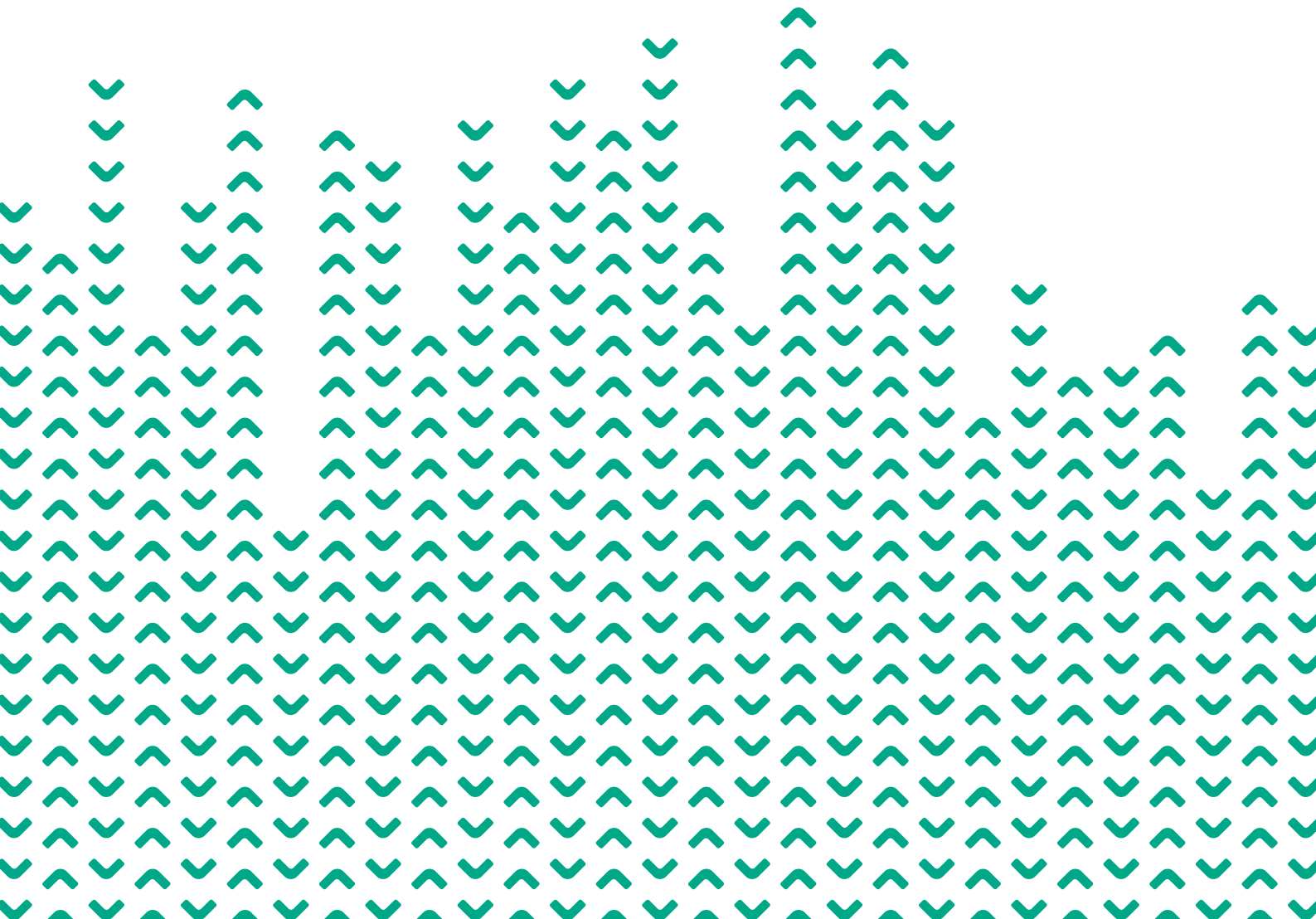





OUTSYSTEMS LOW-CODE DEVELOPMENT

Real-life case study about
Improving Banking Apps





MOBILE APPLICATIONS FOR OVERDRAFT MANAGEMENT AND P2P PAYMENTS

Retail bank received numerous complaints from its customers about the performance of existing applications. RND Point has already delivered his previous projects to the bank. Therefore the bank management invited us to rebuild the applications.

Project Essence

Our experts migrated the functionality and developed new features using OutSystems low-code platform for two the Bank's* apps - P2P Money Transfer* and Installment Credit Card*. With OutSystems functionality, RND Point's specialists achieved the following:

- Optimization of *P2P Money Transfer* and *Installment Credit Card* applications.
- Significant improvement of the applications performance.
- Applications security enhancement.
- Scalable Administrator panel development.
- Optimization of database operations.

These weren't standalone projects, but rather a Proof of concept for using OutSystems further within the bank.

* Name changed due to the NDA agreement.



PROJECT BACKGROUND

As RND Point was known by the Bank's management team as a banking applications development company. They asked us to improve the performance of the bank's applications and develop additional functionalities, demanded by their customer. Our experts suggested optimizing applications performance through the OutSystems platform.

