



DIGITALIZATION & INNOVATIVE PRACTICES



Migros supports its own sustainable growth by spearheading technological change in its sector. Giving customers easier access to its products and services through the digital transformation of their processes is a key element of the company's business model. Migros invests in the future by embracing innovative approaches that sustainably expand and improve the services it delivers through its online channels.

Migros works with a variety of R&D firms to incorporate technology into its business processes. The company's own IT infrastructure and R&D center were established a decade ago and have been in continuous operation ever since. With AI-based solutions coming increasingly to

the fore, Migros is devoting correspondingly more resources to tapping their power. Migros' R&D and Innovation department was staffed by 287 full-time employees in 2023. Total investment outlays in R&D and innovation amounted to TL 418.9 million last year.

Migros uses digital tools to monitor its services in real time so as to better serve its customers and other stakeholders. The company proactively solicits customer feedback and uses it to deliver personalized customer experiences. It dynamically improves the transparency and speed with which product information is shared with customers while simultaneously undertaking awareness campaigns and developing technological solutions to ensure both data security and data privacy.

Migros' focus on digitalization and innovation enables it to:

- Improve its online shopping channels so that customers can shop more easily and quickly,
- Expand the retailing ecosystem it gives its customers access to through new initiatives and subsidiaries informed by its existing operations,
- Support entrepreneurial ecosystem through the Migros Up program,
- Enhance and simplify the customer shopping experience through customer-centric innovation,
- Increase operational efficiency by using resources more effectively.

Opened in 1997, Migros Sanal Market was Türkiye's first online grocery shopping website. Consistent with its strategy of pursuing multichannel growth, ever since then the company has been increasing the number and capabilities of its online channels in line with customers' needs and expectations. **Migros Sanal Market, Migros Hemen, Migros Ekstra, Macroonline,** and **Tazedirekt** brands were merged under Dijital Platform Gıda Hizmetleri A.Ş. ("**Migros One**"), a subsidiary of Migros, in 2021. Migros One's operations were further expanded with the addition of **Migros Yemek** in 2022 and online channel of Mion in 2023. Migros One Kitchen, which provides production and supply services for various Migros kitchen brands, was also launched under the Migros One umbrella. These consolidations have also transformed Migros Mobil into a single super app that provides seamless access to all of the company's online shopping channels. All these channels can also be accessed directly through the www.migros.com.tr website. Migros is aiming to triple its online operations over the next 3 years.

Through Migros Yemek, customers can order food from a variety of local and chain restaurants as well as a range of Migros kitchen offerings produced in Migros One Kitchen facilities. The latter are also available through other food ordering and delivery platforms.

Migros partnered with BlindLook to integrate its voice simulation technology into its websites and mobile app to make them more accessible and user-friendly for the visually impaired.





DIGITALIZATION & INNOVATIVE PRACTICES



Migros Sanal Market

Migros' online grocery shopping platform Migros Sanal Market has been in operation since its launch in 1997. Today it offers over 20,000 items, is served by 958 Migros stores in all 81 of Türkiye's provinces. Migros' 45-minute delivery option has been expanded to 197 stores in 43 provinces. To meet customers' evolving needs, Migros Sanal Market also a "Click & Collect" service that allows customers to conveniently pick up their online orders from any store where this service is available. To enhance service quality, dedicated mini-warehouses have been created to serve online shopping operations at some strategically-located stores. Harnessing the power of digitalization and innovation to reduce the carbon footprint of its logistical operations, Migros increases the number of electric vehicles and bikes used to make deliveries. The company's delivery fleet in 2023 included 11 electric vehicles and 60 electric bikes.

Migros Hemen

Migros Hemen was launched in 2019 to meet customers' growing expectations of fast delivery in online shopping and to enhance the company's competitiveness. Robotic automation technologies are used to pick and fill orders placed through Migros Hemen. In 2023 the number of Migros stores serving Migros Hemen reached 528. The Migros Hemen app gives users access to over 2,500 items at the same prices and quality as they would find at Migros stores together with a low minimum-order requirement, affordable delivery charges, and rapid delivery times often measured in minutes.

