

# Transforming Our Core Business Areas

# Driving Impact at Light Speed

*Just as light moves with **unparalleled speed**, Sabancı Holding embraces **agility and precision** in transforming core business areas. The rapid evolution of **technology, digitalization, and sustainability** demands an approach that moves swiftly and seamlessly toward impact. By leveraging **continuous investment, R&D, and a consistent execution strategy**, we ensure that our businesses **adapt, innovate, and lead** in a rapidly changing world.*

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# Transforming Our Core Business Areas

*We are transforming our core businesses by accelerating scalable growth through innovation, ecosystem synergy, and sustainability.*

In 2024, we continued to advance our portfolio across energy and climate technologies, material technologies, mobility solutions, financial services, and digital technologies, with a clear focus on **sustainability**, **digitalization**, and **scalability**.

We believe that the long-term competitiveness of our core businesses depends on our ability to build **interconnected ecosystems** that continuously evolve. In 2024, we reinforced this mindset across our value chain, connecting Group companies, entrepreneurs, R&D centers, and global partners to co-develop solutions aligned with our sustainability vision. Programs such as **Sabancı ARF**, **Sabancı Ventures**, and our global partnerships provided critical platforms for business model innovation, open collaboration, and the incubation of high-impact technologies.

All of our strategic M&A or investment decisions are guided by our **capital allocation framework**, which integrates financial returns with long-term strategic

alignment and sustainability criteria. This disciplined approach allows us to **preserve value** by reinforcing the resilience and efficiency of our operations, while also **creating value** through future-focused initiatives and innovation-led growth.

We continued to empower our human capital to lead this transformation from within. In 2024, initiatives such as the **Generative AI Upskilling Program**, the **Sustainability Academy**, and the expansion of internal mobility ensured that our workforce remains adaptable, engaged, and aligned with the Group's long-term ambitions. Through platforms like **Sabancı Minds**, **Digital Minds**, and the **Sabancı Leadership Model**, we fostered a culture of forward thinking, collaborative problem-solving, and shared purpose.

Group companies also scaled transformation through internal entrepreneurship and innovation platforms such as **Enerjisa NAR**, **Brisa Raket**, **Akbank+**, **Akbank LAB**, **Aksigorta PURA**, and **Teknosa360**. These initiatives accelerate business model innovation, enabling agile, cross-functional responses to emerging needs in areas like decarbonization, resource efficiency, and digital enablement. In parallel, our **R&D and technology centers across Türkiye, Europe, Asia, and the United States**

served as enablers of product innovation, global market access, and collaborative development with startups and academia, reinforcing our ecosystem-based approach to sustainable transformation.

Our transformation is also shaped by rigorous risk foresight. At both the Holding and company level, we monitor emerging global trends through a **double materiality lens**, integrating financial and non-financial considerations into business planning. This ensures that **sustainability**, **innovation**, and **technology** are embedded into every function, every process, and every product. As we decarbonize our operations, advance nature-positive initiatives and targets, expand inclusive finance, and invest in sustainable digital infrastructure, we are building a **resilient and opportunity-focused foundation**.

The transformation of our core businesses is not only about preserving what makes us strong. It is about **shaping the future with purpose, agility, and lasting impact**.

## R&D and Innovation

### SCALING SUSTAINABLE IMPACT THROUGH RESEARCH, INNOVATION, AND COLLABORATIVE PLATFORMS

At Sabancı Holding, R&D and innovation are core to how we preserve and grow value in our businesses.

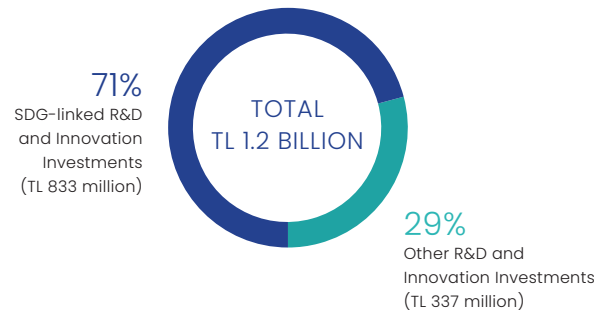
In 2024, we continued to strengthen this commitment by advancing our investments in technology, sustainability-linked innovation, and nature-based collaboration.

We aim to ensure that our businesses are resilient to future trends, while also contributing to transformative impact on a scale.

Our transformation is driven by a clear ambition to grow the share of R&D and innovation investments aligned with the UN Sustainable Development Goals.

*We aim for 70% of our total R&D and innovation investments to serve the UN SDGs by 2025. As of December 31, 2024, we have already surpassed this target.*

#### R&D and Innovation Investments<sup>31</sup> ✓



Our R&D and innovation approach is not limited to technology development. It also enables **value preservation** through increased efficiency, regulatory preparedness, and risk mitigation.

At the same time, it unlocks **value creation** by supporting the commercialization of low-carbon solutions, driving international expansion, and strengthening Sabancı Group's role in shaping the sustainable economy.

As we scale circular production models, launch AI-powered platforms, and strengthen our collaborative innovation ecosystems, we remain focused on generating long-term value for our stakeholders and for the planet.

In 2024, we advanced this transformation through three interconnected platforms:

1. Ideation Platforms
2. Execution Platforms
3. Cross-Functional Collaboration Platforms

<sup>31</sup> Includes Aksigorta, Agesa, Akçansa, Brisa, Carrefoursa, Çimsa, Kordsa, Teknosa, Temsa, Enerjisa Enerji, Enerjisa Üretim, SabancıDX



# R&D and Innovation

## IDEATION PLATFORMS

We foster early-stage innovation across the Group through structured ideation platforms that help identify opportunities aligned with our strategic vision. These include:

**Group Company Innovation Programs** such as Enerjisa NAR, Brisa Raket, Akbank+, Akbank LAB, Aksigorta PURA, and Teknosa360, which enable company-level experimentation and entrepreneurial thinking.

**International initiatives** such as the EIT ClimAccelerator, which supports climate-focused start-ups aligned with ,global decarbonization goals.

## EXECUTION PLATFORMS

To bring innovation to life, we leverage robust execution mechanisms that convert ideas into scalable solutions and business models. These include:

**Sabancı ARF**, our early-stage acceleration platform, which supports internal and external start-ups with seed funding, mentoring, and collaboration opportunities with Group companies.

**Sabancı Ventures**, our corporate venture capital arm, which invests in post-revenue technology ventures that align with the Group’s growth themes and sustainability priorities.

**R&D and Innovation Centers** across Türkiye, Europe, Asia, and the United States, which serve as critical enablers of product development, market expansion, and deep tech collaboration.

**Strategic Initiatives and M&A**, where innovation is integrated into investment decisions using our capital allocation framework, ensuring long-term value creation through responsible investment.

