Innovations and digital solutions

Digital solutions and business innovations

Magnit is constantly searching for innovations and testing forward-thinking solutions to gain additional competitive advantages and create a positive shopping experience.

Focus areas of our approach to inovation

- Enhancing our production facilities
- Streamlining business processes
- Reducing environmental footprint
- Elevating customer service
- Strengthening our CVP

The Company's digital transformation relies on:

1. **A flexible, modular business architecture** that readily adapts to shifting market demands and customer needs
2. **State-of-the-art tools and technologies** that foster the creation of composable services to ensure flexibility and speed while minimising costs
3. **A product-centric approach** that helps find, test and scale creative solutions to emerging challenges

Central to Magnit's innovations is the incorporation of new digital solutions throughout our operational framework and business processes. Magnit has a robust digital transformation programme in place to craft an optimal CVP.

We are actively implementing technologies to enhance the speed of new product launches, streamline operational processes, conduct customer behaviour analytics, and boost employee engagement across the board.

Projects aimed at developing employee functionality

Back office

Following the departure of international companies that previously supplied retail outlet management tools, Magnit chose to prioritise the development of its own back office solution. This tool is being developed based on the Company's existing IT infrastructure with a primary focus on enhancing the experience of employees at retail locations.

Applications currently in development are designed to:

- simplify the key in-store business processes (labour saving);
- unify employee work tools through standardised interfaces;
- implement flexible document management (primary documentation, claim handling, cash collection procedures, etc.)

The development of this back office system reduces employee workloads through a holistic approach to simplification of processes connecting all employee tools: inventory control and inventory management systems, data collection terminals (DCTs), mobile printers, and other essential equipment.

EMM[1]

Magnit has developed its proprietary EMM system characterised by exceptional security, reliability and performance capabilities. The core objective of EMM is to establish optimal interoperability among mobile devices operating within the IT infrastructure that directly impact enterprise business processes. This technology enables remote management, customisation and updating of store tools.
The implementation of EMM technology significantly reduces equipment downtime and shortens device inventory processing time.

Structure of devices in the EMM system in 2024

208,748	Total
	Mobile devices
134,572	Corporate (DCTs, price checkers, smartphones, customer displays, TVs)
251	Personal (as part of the BYOD policy[2])
	Desktop devices
41,798	Price tag printers
33,127	Self-checkouts

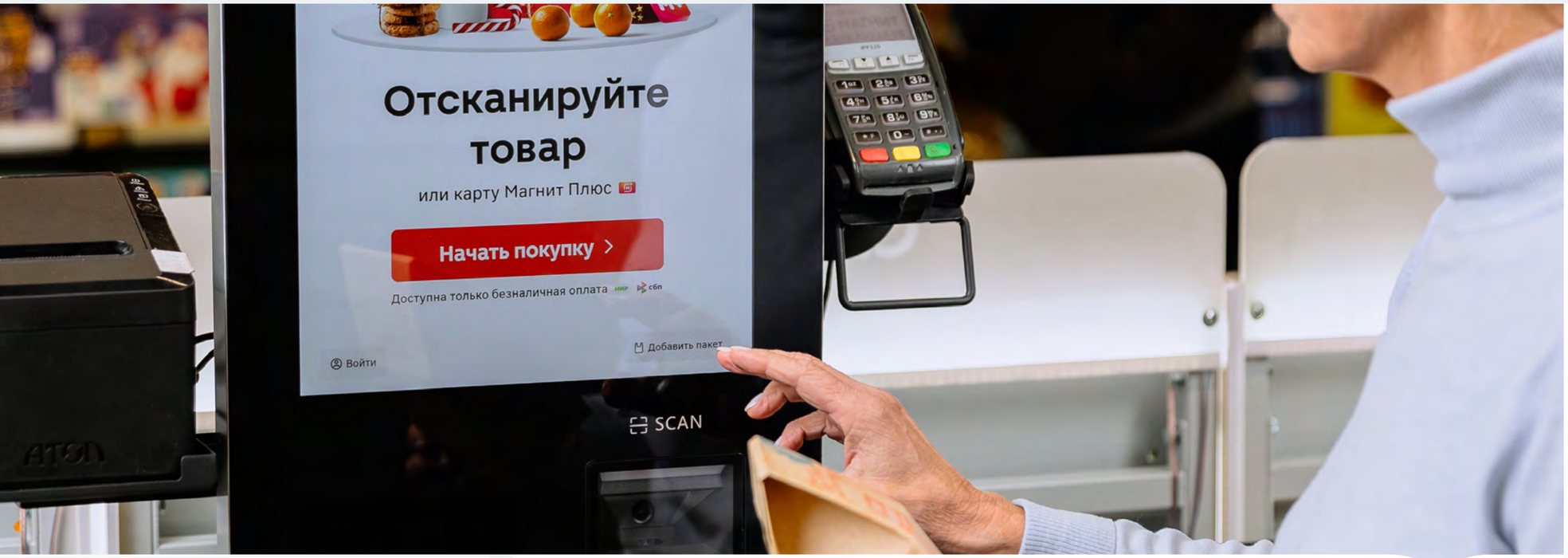
Enhancing shelf management with image recognition and OSA[3]