Migros Ekstra

Migros Ekstra began serving all 81 provinces of Türkiye in 2021, providing guaranteed same-day delivery in designated areas. The number of provinces to which more than 7,000 items can be delivered the same day reached 12 in 2023. Migros Ekstra gives online shoppers quick and convenient access to what they are looking for across a broad selection of **non-food offerings** ranging from electronics and toys to accessories and kitchenware.

Macroonline

Macroonline was launched in 2018 with a focus on providing a choice selection of Macrocenter specialties at the same superior level of Macrocenter quality. Macroonline today offers over 10 thousand items and serves 9 provinces through 87 Macrocenter stores. Macroonline serves customers through the Migros Mobil app as well as through the www.macrocenter.com.tr and www.migros.com.tr websites.



OPERATING SINCE 1997,
MIGROS SANAL MARKET
OFFERS OVER 20,000 ITEMS
AND IS SERVED BY 958 MIGROS
STORES IN ALL 81 PROVINCES.



DIGITALIZATION & INNOVATIVE PRACTICES

Tazedirekt

Giving shoppers the assurance of complete transparency about the origins of what they are buying, Tazedirekt supplies its customers with fresh fruits and vegetables sourced from 70 carefully selected and regularly inspected organic farms all across Türkiye. Tazedirekt serves 5 provinces with a range of 3,500 fresh produce items that are accessible through the Migros Mobil app as well as through the www.tazedirekt.com and www.migros.com.tr websites.

Migros Suppliers Academy manages a catalog of free online training resources for Migros suppliers on issues such as food safety and ethical and social compliance. 37 Tazedirekt suppliers benefited from these resources in 2023. 7 of the 11 women's cooperatives from which Tazedirekt sourced its produce in 2023 were new additions to its network of suppliers.

Tazedirekt conducts podcasts featuring conversations with its producers and leading names in the world of gastronomy. Since 2022, Tazedirekt has hosted 44 podcast episodes dealing with topics such as food, organic farming, local production, ecological production, and gastronomy trends.

Mion

Migros' personal care store format Mion launched in early 2023 and by the end of the year it was serving customers through 70 stores in 22 provinces. Mion's accessibility was given an additional boost in August when its inclusion in the Migros Mobil app gave it the ability to sell a range of more than 8,000 personal care offerings online.

Migros Yemek

Launched in 2022 and serving only İstanbul, Ankara, and İzmir at the outset, Migros Yemek expanded its service footprint to 81 provinces in 2023. In 2024, Migros Yemek will continue to grow by further enhancing its speed and delivery quality and its lineup of menu options with the addition of more chain and independent restaurants. Migros Yemek's online orders are expected to reach Migros' current level of grocery shopping orders within three years.

Migros One Kitchen

Launched in 2021, Migros One Kitchen sets up kitchens in central locations to create diverse menus catering to various target audiences. These kitchens prepare and supply food for private label brands. With a network of over 40 cloud kitchens, Migros One Kitchen serves as a production hub for nearly 20 different brands, offering a wide array of culinary creations across categories like burgers, salads, appetizers, pizza, desserts, and coffee. In these cloud kitchens, a variety of food and beverage options are prepared to the highest standards of hygiene and Migros quality, all offered at affordable prices. A new hybrid concept introduced for the first time at the Ataşehir MMM Migros allows customers to interact directly with Migros One Kitchen.

Migros Toptan

Migros' wholesale service channel, Migros Toptan reliably delivers nearly 1,600 items in fresh condition and safely to customers in 13 cities through Migros Toptan mobile app, which offers a same-day delivery option. In 2023 customers were given the ability to place their orders through the toptan.migros.com.tr website as well.

LAUNCHED IN 2022 AND WAS SERVING ONLY IN İSTANBUL, ANKARA, AND İZMİR AT THE OUTSET, MİGROS YEMEK EXPANDED ITS SERVICE FOOTPRINT TO 81 PROVINCES IN 2023.





