DIGITAL SOLUTIONS FOR CORPORATE CUSTOMERS

Amidst the digitalization of all sectors of the economy and digital transformation of businesses, government and society, MTS offers a wide range of digital products and services that contribute to improving the quality of life for people and driving business growth for our corporate customers.

In 2019, the Company merged three digital areas — cloud services, IoT and system integration — into a single business vertical, Cloud and Digital Solutions. Our capabilities in digital product development, coupled with customer feedback on the products we launch, enable us to continuously expand our product portfolio of in-demand digital solutions for B2B and B2G. These solutions help our customers transition to a digital company model, drive efficiency and revenue.

Hybrid cloud

In October 2019, the #CloudMTS provider launched services for creating private and hybrid clouds based on the Avantage data center. Hybrid cloud involves simultaneous use of both private and public cloud. In private cloud projects, companies use dedicated IT equipment that runs an individual cloud for each of them. Banks can use private clouds to lower their IT spend while ensuring compliance in terms of bank secrecy and personal data rules, while retailers can turn to hybrid cloud to ensure they have enough capacity to process all orders received at peak times such as sale periods.
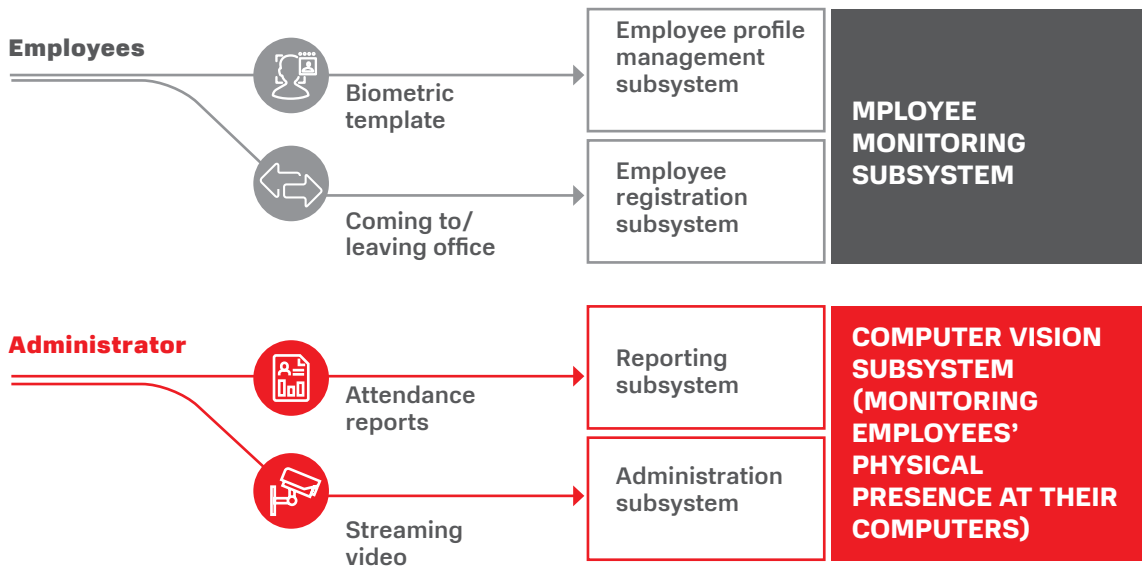
OUR
ACHIEVEMENTS

HOW WE MANAGE SUSTAINABLE
DEVELOPMENT ASPECTS

03 \ VALUES
WE CREATE

Employee time tracking

In 2019, NVision Group developed an IT system to automate office-based employee time tracking processes using biometric facial recognition.

The system rollout will reduce the labor intensity of work time reporting through time tracking automation and drive overall improvement of HR decisions.

\\System overview

Employees

Biometric template → **Employee profile management subsystem**

Coming to/ leaving office → **Employee registration subsystem**

MPLOYEE MONITORING SUBSYSTEM

Administrator

Attendance reports → **Reporting subsystem**

Streaming video → **Administration subsystem**

COMPUTER VISION SUBSYSTEM (MONITORING EMPLOYEES' PHYSICAL PRESENCE AT THEIR COMPUTERS)

The Big Data project

The Company has been actively developing its Big Data[1] project since 2015. Priority areas are telecom, fintech, media business, as well as digital business solutions. MTS successfully develops the bank scoring and geoanalytics service lines, with scale-up plans for these products. In 2019, the Company launched recommendation engines for MTS Cashback, MTS Library, etc., and introduced SpamBlackList and WhoCalls products to protect customers from unsolicited calls. A unique advantage of SpamBlackList and WhoCalls services is that they run on MTS's side, not on the user's device. The user

does not need to install any third-party applications or grant third parties access to their contact list.