To enhance shelf management efficiency for our staff, Magnit, in collaboration with a Russian partner, is developing a shelf health technology based on image recognition (IR). This neural network-based solution identifies within less than a minute which products are missing from shelves, determines optimal restocking priorities, and flags outdated price tags requiring replacement. The app enables swift analytics into actual on-shelf availability of more than 20,000 SKUs. During the initial project stages, revenue growth reached 2.4% due to improved product display quality. The project is also aimed at increasing sales density by improving the efficiency of day-to-day shelf management: the application has modules for controlling planograms, working with non-displayed products, and checking the correctness of price tags. This technology is being scaled across our large-format stores, convenience and drogerie stores.

Since November 2024, a proprietary solution has been operational across Magnit's convenience stores to improve on-shelf availability using OSA signals. An advanced algorithm system sends daily alerts to the store for SKUs that are not available to customers. Employees receive and process signals that help maximise turnover in a particular store. To process the signals, a convenient interface was created in DCTs, which can both identify the issue and address it immediately. For example, instant printing of a price tag significantly reduces employee efforts.

Integration of the IR and OSA systems is planned for 2025 to achieve enhanced business outcomes.

1 EMM – Enterprise Mobility Management.
2 BYOD (bring your own device) is a policy that allows employees to use their own digital devices instead of Company-provided official equipment.
3 OSA (on-shelf availability) is a system for controlling product availability at different points of sale (shelf, refrigerator, checkout area).



Digital twins of operational processes

In 2024, the Company made consistent efforts to mitigate factors that burden its processes by digitising the actual workload for 1,500 operations performed by employees on a daily basis. The assessment covered all formats of the chain, creating digital twins for 184 processes. The obtained data enabled Magnit to identify drivers that allow managing the standard workload in dealing with routine tasks and introducing new processes.

QR-Link digital timekeeping technology

QR-Link's digital timekeeping technology delivers accurate and objective data on employees' actual working hours. The solution enhances transparency and clarity in salary and fringe benefit calculations. Additionally, the technology improves accounting quality and reduces administrative staff burden, in particular through comprehensive process automation. This tool was successfully implemented across all network formats in 2024. From 2025, we plan to extend QR-Link to track external employees (outsourcing, cleaning, merchandisers).

Projects aimed at developing customer service

Clever Lever smart scales with product recognition

Magnit has completed a project to equip large formats with a smart scale technology: customers can now utilise this service across all Magnit Extra and Magnit Family stores. The system can identify the entire assortment of goods sold by weight, which includes over 800 SKUs in categories such as fresh and frozen fruit and vegetables, sweets, ready-to-cook products, seafood, snacks, etc. The technology is used for products in transparent packaging (plastic or mesh bags). It boasts 98% recognition accuracy and is capable of self-learning by remembering the choices made by customers during weighing.