## CROSS-FUNCTIONAL COLLABORATION PLATFORMS

To accelerate ideation and execution, we cultivate collaboration through dedicated knowledge and capability-sharing platforms across the Group:

**Sabancı Minds, Digital Minds, and HR Minds** bring together employees from different sectors and functions to co-develop innovation roadmaps, explore emerging technologies such as generative AI, and align business transformation with sustainability and leadership goals.

These platforms foster an innovation cultur that is **adaptive, participatory, and purpose-driven**, enabling the Group to move faster in a complex global environment.

# R&D and Innovation

## HIGHLIGHTS FROM SABANCI GROUP COMPANIES

### Çimsa

#### Çimsa pioneers green hydrogen use in white clinker production

In 2024, Çimsa continued to strengthen its leadership in sustainable and low-carbon construction materials. The company launched a hydrogen usage project at its Buñol Plant, replacing fossil fuels with green hydrogen in the rotary kiln and calciner, increasing the share of alternative fuels to 50% in white clinker production.

#### 3D Mortar project advances low-carbon construction solutions

TÜBİTAK supported Çimsa's "3D Mortar" project. The two-year project focuses on developing and commercializing an innovative concrete mortar made from waste materials, aimed at enhancing the sustainability of cement-based mortars used in 3D printing applications. By enabling the construction of more environmentally friendly and low-carbon 3D structures, the project represents a significant advancement in eco-friendly technologies.

#### RapiDome: 3D-Printed, Low-Carbon Housing in 48 Hours with OpaCrete

Çimsa also launched the RapiDome project. Through this project by integrating 3D printing technology with its proprietary OpaCrete white concrete, Çimsa has introduced a groundbreaking solution that significantly reduces the carbon footprint of construction. The project enables the rapid production of 3D-printed houses within 48 hours and offers strong potential for climate-resilient and post-disaster housing.

### Akçansa

Akçansa's R&D and innovation agenda was aligned with its CO2 Roadmap and the Development Plan for New Low-Carbon/Low-Clinker Products.

In 2024, the company conducted research on the application of **carbon capture, utilization, and storage (CCUS) technologies** in building materials.

Akçansa also successfully completed work focused on predicting quality control parameters in cement and concrete production using advanced data analytics.

Akçansa also continues to set an example in the industry by actively supporting the circular economy through the implementation of its **Construction and Demolition**

**Waste (CDW) project**, which allows for the reuse of construction and demolition waste in production.

### Kordsa

#### Scaling Recycled PET Yarn Production Across Global Facilities

In 2024, Kordsa continued to embed sustainability into its core business through advanced R&D across tire reinforcement, composite technologies, and construction solutions. The company expanded its efforts to produce PET cord fabric from recycled and bio-based materials. Following its adoption in the Indonesian factory, other facilities also began manufacturing 100% chemically recycled polyester yarn. Additionally, the factory in Brazil completed production of 100% mechanically recycled polyester yarn.

#### Driving Circular, Low-Carbon Material Solutions Across Mobility, Aviation, and Construction

Kordsa contributed to European Commission-supported initiatives such as WhiteCycle and EcoPlast, which focus on recycling plastic waste and advancing circularity in automotive materials. Its **solvent-based polyolefin recycling pilot line**, developed with Sabancı

## R&D and Innovation

University, enables recovery of high-quality materials from challenging waste types, supporting sustainable material use.

In composites, Kordsa advanced product certifications for the aviation sector and invested in BPREG, a company specializing in natural fiber-based biocomposites. This collaboration supports lower-carbon alternatives for industries such as mobility and consumer goods.

In construction, Kordsa's **Kratos** brand continued to offer synthetic fiber reinforcements that extend the durability of concrete structures and contribute to sustainable building practices.

### Brisa

*Brisa leads in EV-compatible, eco-conscious, and EUDR-ready tire innovation in Türkiye*

Brisa maintained its leading position in Türkiye's tire sector with TL 421.6 million in R&D investments and the launch of 148 new products in 2024. Among these was **Lassa REVOLA**, the first domestically developed electric vehicle-compatible tire. Brisa also introduced the **Ecopia**

**Enliten** and **Competus H/P 3 series**, designed to reduce environmental impact through lighter construction and lower rolling resistance. Brisa's response to the EU's deforestation-free regulation included developing its first EUDR-compliant tire ahead of enforcement.

### Temsa

*Driving Next-Gen Electric and Hydrogen Mobility Solutions from Türkiye*

Temsa continued to lead in electric mobility R&D with projects covering modular battery packs, hydrogen buses, and electrified transport platforms. In 2024, the company progressed second-generation battery packs with diverse chemistries such as LFP, LFMP, and Na-Ion, using in-house developed battery management systems.

Temsa also delivered **Türkiye's first intercity hydrogen bus** in collaboration with CaetanoBus and continued to develop **E-quad micro-mobility vehicles** and **electrified refrigerated trailers** to serve sustainable cold chain logistics.

### Enerjisa Üretim

*Bandırma Energy Base: Hub for Renewables, Storage, and Hydrogen Innovation*

In 2024, Enerjisa Üretim's Bandırma Energy Base became a key innovation hub, focusing on renewable energy efficiency and reliability, battery storage systems, hybrid energy models, and hydrogen production. Partnership projects included the Enercon-Enerjisa Wind Energy Hub with a one of the world's largest 175-meter rotor wind turbine of 6 MW capacity, a 2 MW/4 MWh battery system installation, and collaborative R&D on climate technology, renewable energy solutions, hydrogen production, energy storage and solar cells with partners such as TÜBİTAK MAM, MIT Energy Initiative, Greentown Labs, CC4E, and İYTE.

*Pioneering Circular CO<sub>2</sub> Utilization*

Enerjisa Üretim is collaborating on a project at **Tufanbeyli Lignite Plant** to capture CO<sub>2</sub> emissions and convert them into commercial fertilizers.

# R&D and Innovation

## Enerjisa Enerji

### *Innovating for Impact: Digital, Decentralized, and Low-Carbon Solutions*

R&D and innovation remained central to Enerjisa Enerji's sustainability strategy in 2024, advancing impactful projects through its structured innovation platforms. Under **IVME**, the company developed **Werer**, an off-grid electric vehicle charging station powered by renewable energy.

Through **NAR**, Enerjisa Enerji launched **Buradayım**, a digital workforce optimization tool that improves field efficiency while reducing emissions.

Additional innovations included **Carb-Zero**, a carbon tracking and management platform and **VoVo**, a battery life optimization solution.

## Akbank

Akbank continued to advance inclusive financial innovation through its intrapreneurship and open innovation platforms. The **Akbank+** program enabled employees to develop ventures full-time, with USD 1.4 million invested in three initiatives by the end of the year.

