performed as the basis for our assurance conclusion' and the evidence we have obtained, nothing has come to our attention that causes us to believe that Group's Sustainability Information for the year ended 31 December 2024 is not prepared, in all material respects, in accordance with Turkish Sustainability Reporting Standards published in the Official Gazette dated 29 December 2023, and numbered 32414(M) and issued by Public Oversight Accounting and Auditing Standards Authority (the "POA") . We do not express an assurance conclusion on information in respect of earlier periods.

Inherent Limitations in Preparing the Sustainability Information

As discussed in "Metrics and Targets" on pages 31 to 33 the Sustainability Information is subject to inherent uncertainty because of incomplete scientific and economic knowledge. Greenhouse gas emission quantification is subject to inherent uncertainty because of incomplete scientific knowledge. Additionally, the Sustainability Information includes information based on climate-related scenarios that is subject to inherent uncertainty because of incomplete scientific and economic knowledge about the likelihood, timing or effect of possible future physical and transitional climate-related impacts.

Responsibilities of Management and Those Charged with Governance for the Sustainability Information

Management of Karsan Otomotiv Sanayii ve Ticaret A.Ş. are responsible for:

- The Group management is responsible for the preparation of the sustainability information in accordance with Turkish Sustainability Reporting Standards;
- Designing, implementing and maintaining internal control over information relevant to the preparation of the Sustainability Information that is free from material misstatement, whether due to fraud or error;
- The Group Management is also responsible for the selection and implementation of appropriate sustainability reporting methods, as well as making reasonable assumptions and developing estimates in accordance with the conditions.

Those charged with governance are responsible for overseeing the Group's sustainability reporting process.

Practitioner's Responsibilities for the Limited Assurance on Sustainability Information

We are responsible for:

- Planning and performing the engagement to obtain limited assurance about whether the Sustainability Information is free from material misstatement, whether due to fraud or error;
- Forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- Reporting our conclusion to the managements of Karsan Otomotiv Sanayii ve Ticaret A.Ş.
- Perform risk assessment procedures, including obtaining an understanding of internal control relevant to the engagement, to identify where material misstatements are likely to arise, whether due to fraud or error, but not for the purpose of providing a conclusion on the effectiveness of the Company's internal control.
- Design and perform procedures responsive to where material misstatements are likely to arise in the sustainability information. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Misstatements can arise from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of Sustainability Information.

As we are engaged to form an independent conclusion on the Sustainability Information as prepared by management, we are not permitted to be involved in the preparation of the Sustainability Information as doing so may compromise our independence.

Appendix 2: Independent Limited Assurance Statement

Professional Standards Applied

We performed a limited assurance engagement in accordance with Standard on Assurance Engagements 3000 (Revised) Assurance Engagements other than Audits or Reviews of Historical Financial Information and, in respect of greenhouse gas emissions included in the Sustainability Information, in accordance with Standard on Assurance Engagements 3410 Assurance Engagements on Greenhouse Gas Statements, issued by POA.

Our Independence and Quality Management

We have complied with the independence and other ethical requirements of the Ethical Rules for Independent Auditors (including Independence Standards) (the "Ethical Rules") issued by the POA, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. Our firm applies Standard on Quality Management 1 and accordingly maintains a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. Our work was carried out by an independent and multidisciplinary team including assurance practitioners, sustainability and risk experts. We used the work of experts, in particular, to assist with determining the reasonableness of Group's information and assumptions related to climate and sustainability risks and opportunities. We remain solely responsible for our assurance conclusion.

Summary of the Work we Performed as the Basis for our Assurance Conclusion

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the Sustainability Information is likely to arise. The procedures we performed were based on our professional judgment. In carrying out our limited assurance engagement on the Sustainability Information, we:

- Inquiries were conducted with the Group's key senior personnel to understand the processes in place for obtaining the Sustainability Information for the reporting period
- The Group's internal documentation was used to assess and review the information related to sustainability;
- Considered the presentation and disclosure of the Sustainability Information.
- Through inquiries, obtained an understanding of Group's control environment, processes and information systems relevant to the preparation of the Sustainability Information, but did not evaluate the design of particular control activities, obtain evidence about their implementation or test their operating effectiveness;
- Evaluated whether Group's methods for developing estimates are appropriate and had been consistently applied, but our procedures did not include testing the data on which the estimates are based or separately developing our own estimates against which to evaluate Group's estimates;
- Obtained understanding of process for identifying risks and opportunities that are financially significant, along with the Group's sustainability reporting process.

The procedures in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

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

Özgür Beşikçioğlu, SMMM
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2024 TSRS COMPLIANT SUSTAINABILITY REPORT

KARSAN