Breakthrough IT-developments of Sberbank

Technology innovations and application of breakthrough technologies are becoming necessary factors for successful development of a modern bank. Sberbank follows global trends and implements solutions to satisfy the growing needs of its clients.

The changing IT landscape of Sberbank will be based on a technology platform, which will act as an environment ensuring the functioning of the business and allowing ecosystem participants to interact and create value. The technology platform will include infrastructure, data and means for its processing and analysis, applications, development tools, and APIs.

Sberbank actively applies the latest technologies to create innovative services. In particular, methods for working with Big Data have been used in the development of an all-purpose chat platform for Telegram and Facebook messengers. A pilot system of biometric identification based on retinal scanning for self-service terminals has been tested. When launching the project "Biometrics-based payment in the trade network Azbuka Vkusa", closed testing for Sberbank employees by fingerprints was performed. A pilot project for the development of a mathematical model of cash collection and cash on hand management in the self-service terminals of Sberbank was implemented. It is meant to reduce the downtime of terminals and to save on the optimization of cash funds stored.

The Program for the Automation of Risk Management Systems in the Financial Markets, which was started 4.5 years ago, was finished successfully. Systems were created to control market and credit risk limits and to establish limits for financial institutions. Systems for monitoring the arm's-length-principle and independent verification of prices were introduced. The uniqueness of this IT program for Russia is that there has been no positive experience of solving such problems until now. A total of about 360 mln rubles was saved by creating the risk infrastructure.

Sberbank introduced an automated monitoring system for credit applications to identify fraudulent actions of its corporate clients. The system processes big data scopes in memory, which makes it possible to perform real-time verifications.

Sberbank has automated its underwriting quality control system. Creation of risk analysis tools, which is planned before the end of 2017, will make it possible to improve credit portfolio quality and to support a high level of expert review.

A pilot project for deployment of an international card processing center has been completed successfully. Its first client was BPS-Sberbank in the Republic of Belarus.

Sberbank introduced a system that automates collection of past-due debt at the stage of late collection, inter alia, using the collector's mobile application.

Sberbank offered its clients an "Investor's Personal Account" to let them view their balances on brokerage accounts, financial leverage, register of transactions, and information on the deposit/withdrawal of cash and on securities flow between the client's accounts.

The database of the "Mobile Bank" text service was carried over to a new high-efficiency resource to bear the daily load of 18 mln incoming messages from clients.

A prototype of the portal for Sberbank's external partners was created, a service with an open interface (API) was published, and an API lifecycle management tool was deployed to connect Sberbank Messenger partners and to publish the API of corporate services and attract new partners.

A new channel for processing multimedia messages "Text Chat" was created in the contact center to reduce expenses on telephone traffic and to slow down the growth of load on operators.

Sberbank implemented a "direct settlements" technology, which made it possible to make real-time payments in Sberbank's payment system. Thus, the time for payment between Sberbank clients was reduced from 45 to 6 minutes.

Sberbank introduced a simplified structure of processing corporate clients' requests, as a result of which up to 50% of financial claims are settled within one day, and self-cash collection requests are resolved within an hour. The maximum time for processing corporate clients' requests does not exceed two days.

A data quality management policy was created, and a unique training program for the Russian market on data handling was developed and first completed by 80 top managers of Sberbank.

A new data monetization business appeared in Sberbank. A basic portfolio of Sberbank products was formed based on aggregated data. The first transactions were made with external clients for products for building a model of the propensity to buy and client base segmentation for targeted campaigns.

The Open Data portal was launched, a unique information product based on Big Data technologies that provides aggregated data on the economic activity of the population and business.

Sberbank created the innovation laboratories where the mean time of the development of an innovative product prototype does not currently exceed five months. Among the innovative initiatives tested or implemented by Sberbank, we can name the following:
- Tracking and management of powers of attorney, electronic real estate mortgage bonds, money transfers, and accounting of factoring transactions based on blockchain technology
- Building an electronic document-flow system based on blockchain technology together with the Federal Antimonopoly Service
- Automated scheduling of employees' work in the customer service offices
- Using Platform as a Service (PaaS) technology and implementing a new product with the minimum valuable performance for the client (MVP), which will reduce the time to market of new products of Sberbank

- Using the technology of automatic communication with clients in text-service channels (messengers and texting), creating intelligent digital assistants to resolve clients' problems and an all-purpose platform for chat bots
- Creating a new-generation mobile banking application based on messenger technology; creating an ecosystem of client communication, ordinary channels for communications and management of accounts, cash funds and transfers; studying the marketplaces for partners, and providing additional services to clients
- Studying the demand for services that are based on provision of real APIs of Sberbank for the development of applications by external developers; the purpose is to create a community that uses the Sberbank platform for the development of external products
- Developing a corporate file storage where Sberbank will be able to keep all its working documents in its cloud-based environment and provide access to them from workstations and mobile devices to all its employees while complying with security requirements

The project "Creation of a Monitoring System for Deviations in Calculations" (Program PPRB 18+) won the category "Best Industrial Solution" in the contest "Project of the Year" held by the community of IT directors Global CIO.

For its work over the last years, experience in the field of innovations, and crowd-sourcing activities, Sberbank was ranked second at the international Berkley-Haas Open Innovation Awards-2016 in the category "Business Model Transformation."

Among the key plans of technology landscape development for 2017, Sberbank scheduled implementation of all basic technology services of the IT platform and business services for private clients, development of an Open API ecosystem of technology partnership, implementation of artificial intelligence and machine learning algorithms for Sberbank tasks, and connection of at least two businesses of the ecosystem.