DIGITALIZATION & INNOVATIVE PRACTICES

MoneyPay

Migros' subsidiary MoneyPay Ödeme ve Elektronik Para Hizmetleri A.Ş. offers a comprehensive range of financial products and services designed to meet the needs of both retail and business customers. Customers can make card or QR payments at any location using the balances they transfer to their Mastercard-based prepaid digital or physical MoneyPay card. They can also make payments via Wallet/QR using credit/debit cards that they have defined using the MoneyPay mobile app. MoneyPay users can take advantage of MoneyPay's 'Buy Now, Pay Later' option, offered in partnership with various financial institutions and banks, to defer payments for up to 30 days. Besides having a "Put it on my Turkcell bill" option, customers can also finance electronics they purchase at Migros stores through instalment plans offered by participating banks. The MoneyPay app's many features include wire-transfer and EFT options, the ability to send money 24/7 to anyone with a mobile phone free of charge simply by entering the phone number and the amount, and the convenience of withdrawing cash from ATMs and at all Migros checkout counters.

In addition to being accepted in Migros stores, MoneyPay also offers a range of payment options and promotions available through the **MoneyPay Wallet** to pay for online purchases made through Migros Sanal Market, Migros Hemen, Migros Yemek, Migros Extra, Macroonline, Tazedirekt, and Mion. In the B2B sector, MoneyPay serves as a single-source provider capable of addressing companies' diverse needs. Through

MoneyPay Pro, it offers corporate gift cards for employees, while **MoneyPay Business** provides solutions for various fringe benefit payments such as meals, transportation, clothing, fuel, and invoiced expenditures. MoneyPay is expanding its offerings with MoneyPay Sanal POS, a new virtual-POS product designed to provide businesses with secure and convenient e-commerce payment processing solutions.

Mimeda

Mimeda Medya Platform A.Ş., Türkiye's first retail media company, aims to supply retailers with shopping experience-enhancing precisely-targeted advertising for their customers. This is achieved by integrating retailers' sales data across their physical and online channels. In operation since 2021, Mimeda is also working with 12 retail partners outside the Migros Group at present.

Chairing the Interactive Advertising Bureau (IAB) Türkiye Retail Media Committee in 2023, Mimeda contribute to the development and publication of the industry's first guidebook as a member of IAB USA retail media working groups. Last year the company also conducted **3,718 projects and campaigns for 350 brands**. Mlink, a self-service retail media advertising technology, has been used by over 150 brands in 1,000 campaigns. Mimeda aims to increase the number of brands it serves to 750 in 2024. In 2023, Mimeda received a **Brandverse** award for its 360-degree programmatic outdoor project for Pepsi and a Smarties award for its digital campaign for Magnum. The Smarties award was in the **Innovative & New Tech Sales Channels** category.

Migen Enerji

Migen Enerji ve Elektrikli Araç Şarj Hizmetleri A.Ş. was set up in 2022 to provide electric vehicle (EV) charging services and contribute to the country's transitioning to electrical-powered vehicles. Migen Enerji's charging stations installed at Migros store locations provide customers with quick and reliable recharging capabilities. In 2023 Migen Enerji began branding itself as "**MIGGO**". The company currently has 55 charging stations at 50 store locations in 19 provinces; it plans to increase the number in 2024.

Paket Taxi

Migros' subsidiary Paket Taxi (Paket Lojistik ve Teknoloji A.Ş.) provides parcel delivery services for online orders. In 2023 the company expanded its service footprint to all 81 provinces. The company added to its fleet in 2023 and is currently exploring and investing in new, more productive delivery models with the aim of increasing the number of electric vehicles in it.



MİGROS' SUBSIDIARY PAKET TAXİ PROVIDES DELIVERY SERVICES FOR ONLINE VENDORS. THE COMPANY EXPANDED ITS SERVICE FOOTPRINT TO 81 PROVINCES IN 2023.



DIGITALIZATION & INNOVATIVE PRACTICES

GurmePack (CRC Danışmanlık ve Organizasyon A.Ş.)

The Migros Group controls a 50% stake (30% Migros, 20% Migros' subsidiary Dijital Platform Gıda Hiz. A.Ş.) in Gurmepack, a company with experience in the hygienic preparation and delivery of nutritious, appetizing prepackaged meals made from wholesome, natural ingredients. Gurmepack's menu includes a range of vegan, vegetarian, and gluten-free offerings suitable for people with diverse nutritional and dietary needs and expectations.