These included **Waste Log**, a digital waste management platform; **Voltla**, a navigation and payment solution for electric vehicle users; and **Metriqus**, an AI-powered analytics tool for mobile game studios.

Through **Akbank LAB**, 42 PoC studies have been conducted to date, with 21 successfully implemented. In 2024, four new PoC projects were approved. Akbank also completed the **third edition of the ReFi Türkiye program** on regenerative finance, carried out in collaboration with the Social Innovation Platform imece.

In 2024, Akbank launched the **Sustainable Supplier Financing Program** in partnership with the EBRD, offering working capital and cash incentives linked to sustainability performance. The program focused on supporting SME suppliers, particularly those in the earthquake-affected region.

## Agesa

In 2024, Agesa expanded its **Barrier-Free Digital Experience** program to enhance accessibility for visually and hearing-impaired users. Voice simulation features were added to the Online Individual Internet Branch, enabling screen reader-compatible, step-by-step navigation. The company also scaled its sign language video call feature on Agesa Mobile, allowing users to

perform transactions with live guidance. Recognized with the EyeBrand certificate for inclusive service design, Agesa recorded 36 thousand average monthly simulation uses and high satisfaction scores, reinforcing its commitment to digital inclusivity.

## Teknosa

In 2024, Teknosa advanced its sustainability-focused innovation agenda through **circular retail solutions and AI-powered efficiency tools**. The company expanded its **Refurbished Phone Program** to physical stores, reinforcing its commitment to electronic waste reduction and responsible consumption. It also rolled out **Bilge**, an AI-powered sales assistant deployed across all stores, which significantly reduced paper usage by replacing printed reports with real-time digital insights. Bilge analyzes sales performance on the spot and provides actionable recommendations, improving operational effectiveness and decision-making at the store level.

# Digitalization for Sustainable Business Models

## LEVERAGING DIGITAL CAPABILITIES TO DRIVE SUSTAINABILITY, EFFICIENCY, AND INNOVATION

**At Sabancı Group, digitalization is a strategic enabler of our sustainability transformation.** In 2024, we continued to expand our digital capabilities to create more connected, intelligent, and inclusive business models. These models are designed not only to increase efficiency but also to contribute directly to sustainability impact on a scale.

**From energy optimization to circular business processes,** digitalization is embedded into the way we decarbonize, streamline, and future-proof our operations.

Our Group-wide digital strategy focuses on building and scaling infrastructure for the connected enterprise of tomorrow.<sup>32</sup> It includes **potential global investments in hyperscale data centers, multi-hybrid cloud services, and AI-powered platforms,** alongside digital retail, ESG data tools, and cybersecurity solutions. By combining cloud-native innovation with enterprise-grade resilience, we are enabling not just transformation but long-term value creation through sustainability-driven digital infrastructure.

**In 2024, we reinforced this strategy by increasing our stake in Bulutistan to 75.5%.** These investments strengthen our ability to deliver scalable and low-emission digital services while meeting data sovereignty and regulatory expectations.

In parallel, we supported the digitization of procurement, HR, and performance management systems across Group companies. These efforts resulted in measurable reductions in paper use, improved data traceability, and stronger ESG performance management.

Our commitment goes beyond internal transformation. We are building a full-stack ecosystem that links data generation, distribution, and intelligent processing. **This ecosystem supports the transition toward a low-carbon, digitally enabled economy.**

As we move forward, we will continue to deepen strategic partnerships, invest in sustainable digital innovation, and scale technology solutions across sectors and regions. Our goal is to turn electrons into data, and data into insight. This is how we are **shaping a connected future that is smart, secure, and sustainable by design.**

## HIGHLIGHTS FROM SABANCI GROUP COMPANIES

### SabancıDx

### *Scaling Sustainable Digital Infrastructure and Cloud Solutions*

In 2024, SabancıDx leveraged its R&D Center to develop sustainability-driven digital solutions that enhance operational efficiency and reduce environmental impact, playing a central role in advancing digital infrastructure across the Group and beyond.

As a fast-growing hybrid cloud and managed services provider, SabancıDx scaled its operations through partnerships and platform integration. The company continued its transition into a **leading Managed Cloud Solutions Provider**, supporting over 5,000 clients with multi-hybrid cloud services. **Strategic alliances,** including with **Microsoft Azure**, enabled high-availability, low-emission infrastructure solutions aligned with green computing principles.

SabancıDx also expanded its digital product suite across procurement, HR, and performance management systems. Platforms like **PratisPro, HrWe, and Perfx**

<sup>32</sup> For further details please refer to [Sabancı Holding 2024 Annual Report](#).



# Digitalization for Sustainable Business Models

supported **transparent, paperless, and data-driven enterprise operations**. With growing adoption among Group companies and external clients, SabancıDX reinforced its role in delivering scalable, secure, and sustainable digital business models.

## Teknosa

### *Advancing AI-Powered Retail and Sustainable Digital Operations*

In 2024, Teknosa deepened its digital-first transformation by advancing AI-powered, omnichannel retail technologies. The rollout of **Bilge**, its in-store AI sales assistant, replaced printed reports with real-time insights, significantly reducing paper use and improving sales performance. The company also launched ERP and enterprise architecture transformation initiatives to optimize operations, enable agile decision-making, and enhance customer experience. These efforts contributed to greater operational efficiency and reduced environmental impact, aligning digitalization with the Group's broader sustainability goals.

## Çimsa

### *AI-Powered Platforms Driving Efficiency and Sustainable Growth*

In 2024, Çimsa advanced its digital transformation through integrated, AI-driven platforms that improved operational efficiency, traceability, and decision-making across the value chain. The **CemClone digital twin initiative** modeled plant performance using real-time data from automation systems and sensors, enabling scenario-based simulations that enhance energy efficiency and support decarbonization goals.

To optimize logistics, the company launched its **Digital Warehouse Project**, combining wearable smart gloves with an SAP-integrated warehouse management system for hands-free, real-time inventory tracking and process traceability. This improved productivity in stocking, order fulfilment, and dispatch operations.

Complementing these efforts, the **Inventory Insight & Optimization Platform** applied machine learning for demand forecasting and stock optimization, while **SpendAI** supported strategic cost management through real-time spend analytics, risk detection, and customized dashboards. These initiatives reflect Çimsa's

commitment to leveraging digitalization as a core driver of sustainable, efficient growth.