The Company has also launched a pilot programme for smart scales in Magnit convenience stores. Beyond reducing misidentification of items sold by weight, in the smaller format, this technology reduces cashier workload by cutting the time required to add weighted items to receipts by six seconds.

98%
product recognition accuracy of Clever Lever smart scales

BeautyScan cosmetics selection technology

Magnit, with the support of Sechenov First Moscow State Medical University, has developed and tested an unparalleled offline retail service called BeautyScan in the Magnit Cosmetic format. Through this service, customers can gain deeper insights about their skin and select products that best address their specific needs. The service employs advanced AI algorithms to analyse photographs and user responses. Customers receive a detailed portrait of their skin with problem areas clearly marked, alongside a personalised skin care regimen. Recommendations are based on products available in the Magnit Cosmetic range, including new arrivals and exclusive brands. The Company plans to expand this service to 2,500 stores, and to incorporate functionality for selecting decorative cosmetics and perfume into the system.

2,500 stores
planned rollout of BeautyScan

Electronic price tags and media shelves

The digitalisation of the price tag experience has provided store staff with enhanced flexibility in managing shelf marketing tools. This project has helped reduce labour costs and redistribute staff workload, whilst also increasing sales through the broadcast of dynamic advertising on media shelves. In 2024, the project was implemented across three network formats.

Complexity
- 99.9% price tag correctness
- Ecosystem with a unified management system
- Flexible template adjustments for standard and promotional offers, enabling targeted promotion and additional revenue generation for specific product groups
- Minimal staff workload requirements
- Implementation of beacon technology for efficient product location via electronic price tags
- Support functions: inventory management, e-commerce integration, order assembly, etc.

Key results

Speed
- Single price tag updates completed in under 10 seconds
- Dynamic pricing capabilities

Information security and personal data protection

Magnit's information security is based on a set of interrelated organisational and technical tools which comprise an integrated information security management and assurance system. Our comprehensive approach enables us to protect ourselves against modern information security threats, comply with Russian legal requirements, and prevent financial, reputational and other damage. The Company's information security system is designed and developed in line with global best practices.

Magnit has a formalised procedure for internal auditing, which falls within the remit of a dedicated department. We regularly assess information security risks and test our information systems on a quarterly basis.

Key focus areas of information security

Cyber security system

The Company has a set of systems and services to protect against cyberattacks, with solutions in place to identify and eliminate vulnerabilities in IT equipment, detect virus activity and zero-day attacks[1], as well as monitor and respond to security incidents. Magnit monitors the integrity of software architecture across all of its external IT services. The Company's IT team performs ongoing updates to network devices, servers and software, as well as routine scans of all external Company services for known vulnerabilities.

All of Magnit's web services are protected through tools designed to detect and block network attacks on web applications. We actively employ Anti-DDoS[2] solutions, and regularly scan open internet ports.

Due to the withdrawal of foreign vendors of security systems, in 2024, we tested and adopted domestic solutions for data-centric audit and protection (DCAP) and data access governance (DAG) systems. The Company also completed the replacement of its security information and event management (SIEM) and vulnerability management (VM) systems.

Anti-fraud

Magnit has established a transparent framework to monitor and respond to incidents related to loyalty programme bonus points. IT experts constantly analyse open-source intelligence (OSINT) to detect new attack vectors, implement and improve anti-fraud equipment for blocking illegitimate debits and bonus point accruals, build processes for analysing the Company's projects under development and implementation for minimising the risks of attacks, etc.