Entrepreneurial Ecosystem

Migros Up

The Migros Up program brings Migros specialists and startups together providing them with opportunities to trial and develop new business models in the real world with the goal of driving next-generation innovation and creating value for Türkiye's entrepreneurial ecosystem with the slogan 'New Way to Innovate'. Two calls for submissions that were announced in 2023 solicited 218 applications; new innovation projects were initiated with two startups, bringing the total number undertaken through Migros Up to 12.



Project highlights:

- **KolajeM** is a collagen-production project being developed with Bugamed Biyoteknoloji A.Ş. At Migros' integrated meat processing plant, MiGET, pre-separated and commercially useless tendons are processed at advanced level in Bugamed laboratories and are transformed into raw materials to be used in the cosmetics industry. Collagen skin cream and collagen skin serum were produced from these collagens under the brand Voop, which are sold only in Migros stores. The KolajeM project took **first place** in the "New Products & Services" category in the **9th Anadolu Holding Bi-Fikir Competition**.
- **Dryers** is a project being carried out with startup Amanos to develop fruit and vegetable dehydrators suitable for use in stores. These machines will be used to dehydrate fresh-produce stock that is past its prime for use in other applications instead of being discarded. The machines' energy-efficiency is given an additional boost by harvesting dehydration process heat. The first machines were manufactured in 2023; one has been installed at the Ataşehir MMM Migros.
- **Wamo** is an electric scooter developed in partnership with **Hergele Mobility** for use in order-picking operations at Migros' distribution centers. These scooters increase overall operational process efficiency by up to 70% by

reducing the distances that order-pickers need to walk by 96%.

- **ETTA** is an energy-consumption prediction algorithm developed in partnership with startup ServisSoft. This algorithm powers AI-based systems that take real-time data harvested from stores' energy-management systems to predict how much energy will be needed and when. In 2023 such systems were in use in 190 Migros stores, where they are expected to reduce energy consumption by 3.5% in 2024. This project **received the "Best Use of Technology" award at the Turkish Retailers Association's 10th Retailing Technology Conference**.
- **Clean Up** is the name of a system developed in partnership with startup **ERG Controls**. The system uses IoT and computer vision technology to track compliance with hygiene rules by charcuterie and meat counter employees. The system was in operation in 6 stores in 2023.

In 2023 Migros and its global partners the **UN Food & Agriculture Organization (FAO)** and the **European Bank for Reconstruction and Development (EBRD)** organized a **Global Agrifood Hackathon** to which participants were invited to propose project ideas and initiatives capable of answering the question "How can farmers make more effective use of technology in their everyday lives?" Project submissions were received from teams from Egypt, Lebanon, Kenya, Türkiye, and the USA, of which eight were accepted to continue on to the workshop stage. The results of the Global Agrifood Hackathon held for the 2022 FAO Global Summit were assessed during the 2023 summit and the winning initiatives were three Turkish companies **Algdeha**, **Görsentam**, **FreshSens**.



**MİGROS GROUP
ACQUIRED 50% STAKE IN
GURMEPACK, A COMPANY
WITH EXPERIENCE IN THE
HYGIENIC PREPARATION
AND DELIVERY OF
NUTRITIOUS, APPETIZING
PREPACKAGED
MEALS MADE FROM
WHOLESOME, NATURAL
INGREDIENTS.**



DIGITALIZATION & INNOVATIVE PRACTICES

Customer-Focused Innovation

24/7 Self-Service Markets

Migros pioneered the self-service all-vending machine market format in Türkiye. The company currently has three of them in different locations in İstanbul offering customers quick, convenient, uninterrupted 24/7 access to nearly 200 products that include hot beverages and food. Self-service vending machines installed at 21 Migros stores in 6 provinces provide customers with round-the-clock service even when the stores themselves are closed.