## Akçansa

### *Scaling AI and Digital Excellence for Operational and Energy Efficiency*

In 2024, Akçansa advanced its digital transformation agenda by embedding AI and data analytics into operational and planning systems. The company launched several key initiatives to improve efficiency, strengthen customer engagement, and support energy optimization. **The digiFactory platform** transitioned to a cloud-based infrastructure to enable broader internal application and commercialization. Through **the Pro-Cure AI project**, generative AI was introduced into procurement processes to streamline sourcing decisions. **The S&OP Planner** and **CRM** projects supported more integrated planning and improved customer relationship management in the ready-mix concrete business. Ongoing work on **rotary kiln optimization** aims to enhance energy efficiency and process control, aligning digital innovation with Akçansa's decarbonization goals. These efforts reflect a systematic approach to scaling internal capabilities and building a culture of digital excellence.

# Digitalization for Sustainable Business Models

## Kordsa

### ERP and AI Drive Global Efficiency and Sustainability

In 2024, Kordsa leveraged digitalization to enhance efficiency, reduce environmental impact, and strengthen data-driven decision-making across its global operations. **The Project Janus** ERP transformation initiative standardized digital infrastructure in Türkiye, Indonesia, Thailand, and Brazil, enabling faster, more flexible production with reduced setup times. The company also integrated AI and advanced data analytics into its operations to monitor environmental performance, optimize energy use, and minimize its carbon footprint. These digital enhancements supported Kordsa’s broader sustainability strategy while reinforcing operational agility and global consistency.

## Brisa

### Smart Mobility and Industry 4.0 Solutions Enhance Efficiency and Resilience

In 2024, Brisa advanced its digitalization efforts to create more connected, efficient, and sustainable mobility

solutions. By combining digital platforms with its tire and fleet services, the company delivered **integrated mobility experiences** that improve performance and reduce environmental impact. Its **Digital Fleet services**, accessible via mobile application, enabled real-time tire condition monitoring to help reduce fleet fuel consumption. In manufacturing, **digital twin simulations** and **predictive maintenance** enhanced operational efficiency and energy optimization. Brisa also introduced **smart dashboards** for real-time tracking of sustainability KPIs, supporting more agile and data-driven management. In parallel, the company strengthened its **Industry 4.0** capabilities by participating in the EU’s Digital Europe cybersecurity program, reinforcing digital infrastructure and operational resilience. On the customer front, the **AI-powered Arvi Chatbot and digital tachograph integration** improved responsiveness and data precision for commercial vehicle services.

## Temsa

### Smart Platforms Enable Low-Emission Mobility

Temsa advanced its digital transformation by embedding **AI-supported battery management systems** and analytics into its electrification strategy.

In 2024, the company scaled **smart energy platforms** across logistics, marine, and agricultural use cases, improving performance tracking and reducing diesel dependency. The rollout of the **E-quad** electric vehicle and **modular battery technologies** reflected Temsa’s commitment to building connected, low-emission mobility systems through digital innovation.

## Enerjisa Üretim

### Smart and Secure Platforms Power Global Renewable Energy Management

Digitalization played a transformative role in enabling sustainable energy systems at Enerjisa Üretim and its digital spinoff, Senkron Digital.

Through Senkron Digital, Enerjisa Üretim offers its Renewable Energy Management Suite (REMS) and Cyberpact solutions to provide comprehensive renewable energy management and cybersecurity services to third parties, **managing a total capacity of 6 thousand MW across 11 countries on 4 continents.**

In 2024, Enerjisa Üretim expanded its **ONEPACT Suite** and **CYBERPACT** offerings, leveraging AI and digital tools

# Digitalization for Sustainable Business Models

to enhance the efficiency, security, and resilience of its renewable energy infrastructure.

**Onepact Monitor** enabled 24/7 remote operations and fault detection, reducing manual labor and maximizing renewable energy output. **Onepact Predict** extended asset life through predictive maintenance, while **Onepact Feasibility** guided energy storage investments with data-driven battery analysis. Complementing these tools, **Cyberpact OT Soc** and **Cyberpact Audit** strengthened cybersecurity and compliance, safeguarding critical systems against operational disruptions. Together, these platforms reflect a comprehensive approach to smart, secure, and sustainable energy transformation.

## Enerjisa Enerji

### *Pioneering a Responsible and Transparent AI Strategy*

In 2024, digitalization became a key enabler of resilience, accessibility, and operational excellence at Enerjisa Enerji. The company formalized its AI strategy around efficiency, capability transformation, and ethical implementation. It published its first **AI Manifesto**, emphasizing a sustainable, transparent, and responsible approach to artificial intelligence.

**The North Star project** marked a milestone in disaster preparedness, enabling real-time tracking of power outages in disaster zones through an interactive digital platform. Drawing on remote data and field personnel updates, the tool accelerated energy restoration efforts and improved decision-making during emergencies.

Following the 2023 earthquakes, Enerjisa Enerji deployed **solar-powered trailer stations** and expanded **vehicle radio communication systems**, strengthening crisis response capacity.

## Akbank

### *Driving Digital Banking Transformation Through Strategic Innovation*

Akbank's digital infrastructure and strategic collaborations with innovation partners continued to create measurable value for its stakeholders in 2024. By accurately analyzing evolving trends and customer expectations, Akbank remained committed to delivering a seamless, simple, and practical banking experience through personalized digital solutions.

Throughout the year, the Bank ensured uninterrupted, high-quality service and achieved a **digital penetration rate of 86.79%**, while also supporting its digital

transformation journey through a comprehensive cultural transformation program.

As part of its **partnerships with FinTech companies**, Akbank provided an affordable platform for businesses aiming to operate in e-commerce through IdeaSoft, an e-commerce infrastructure provider offering web and mobile-based software solutions. In addition, Akbank offered a comprehensive financial support package tailored for SMEs, including business credit cards with exclusive promotional campaigns, working capital loans, and virtual POS services.

To address the risks associated with cash handling in second-hand vehicle transactions, Akbank implemented its **"Secure Payment System"**, which ensures that the transfer of the sale amount occurs securely and simultaneously with the vehicle registration process.

Furthermore, to enhance customer experience and reduce the operational workload for its employees, Akbank expanded its **Robotic Process Automation (RPA) initiatives**, which began in 2018. In 2024, the Bank deployed approximately 23 virtual colleagues across various business lines including ATMs, POS, merchants, credit cards, money transfers, insurance, and internal control systems.

# Digitalization for Sustainable Business Models

## Aksigorta

### *Digital Innovation in Insurance and Cybersecurity*

In 2024, Aksigorta advanced its sustainability agenda through digital innovation in insurance and cybersecurity. The company's **Digital Security Platform** emerged as a flagship initiative, helping raise awareness and preparedness across society for future digital risks. By recognizing data as a vital asset, Aksigorta prioritized investments in cybersecurity, AI, advanced analytics, and blockchain, reinforcing both operational resilience and customer trust.

Internally, Aksigorta continued to scale **paperless insurance issuance** and **online expertise applications**, reducing resource use while enhancing service speed and transparency.