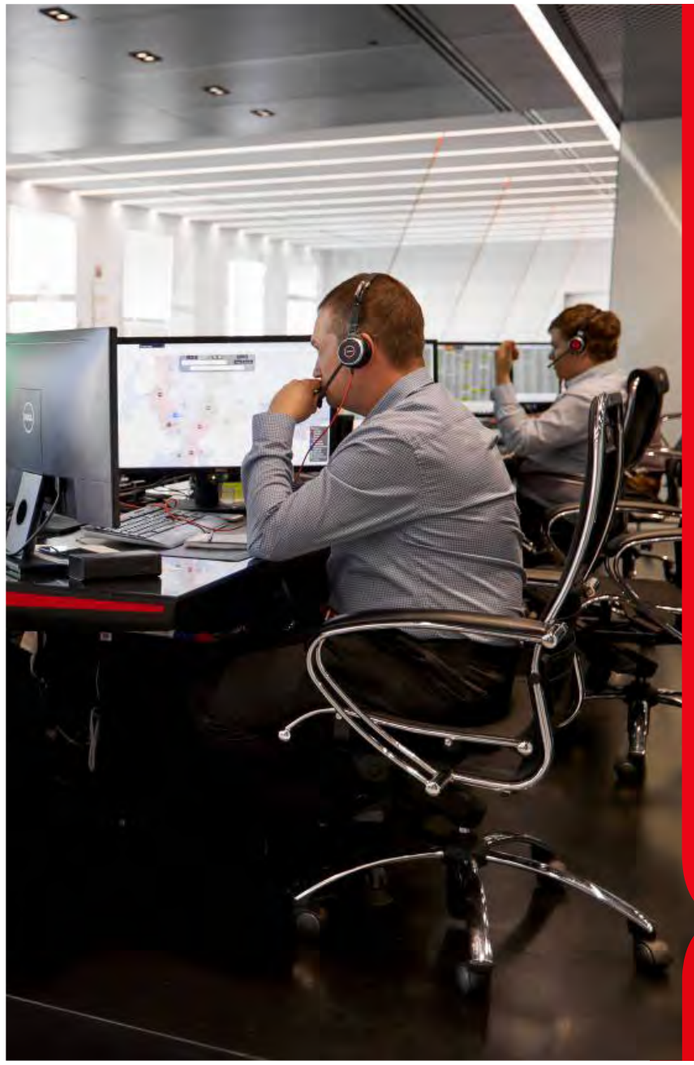
Development of IT security competencies

One of our information security priorities is to make employees more aware of cyber security rules. In 2024, we maintained our focus on developing practical skills for navigating the digital environment safely. Employees receive interactive training and are subjected to simulated phishing attacks to build practical skills. The use of gamification promotes employee engagement in the learning process.

Work from home

During 2024, we piloted a domestic remote access system across select Company branches. Working together with the manufacturer, we have developed an enhancement plan and aim to implement the refined system in 2025.

1 Zero-day – an exposed software vulnerability or malware with no identified means of containment.
2 Anti-DDoS is a tool of protection against DDoS attacks, which aim to disrupt the computer system through a constant stream of requests.



Protection of personal data

We have a systematic approach to protecting the personal data of all stakeholders and continuously monitor all existing and planned information systems. The Company makes consistent efforts to raise awareness of employees in information security and personal data protection, with training materials, videos and information security courses now developed and available. Magnit also approved corporate regulations and instructions on personal data processing and protection.

Employees of the IT Department working with user data are duly trained on a regular basis. The Company has automated the collection of consents to personal data processing.

We maintain a log of security incidents in information systems for processing personal data and inquiries regarding their processing and storage.

In addition, internal and external audits assess risks, analyse processed data, and develop and update a threat model for information systems and technical solutions to eliminate such threats.

Plans for 2025

In 2025, we will continue to develop our information security systems to prevent new threats, including further automating of processes, implementing import substitution of information security tools, standardising processes and approaches in our development teams, and developing DevSecOps processes[3].

3 DevSecOps (development, security and operations) is a modern development practice that enables organisations to rapidly build and release secure applications.