With our support and consultations the development department of the Bank has thoroughly investigated how the OutSystems platform works. To be sure that the development process was moving in the right direction, we suggested to develop a PoC (Proof of Concept) and, within it, migrate some functionality of the existing Bank application *P2P Money Transfer* to OutSystems.

Following the successful implementation of the PoC on this project, we continued the development of more complex features on the OutSystems platform. Moreover, the Bank entrusted us to develop the functionality on OutSystems for the *Installment Credit Card* product also.



P2P MONEY TRANSFER APP: MOVING TO THE OUTSYSTEMS LOW-CODE PLATFORM

Challenge

P2P Money Transfer is a messenger that enables quick money transfers between payment cards, payment requests, and bill-splitting between users.

The major challenges were the slow component loading, security issues, and the lack of user-friendly UI/UX design. Together with the Bank's specialists, we decided to migrate a part of the application functionality to the OutSystems platform for Android and iOS operating systems. The main performance requirement was to ensure quick response to all transactions carried out by users.

The main business goal of the project was to increase the number of users and their loyalty with the opportunity of money transfer anytime and anywhere. The application had to be an additional channel of business communication with the clients of the Bank.

Solution

Before the project started, our specialists worked closely with the Bank to figure out the way we can solve emerging issues, and the functional requirements identification to be implemented.

Within the PoC, the designer created a new UI and UX design for the application in close cooperation with the marketing department of the Bank. Based on these layouts, our experts subsequently implemented the required functionality with the OutSystems platform.

After the PoC was ready, we organized a demo with the Bank's management. The PoC was accepted: the application performance was significantly improved, UI/UX design met the requirements. After that, we extended the list of functional requirements and continued the application development with OutSystems platform.

Security requirements

High demands on data safety requirements were assigned to the *P2P Money Transfer* application. The wide functionality of the OutSystems platform enabled our specialists to:

- configure support for checking Jailbreak and Root,
- implement and correctly configure SSL-pinning,
- use the latest SDK versions (9.0) with improved security mechanisms, new API and support of new devices,
- use the AppTransportSecurity (ATS),
- implement encryption mechanisms for HTTP-connection traffic based on TLS protocol,
- configure two-factor authentication,
- use the KeyChain and KeyStore for critical data storage (login-password, credit card information, etc.),
- provide the full completion of the P2P Money Transfer app session and removal of all user data from the device,
- disable users' critical data recording to the device log; the OutSystems platform records only data of the platform's internal processes.

Admin Panel

The application administrator panel enables Bank employees to browse the information, resolve conflict issues for *P2P Money Transfer* users, make changes to required application data.



INSTALLMENT CREDIT CARD: SIGNIFICANT APP OPTIMIZATION WITH OUTSYSTEMS LOW-CODE DEVELOPMENT

Challenge

Due to our success in the *P2P Money Transfer* project, the Bank's management decided to continue cooperation with us and entrusted us to work on their product *Installment Credit Card*.

This is one of the most innovative products of the Bank which provides a "buy now, pay later" service. The card enables buying a wide range of goods on an installment basis at no extra costs.

Our specialists were assigned to improve the functionality of the website and mobile application using the OutSystems.

Solution

Our specialists refined the provided design mockups, built the website, integrated it with the product database. They also developed an administrative resource on the OutSystems platform.

One of the greatest challenges was the optimization of database operation.

Separate databases were applied for business users (companies providing installments on a product basis) and individual customers (users the *Installment Credit Card*), despite the fact that their information was largely the same. This has led the bank employees to carry out double the work: business users' data was previously entered into the first database, and subsequently transferred manually into the customers' database.

RND Point's specialists optimized the operation of databases and combined them. Bank employees need to enter the information just once.



The most crucial project task was **the optimization of accounting department operations**. The issue was that invoices were formed incorrectly and accountants always had to revise them. With database optimization, our specialists solved the issue of invoice formation, making it automatic and error free.

IMPACT

OutSystems performance appraisal. The Bank is pleased with the OutSystems implementation results and considers it the right choice for other Bank's systems deployment.

Continuation of the project. RND Point's specialists continue to be actively involved in further development of *P2P Money Transfer* and *Installment Credit Card* applications. At the same time, our consultants helped the Bank's development department to learn the features of the OutSystems platform in order to effectively make knowledge transfer.

RND Point's contribution to the *P2P Money Transfer* project. We have developed all the required application functionality on the OutSystems platform. Our experts have significantly enhanced application security through the refinement of the authentication and money transfer functionality.

Launch of *P2P Money Transfer*. The application has been launched. Currently, we are implementing new requirements on functionality, including integration with the Apple Wallet.

***Installment Credit Card* project progress.** Application development is ongoing. For the site and mobile application: development of the Partner's Personal Account, updating the rubricator. We will make integration with affiliate sites at item level. For the administrative side: the formation of financial and legal documentation, further database integration and restructuring.