## Agesa

### *End-to-End Digital Pension and Communication Solutions*

In 2024, Agesa scaled digital transformation to enhance customer experience, operational efficiency, and environmental sustainability. Through its **BES2Bİ'Tikla** project, the company fully digitized private pension application processes. By eliminating face-to-face paperwork, Agesa reduced average application time from 55 minutes to just 12 minutes. The digital system also delivered a 35% gain in software development cycle efficiency and substantial cost savings, while receiving over 91% satisfaction in field surveys.

With the **DeliverX** project, Agesa replaced physical mailings with digital communications, reducing shipment volumes and enabling real-time status tracking via a newly scalable, Kafka-based infrastructure. The transition reduced server load by 1 terabyte, cut complaint-related workload by 95%.



# Environmental Investments and Expenditures

At Sabancı Group, we categorize our environmental expenditures in two distinct groups: those mandated by regulatory requirements, and those that go beyond compliance, reflecting our proactive environmental stewardship.

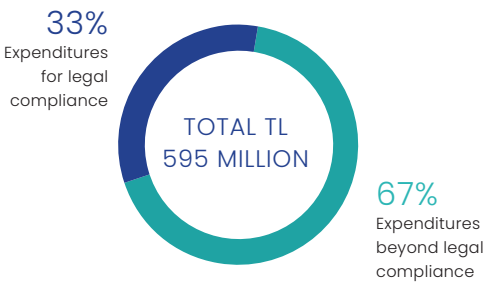
In 2024, total environmental expenditures by Group companies exceeded TL 595 billion, with 67% allocated to voluntary efforts that go beyond regulatory compliance.

We also continued to advance **environmental investments in our strategic growth areas**, which approached **TL 4.2 billion** in 2024. These investments are monitored under three core categories, each reflecting a different dimension of our contribution to sustainable development.

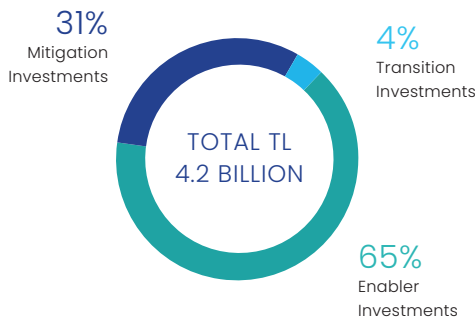
In 2024, the largest share of our environmental investment portfolio fell under the enabler category, accounting for 65% of the total.

This reflects our continued emphasis on long-term value creation, resilience, and alignment with our Nature Agenda.

## Breakdown of Environmental Expenditures<sup>33</sup> (2024) ✓



## Environmental Investments in Our Growth Areas<sup>34</sup> (2024) ✓



**1.Mitigation Investments:** These include projects that significantly reduce resource consumption or greenhouse gas emissions and have a direct positive impact on sustainability.

**2.Transition Investments:** Covering resource and/or carbon-intensive activities that represent a shift toward more sustainable solutions. Examples include cement products utilizing alternative fuels or raw materials.

**3.Enabler Investments:** These are investments that, while not directly reducing emissions or resource use, enable decarbonization or sustainability in adjacent industries through supporting infrastructure or inputs.

<sup>33</sup> Usually refers to operational expenses (OpEx) or capital expenditures (CapEx), such as the purchase of energy efficiency equipment or modernization. It is aimed at making existing activities more sustainable. Routine maintenance–repair, environmental measurement, etc. expenses are not included. It expresses expenditures that result in reduction in raw materials, waste or GHG emissions. <sup>34</sup> Usually refers to capital expenditures (CapEx). Growth investments in Sabancı Holding’s core business areas are included in this category. This includes the relevant M&A activities.

# SDG-Linked Products and Services

At Sabancı Holding, our commitment to transforming our portfolio towards sustainable business models is embedded in our strategic approach, with a strong emphasis on decarbonization across diverse industries, strengthen positive impact, and invest in the industries of the future.

As part of this transformation, we invest in SDG-linked products and services that help accelerate the shift

towards low-carbon operations within a diversified portfolio. These efforts are aligned with our principles of responsible business and sustainability.

We track and evaluate products and services that contribute to reducing resource consumption and greenhouse gas emissions, enable the transition to cleaner technologies, support their implementation, and generate positive social outcomes.

To guide investment decisions in SDG-linked economic activities, we promote a shift in mindset across all Sabancı Group companies. At the same time, we regulate and monitor SDG-linked products and services through an internal classification system grounded in global standards and best practices.

This approach supports our ongoing transformation into a more sustainable portfolio and strengthens our role as a catalyst for positive change.

We are embedding a Group-wide mindset and monitoring SDG-linked products and services across four key categories:

MITIGATION

Includes products and services that directly reduce environmental resource use and greenhouse gas emissions.

**Examples:**  
**Energy:** Green tariffs, renewable energy generation and sales  
**Financial services:** Green loans and/or sustainability-linked funds directed toward low-carbon economy and climate-positive investments  
**Mobility:** Electric vehicles and low-emission transport

TRANSITION

Covers resource- and/or carbon-intensive products and services that are aligned with a shift toward more sustainable technologies.

**Examples:**  
**Materials:** Cement products with lower clinker ratios and extended lifecycle performance

ENABLER

Refers to solutions that support customers’ environmental goals or act as inputs for sustainable industries.

**Examples:**  
**Energy:** E-mobility charging infrastructure  
**Retail and technology:** In-store electronics repair services to extend product life  
**Mobility & materials:** Lightweight components and battery solutions that lower end-user emissions

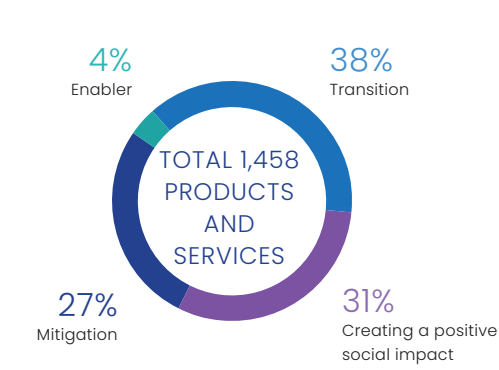
CREATING A POSITIVE SOCIAL IMPACT

Includes products and services that improve access, safety, and well-being in underserved communities.