As a part of our fintech business, the Big Data team has implemented a number of successful projects for MTS Bank. Currently, Big Data technologies are actively used in many business processes of the Bank, from risk assessment and anti-fraud models to smart promotion of banking products and generation of personalized offers for its customers.

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[1] Big Data technology.

Industrial automation

The Industrial Automation Center was established at MTS in 2019 to help Russia's industrial enterprises increase their efficiency. The center develops a comprehensive IoT solution to drive employee safety in manufacturing, mining and construction.

The product allows the user to build a "digital twin" of an employee in real time and track their movements and tasks performed, helping businesses improve labor efficiency.

E-procurement platforms

Continuing its focus on further business diversification, MTS was the first Russian telecoms operator to announce expansion into e-procurement platforms. At the moment, the MTS Auctions covers lots featuring real estate, IT and process equipment, rolled metal products, motor vehicles, household appliances, furniture, and other categories of items for sale. One of the main benefits of the service is that large telecommunications, financial, industrial and IT companies can sell items that are not used or are about to be written off.

Online cash registers for small businesses

In 2019, MTS continued to develop services for small and medium-sized enterprises (SMEs). In early 2019, the Company began to lease out online cash registers. This solution targets the small business owners who were required by the law to start using online cash registers by 1 July 2019. Leasing an online cash register allows small business owners to minimize the one-time costs of purchasing cash registers while also gaining access to an inventory accounting system and 24/7 technical support.

A marketplace
for individual entrepreneurs and the self-employed

In February 2020, MTS launched an online marketplace with IT products for micro-businesses and the self-employed. Customers of the marketplace can subscribe to useful IT services for their business without having to install any special software or third-party applications.

65
thousand

users in the MTS Kassa subscriber base

43.2
thousand

online cash registers sold in 2019

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Antivirus protection
of IT resources and corporate data in the public cloud

The solution was developed in a technology partnership with Kaspersky Lab and integrated into the virtual infrastructure of the MTS cloud. The Antivirus Protection of Virtual Machines service targets companies that choose cloud deployment of mission-critical corporate systems

and applications, such as online store websites, databases or accounting systems. The service will also be relevant for customers handling citizens' personal data and required to comply with the data privacy laws.

A cloud service
to protect personal health-related data processed by healthcare institutions

The MTS solution can help customers ensure compliance with Russian laws and optimize personal data storage and processing IT infrastructure costs. The service enables cloud deployment of IT systems that collect and process personal data of customers of outpatient and dental clinics, as well as diagnostic, fitness, and wellness centers. The service relies

on a dedicated #CloudMTS segment certified to comply with the Federal Service for Technical and Export Control (FSTEC) requirements and fully complies with the requirements of Federal Law No. 152-FZ dated July 27, 2006 On Personal Data and respective legislative enactments.

IoT in Belarus

In 2019, MTS's subsidiary in Belarus (MTS JLLC) launched a range of initiatives to roll out the IoT technology. These included pilots in the utility sector to create products for remote collection and feeding of electricity meter readings in apartment blocks and single dwelling units, as well as for monitoring municipal waste removal. The Smart Cow Collar pilot was also implemented with NB-IoT enabled collars monitoring the physical activity of cows.

In 2019, the Company launched the Internet of Things tariff plan for smart devices in urban infrastructure, agriculture, utilities, as well as for monitoring systems and industrial devices.

Digital solutions for business
in Belarus

The Company developed functionality for a solution offering electronic signature on a SIM card. The technology, called MTS ID, is available in the personal account of retail customers and individual entrepreneurs with the Ministry of Taxes and Duties of the Republic of Belarus, as well as on the Social Security Fund portal and in the electronic document and packing slip exchange service.

The MTS Communicator solution was also launched, offering a secure, stable and cost-efficient platform for reliable and timely text messaging through SMS and Viber.