MkolayKantin

MKolay Kantin delivers a self-service/mobile-shopping experience in workplaces, offices, and plazas. Customers pick items they want and put them in their basket or cart after scanning them. Upon scanning, item payments are automatically charged to their predefined bank or credit card or deducted from their MoneyPay account, after which customers can leave without having to do anything else.

MGO DELIVERS A SELF-SERVICE SHOPPING EXPERIENCE IN WORKPLACES, OFFICES, AND PLAZAS. PAYMENTS FOR ITEMS TAKEN OFF MGO SHELVES ARE AUTOMATICALLY CHARGED TO CUSTOMERS' PREDEFINED BANK OR CREDIT CARDS.

MGo

MGo is another Migros format that delivers a self-service shopping experience in workplaces, offices, and plazas. In the MGo format, payments for items that customers take off a shelf are automatically charged to their predefined bank or credit card. AI-assisted cameras and sensors incorporated into intelligent shelves ensure that customers are properly charged for the items they choose. MGo vending machines installed in office buildings deliver a 24/7 uninterrupted cash-free shopping experience by automatically charging users' predefined cards.

Migros Deniz Market

Migros Deniz Market (Sea Store) is a seagoing vessel that tours islands in the Aegean Sea and covers inaccessible by road, selling more than 3,500 items ranging from fresh produce, meat, and charcuterie to fresh bread and ice. Its "Floating Cloud Kitchen" also delivers freshly-cooked hot meals.





DIGITALIZATION & INNOVATIVE PRACTICES

Business Process Efficiency Enhancement

AI-Powered Systems and Projects

Shelf & Aisle Product Recognition project is an AI-powered image processing system. It has been developed improves operational efficiency by detecting misplaced items on shelves and counters or in aisles as well as goods that are in stock but not on display. These systems are currently in operation in five of Migros' stores.

The Fresh-Produce Image Processing project uses AI-powered image processing to track and forecast items that are out of stock or nearly out of stock, thereby ensuring that customers can always find whatever they are looking for and never encounter an out-of-stock situation. These systems are currently installed in 50 of Migros' stores. The project is selected as one of the top 3 success stories in Microsoft MEA.

The AI-powered Fraud Detection project uses AI-powered image processing to detect deliberate fraud and unintentional errors in payment and

receipt processes in stores. This system improves operational efficiency by eliminating the need for manual checks of customers' receipts and invoices.

Robotic Process Automation (RPA)

The Robotic Process Automation project was initiated to automate routine, repetitive, high-priority, and high-volume tasks using RPA to improve operational efficiency, save time, and reduce errors by making it unnecessary for employees to do them. As of end-2023, over a hundred business processes had been converted to RPA and were saving 912 hours of employee time a month.

R10 Payment Systems Platform

The R10 Payment Systems Platform is a project to transform payment-system infrastructure by deploying a multi-channel software architecture. As this project entails examination and analysis of all payment systems, it is being carried out jointly by Migros' IT, Finance, and Sales & Marketing departments. Currently all e-commerce, vending-machine, and Mkolay (MGo) sales have been transferred to a central R10 payment system that eliminates the need for checkout counters. Cash registers in 4 Makrokiost stores and at 2 Migros store express checkouts have also been converted.

TARO Robot-Supported Product Assistant

TARO is a robotic-assisted product picker developed to improve the speed and efficiency of product picking in online sales operations by integrating innovation and technology into how the company conducts its business. TARO

is a user-friendly robot that can handle up to three orders simultaneously and accurately put together online customers' orders five times more quickly. In 2023 TARO was being used at 58 stores in 18 provinces to fill Migros Sanal Market orders and at 51 stores in 10 provinces to fill Migros Hemen orders. The system is also use to fill Tazedirekt and Mion online orders.



TARO IS A ROBOTIC ASSISTANT THAT IMPROVES SPEED AND EFFICIENCY OF ORDER-FILLING IN ONLINE SALES OPERATIONS BY ALLOWING EMPLOYEES TO HANDLE UP TO THREE ORDERS SIMULTANEOUSLY AND ACCURATELY PUT TOGETHER ONLINE CUSTOMERS' ORDERS FIVE TIMES MORE QUICKLY THAN WITHOUT IT.