**Examples:**  
**Energy:** Distributed energy solutions for critical facilities and regions with limited grid access

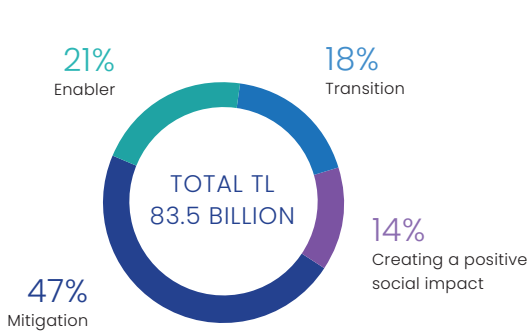
# SDG-Linked Products and Services

Category Breakdown of SDG-Linked Products and Services ✓



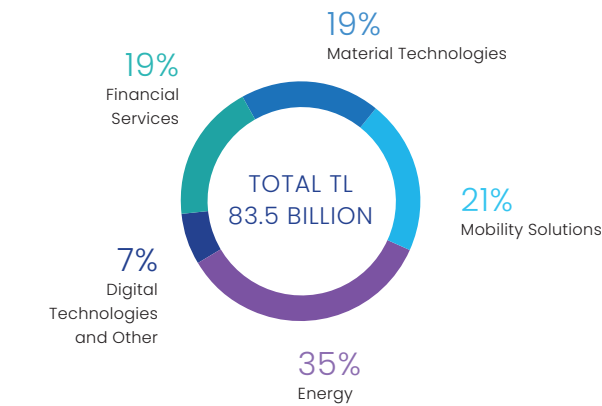
The total number of SDG-linked products and services in our Group reached 1,458 in 2024.

Distribution of SDG-Linked Revenues ✓



The revenues from SDG-linked products and services amounted to TL 83.5 billion.

Sectoral Breakdown of SDG-Linked Product and Service Revenues<sup>35</sup> ✓



The largest revenue stream was generated through the mitigation category, with energy companies leading in SDG-linked revenues by sector.

<sup>35</sup> Akbank is not included. Akbank's performance regarding its sustainable business model is monitored under the Sustainable Finance heading.

# SDG-Linked Products and Services

## HIGHLIGHTS FROM SABANCI GROUP COMPANIES

### Akbank

#### *Market-Leading SDG-Linked Finance Portfolio Accelerates Türkiye's Green and Inclusive Transition*

Akbank contributes to sustainable development through a growing portfolio of financial products and services that deliver measurable environmental and social value. The bank actively channels capital toward low-carbon and inclusive economic activities, offering a robust suite of SDG-linked products across **climate mitigation, climate adaptation, and climate transition** finance categories.

In climate mitigation, Akbank provides products such as rooftop solar panel investment loans, environmentally friendly vehicle loans, and **EcoLease by AkLease—Türkiye's first and only sustainable lease offering**, designed to accelerate investments in renewable energy and clean transportation. For climate adaptation, the bank offers agricultural loans, sustainable water and waste management loans, and EcoLease solutions that support resilience across supply chains and food systems.

Akbank's climate transition finance offering includes the **SME Eco Transformation Package, Türkiye's first and only comprehensive green credit bundle tailored for SMEs**. This package supports investments in energy efficiency, clean transportation, waste management, water systems, and sustainable agriculture. The bank also supports blue economy initiatives through its **Blue Finance Package, Türkiye's only product set for blue port, blue sea transport, and blue tourism investments**.

To further scale its impact, Akbank integrates sustainability-linked supply chain finance, direct debit systems, and a sustainable foreign trade system into its product architecture. These solutions are strategically designed to address transition risks in carbon-intensive sectors while contributing to SDGs such as affordable clean energy, sustainable cities, responsible production, and climate action. Akbank's SDG-linked offerings represent a comprehensive, market-leading approach to financing Türkiye's transition to a greener and more inclusive economy.

### Aksigorta

#### *Sustainability-Linked Insurance Backed by Strong Governance*

In 2024, Aksigorta advanced its efforts to align insurance products with sustainability objectives, guided by its Sustainability Committee and a dedicated Sustainable Product and Service Working Group. These structures work collaboratively to inform product design, raise internal awareness, and embed sustainability features into offerings across the value chain.

The company places particular emphasis on helping customers manage environmental and social risks through insurance solutions that offer protective coverage in the face of climate-related, operational, and social challenges. Educational materials and internal communication initiatives have been developed to strengthen the sales team's understanding of these features and improve customer engagement.

Looking ahead, Aksigorta aims to expand the share of sustainability-linked products in its overall portfolio while continuing to focus on solutions that generate positive environmental and social outcomes. This direction reflects the company's broader ambition to serve as a catalyst for sustainable transformation within the insurance sector.



# SDG-Linked Products and Services

## Agesa

### *Inclusive Financial Protection and Literacy Initiatives*

Agesa enhanced the inclusivity of its **Kredim Gvende** credit-related product by expanding the eligible age range for critical illness coverage and increasing coverage limits, thereby making financial protection more accessible to a broader customer base.

In parallel, the company launched a proactive engagement program targeting paused customers and introduced the **Financial Therapy** initiative to support financial literacy and behavioral change. Delivered through a dedicated YouTube video series, this program reflects Agesa's commitment to empowering individuals on their journey toward financial well-being.

By integrating digital accessibility, proactive customer engagement, and socially inclusive product offerings, Agesa continues to position its insurance and pension solutions as effective tools for promoting sustainable living.

## Brisa

### *Mobility Transformation Through Smart and Sustainable Solutions*

Brisa continues to position sustainability as a core driver of innovation across its mobility solutions, aligning its products and services with the UN Sustainable Development Goals. In 2024, the company advanced its SDG-linked strategy under three transformation dimensions: **Transition to a Low-Carbon Economy**, **Low-Touch Economy**, and **Cultural and Social Transformation**. This multidimensional approach guides Brisa's development of offerings that contribute to environmental efficiency, safer mobility, and inclusive access.

Brisa's product portfolio incorporates a wide range of smart and sustainable tire solutions, including **fuel-efficient and sensor-enabled tires** that reduce emissions and improve road safety. These innovations support customers in lowering their carbon footprint, particularly in commercial transport fleets, and contribute to a more sustainable mobility ecosystem.

With operations aligned to 10 of the 17 UN SDGs, Brisa integrates risk assessment and scenario analysis into its product development process to proactively address emerging sustainability challenges. The company's activities span beyond product design, encompassing value chain engagement, customer education, and digital service platforms that enable better performance monitoring and lifecycle management.

## Temsa

### *Leading Clean Mobility with Zero-Emission Buses and Hydrogen Innovation*

Temsa continues to lead the transformation toward sustainable transportation with one of the most comprehensive zero-emission bus portfolios in Europe. As of 2024, the company offers a wide range of fully electric and hydrogen-powered vehicles, serving urban, intercity, and long-distance markets across global geographies.

A key highlight in 2024 was the advancement of the **HD12 Fuel Cell coach**, co-developed with CaetanoBus and Toyota. This long-range hydrogen bus is designed to meet next-generation safety and performance standards and is expected to support the decarbonization of intercity travel.

Temsa's clean vehicle lineup includes models such as the **LD SB E**, promoted as Europe's first electric intercity bus, and the **Avenue Electron**, which has earned Environmental Product Declaration (EPD) certification, positioning Temsa among a select group of global manufacturers committed to product transparency and lifecycle sustainability.

# SDG-Linked Products and Services

The company continues to prioritize R&D investments focused on sustainability and clean mobility technologies. In 2024, it recorded strong international performance and marked a milestone year in terms of commercial scale and global market expansion.

## Enerjisa Enerji

### *Enabling 360° Energy Transformation Through Integrated Low-Carbon Solutions*

Enerjisa Enerji contributes to the UN SDGs by delivering integrated, customer-centric solutions that support the transition to a low-carbon, resource-efficient energy ecosystem. Operating as a 360-degree energy transformation partner, the company offers SDG-linked products and services that address environmental challenges, energy access, and economic resilience.

Through its **“Energy of My Business”** platform, Enerjisa Enerji enables customers to reduce their environmental impact and optimize energy use by offering tailored **renewable energy installations, energy efficiency projects, and smart energy management systems**. These solutions are designed to accelerate the decarbonization of commercial and industrial operations.

The company also supports customers in demonstrating environmental responsibility through instruments such as I-REC and Carbon Reduction Certificates, helping them meet global disclosure standards and carbon reporting obligations.

In the realm of sustainable mobility, Enerjisa Enerji leads the expansion of EV charging infrastructure through its **Eşarj** network, while also investing in **electricity storage systems, smart home technologies, and consumer-driven electricity generation**. These offerings empower individuals and businesses to take an active role in the energy transition.

## Enerjisa Üretim

### *Advancing Türkiye’s Energy Transition Through Scalable Renewable Investments*

Enerjisa Üretim continues to strengthen its role in Türkiye’s energy transition by expanding its renewable energy portfolio and reducing the carbon intensity of its electricity generation. As of the end of 2024, approximately 48% of its total installed capacity comes from renewable sources including **hydro, wind, and solar**.

Through large-scale investments like the YEKA-2 and YEKA RES-2024 projects, Enerjisa Üretim is contributing to one of Türkiye’s most ambitious renewable energy programs. These projects form a strategic pillar of the company’s climate mitigation efforts, while also supporting national energy security through the utilization of domestic and sustainable resources.

In line with its long-term decarbonization vision, **Enerjisa Üretim aims to expand its installed capacity significantly by 2028**. Future investments will continue to focus on high-efficiency, flexible generation technologies and maximizing the use of renewable energy for a low carbon, sustainable energy future.

## Akçansa

### *Transforming Cement and Concrete with Certified Low-Carbon Solutions*

Akçansa contributes to the UN SDGs by transforming its product portfolio through low-carbon cement and concrete solutions. The company structures its sustainability offering under the **“Green Formulation”** platform, which categorizes products into **“Green For Cement”** and **“Green For Concrete”**. This product framework aligns with the transition to climate-resilient infrastructure and more responsible production practices.

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Under “Green For Cement”, Akçansa offers low carbon cement (**Actioncem**), durable cement (**Duocem**), and environmentally resistant cement (**Solidcem**). In the “Green For Concrete” category, products like **Ecocrete** represent next-generation ready-mix concretes designed to minimize lifecycle emissions. Additional specialty concretes—including **Performix**, **Solidmix**, **Hidromix**, **A+Beton**, **100+Beton**, **Yolbeton**, and **TunnelMix**—offer tailored sustainability benefits across a range of infrastructure applications.

Akçansa obtained green cement certification for its Büyükçekmece, Ladik, and Çanakkale plants under Türkiye’s new regulation promoting low-emission materials in public procurement. Akçansa reaffirmed its goal to make all cement and concrete products sustainable by 2030.

### Çimsa

### *Leading Low-Carbon Cement Innovation with the Green Wave Program*

Çimsa continues to drive the transformation from grey to green in the cement industry by advancing its portfolio of low-carbon, value-added products.

In 2024, the company redefined its sustainable product framework by classifying cement types with clinker content below 80% as sustainable, in line with the EU Taxonomy and global standards.

Through its flagship “**Green Wave**” program, Çimsa consolidated its environmentally friendly next-generation cement offerings under a single platform, expanding its low-carbon portfolio and strengthening market leadership. Developed through detailed market analysis and the expertise of its R&D center, Çimsa’s **CEM II** product line responds to rising demand for technically robust, low-emission cement alternatives.

In anticipation of Türkiye’s new green cement regulation, the company organized a dedicated customer webinar to explain the expected clinker thresholds in public procurement and its own readiness to meet these requirements. This proactive engagement reinforces Çimsa’s role as a strategic enabler of low-carbon transformation in the construction sector.

### Kordsa

### *Advancing Material Innovation for Low-Emission and Circular Solutions*

In 2024, Kordsa continued to expand its portfolio of SDG-linked technologies designed to reduce emissions, improve efficiency, and support a circular economy. Its **tire reinforcement products** are engineered to lower rolling resistance and reduce fuel consumption, while **advanced composite materials** enable the production of lighter vehicles that consume less energy. In construction, Kordsa’s reinforcement solutions contribute to the durability and sustainability of critical infrastructure.

The company also advanced the use of **compounding products** that support lower-emission manufacturing, demonstrating a strong link between material innovation and environmental performance. These offerings reflect Kordsa’s integrated approach to product sustainability, driven by R&D and informed by its commitment to responsible industry transformation.



[For the Sabancı Group facilities certified with ISO 9000, please read the ISO Certifications Document available at the Download Center section of the Report’s website.](#)

# Sustainable Finance

## *Mobilizing Sustainable Finance to Accelerate Climate and Impact-Driven Growth*

At Sabancı Holding, we recognize sustainable finance as a strategic enabler that mobilizes capital toward climate action, nature preservation, and social impact.

In 2024, our Group companies in the financial services and banking sector continued to expand their sustainable finance product and services, advancing solutions aligned with responsible banking and insurance principles. At the same time, other Group companies across industries accessed green and sustainability-linked financing instruments to support low-carbon investments, improve financing terms, and enhance their resilience to emerging environmental and social risks.

We also leveraged international mechanisms to accelerate our global sustainability investments. Sabancı Climate Ventures secured **USD 184 million in tax equity financing for the Cutlass Solar II Project**, a 272 MW solar energy investment in the United States. This milestone marked a significant step in scaling our renewable energy portfolio and demonstrated our ability to mobilize financial capital for impactful, future-shaping projects.

The following highlights present how Sabancı Group companies are integrating sustainable finance into their operations, investments, and long-term strategies, reinforcing our collective transition toward a just, low-carbon economy.

### HIGHLIGHTS FROM SABANCI GROUP COMPANIES

#### Akbank

#### *Leading Türkiye's Sustainable Finance Transition with Impact and Innovation*

Akbank continues to lead sustainable finance efforts in Türkiye, aligning its lending and investment activities with a long-term commitment to climate action and inclusive economic growth.

**By the end of 2023, the bank reached its initial sustainable finance target of TL 200 billion and subsequently increased this goal to TL 800 billion by 2030, reflecting its strengthened ambition.**

In 2024, Akbank provided TL 190 billion in sustainable financing, bringing its cumulative contribution to TL 416 billion since 2021. This includes innovative instruments such as green trade finance, supplier financing,

and ESG-linked loans that empower clients on their sustainability journeys. The bank also issued a **USD 500 million sustainability bond**, completed **two syndicated sustainability loans totaling USD 1.35 billion**, and expanded its product range to include **Türkiye's first global sustainable foreign trade financing**, developed in cooperation with a major European bank.

**Sustainability-themed funds under Ak Asset Management reached TL 13.6 billion** in assets under management, with 402 thousand investors — a 132% increase year to date.

The share of sustainability-linked transactions in Akbank's total wholesale funding reached 69%, further advancing its **goal of achieving 100% sustainability in wholesale funding by 2030**.

To support investor access to ESG opportunities, Akbank launched **iyigelecegeyatirim.com**, a platform guiding capital toward companies with positive environmental and social impact. The bank's leadership was recognized with two international awards in 2024: **the Platinum Award for "Social Bond of the Year"** at the Global SME Finance Awards and the **"Best Bank for Social Bonds"** in Central and Eastern Europe at the Sustainable Finance Awards.



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Akbank's sustainable finance approach is governed by its published **Sustainable Finance Framework and Environmental and Social Risk Framework**, ensuring alignment with international best practices.

**The bank's Net Zero Strategy, which includes interim 2030 targets and a coal phase-out by 2040, further reinforces its role in enabling a just and inclusive transition.**

### Aksigorta

Aksigorta integrates sustainability into its financial operations by prioritizing investments that support environmental and social impact. In 2024, sustainable and green investment instruments were given increased weight in the company's fund management decisions, reflecting its intent to align financial returns with long-term sustainability goals.

The company emphasizes the role of insurance providers in facilitating the green transformation through innovative products and responsible investment practices. By embedding ESG criteria into its investment approach, Aksigorta supports a more resilient financial ecosystem while advancing the broader transition toward a sustainable economy.

### Agesa

#### *Empowering Sustainable Savings: Agesa Sustainability Fund*

Agesa contributes to sustainable finance through long-term savings instruments that align individual investment goals with environmental and social impact. A key milestone is the **Sustainability Fund**, launched in 2021 to provide private pension participants with a vehicle that channels capital toward companies demonstrating strong ESG performance.

The fund invests at least **80% of its portfolio in sustainability-focused equities**, including companies listed on the BIST Sustainability Index, international sustainability indices, and exchange-traded funds tracking ESG benchmarks. Through this offering, Agesa empowers customers to make purposeful investment choices while supporting the growth of a sustainable capital market in Türkiye and beyond.

### Brisa

#### *Integrating Lifecycle Risk Perspective for Sustainable Growth*

Brisa integrates sustainability into its financial strategy by closely managing environmental and social risks across its operations and value chain. The company adopts a lifecycle risk perspective, addressing not only economic parameters but also environmental and social dimensions in its financing and planning decisions.

In 2024, Brisa secured a **USD 100 million sustainability-linked loan from the European Bank for Reconstruction and Development (EBRD)**, marking a significant milestone in its sustainable finance journey. This transaction was recognized with the **"IFI Loan Deal of the Year"** award at the Global Banking & Markets: CEE, CIS & Türkiye Awards 2024.

### Enerjisa Enerji

#### *Integrating Green and Sustainability-Linked Frameworks into Business Strategy*

Enerjisa Enerji has strengthened its sustainable finance strategy by establishing formal frameworks that integrate environmental and social performance into funding activities. In July 2023, the company published its inaugural **Green Finance Framework**, designed to support financing for renewable energy, energy

# Sustainable Finance

efficiency, clean transportation, and innovation in sustainability-focused technologies.

Building on this foundation, Enerjisa developed a **Sustainability-Linked Financing Framework**, aligning its business strategy with funding practices through measurable performance targets. This framework enables the company to issue sustainability-linked bonds and loans in accordance with the [ICMA Sustainability-Linked Bond Principles](#) and [LMA Sustainability-Linked Loan Principles](#).

## Enerjisa Üretim

### *Advancing Türkiye's Clean Energy Transition with IFC-Aligned Project Finance Loan*

In 2024, Enerjisa Üretim advanced its sustainable finance strategy by securing a **USD 1 billion project finance loan for the 750 MW portfolio** awarded under the YEKA RES-2 wind power tender. This financing was structured in line with the **IFC Performance Standards**, demonstrating the company's strong alignment with international environmental and social risk management frameworks.

As part of the financing process, the company conducted comprehensive environmental and social impact assessments and embedded safeguards throughout the project lifecycle. This included **biodiversity protection, land acquisition and resettlement standards, cultural heritage assessments, and labor rights compliance**, ensuring that all sub-projects meet rigorous sustainability criteria.

By aligning its renewable energy investments with international sustainability standards, Enerjisa Üretim continues to strengthen its leadership in Türkiye's clean energy transition while enhancing its ability to attract ESG-aligned capital from global financial markets.

## Akçansa

Akçansa is enhancing its sustainable finance strategy to support its low-carbon transition and long-term investment goals. In 2024, the company expanded its strategic focus to include Sustainability-Linked Finance and Reporting, integrating these areas into its updated 2030 sustainability targets.

## Çimsa

### *Pioneering Green Finance in Cement with EBRD and IFC-Backed Loans*

Çimsa views sustainable finance as a strategic tool to accelerate its low-carbon transition and align capital allocation with long-term environmental goals. In 2024, the company entered into two landmark loan agreements with international financial institutions, following rigorous due diligence processes that validated the strength of its sustainability strategy.

The company secured **EUR 25 million in financing from the EBRD** and **USD 70 million from the IFC**. These agreements marked **a first for Türkiye's cement industry** and positioned Çimsa as a pioneer in green finance for the sector.

To formalize its approach, Çimsa published a **Green Finance Framework** in 2024. The framework outlines eligible project categories and guides the issuance of green financial instruments in support of the company's sustainability-linked 2030 targets. By integrating financial discipline with its sustainability roadmap, Çimsa is strengthening investor confidence and supporting the long-term decarbonization of its operations.