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ROBOTISATION IN THE SALE OF BANKING PRODUCTS

Integrated business processes automation (In Eng. Robotic Process Automation, RPA) is one of the most effective tools for combined optimization of banks' operations with increased security and reliability of client service.

RPA represents a technology that uses software robots (or bots, as a «virtual employee») to automate repetitive tasks based on defined rules, data models. Robots simulate the interaction of a person (a bank client) with digital systems, while ensuring the accuracy and speed of various processes. The coronavirus pandemic has become a catalyst for digital options for the banking business.

The Robotic Process Automation in the global financial services market was valued at USD 340.95 million in 2020 and is projected to reach USD 4,883.41 million by 2030, growing at a CAGR of 30.9% from 2021 to 2030 year. The need to control operational costs, harmonize processes, focus on core competencies and hire skilled professionals is expected to drive the market in the coming years [6].

The daily activities of banks include a large number of different processes, which can be grouped according to the areas of interaction:

– between banks (opening and maintaining accounts, transactions on the money, currency and securities markets, bank transfers, requests, statements);

– between the bank and its clients (opening new accounts for clients, processing requests, client instructions and communication with consumers);

– between the bank and the staff (monitoring of staff productivity, calculation of remuneration, changes in the status of the employee);

– between the bank and state authorities (loan applications, reports, remittance of taxes and fees, notifications);

– between the bank and interested parties (rating agencies, mass media, communities.

This software has proven its worth to all organizations in various business areas. The combination of RPA and artificial intelligence (Artificial Intelligence – AI) is called CRPA (Cognitive Robotic Process Automation) or IPA (Intelligent Process Automation). Along with this, «intelligent automation of processes» creates problems regarding the protection of both the interests of consumers and the stability of the financial system [9].

To stay competitive, banks need to take their client experience to a qualitatively new level. Thanks to RPA, banks can optimize client relations:

– sending electronic messages and updating the client database reduces the time clients wait for feedback, reduce errors related to manual operations;

– automatically respond to standard requests from clients, send template messages about the status of the application or information about the product;

– consider loan approval applications, use scoring systems, remind borrowers about payments.

There are still many standard and routine tasks in clients' transactions with banks, and the employees who perform them are not inspired, but rather dissatisfied. Properly configured robotics technology allows not only reduces the frequency of mechanical errors that human can make, but also to overcome working time constraints. Robots work around the clock, which is very important for client satisfaction. Also, increased job satisfaction means greater staff loyalty and focusing their attention on service quality. On the other hand, robotization poses a threat to the least

skilled staff, as the bank cannot always offer more interesting, creative and highly-paid jobs to employees replaced by robots.

Table 1

Key benefits of RPA for banks

Advantage	Explanation
Increased efficiency and accuracy	Elimination of human errors in data entry, increasing the accuracy of instructions.
Cost savings	Reducing costs for personnel performing routine operations, increasing the level of job satisfaction.
Improved scalability	Adaptation to peak loads and acceleration of processes without compromising quality and safety.

Source: compiled by the authors based on [3].

The migration of an increasing number of clients to remote service channels requires uploading of documents and confirmation with an electronic signature. RPA helps in all these processes including client communication, document processing, identity verification, account updates. This technology supports client demand for self-service. Modern solutions from RPA providers already include intelligent document processing, which is useful for approving loan applications.

RPA client service bots can provide complex and contextual advice to clients: refer them to frequently asked questions or a full auto-assistant dialogue with the client using artificial intelligence, helping to provide more personalized services without additional operational costs.

The process of generating reports is significantly accelerated thanks to RPA tools, due to the fact that the collection and aggregation of information is automated without the risk of human errors. RPA systems can be implemented in analysis and decision making.

Practice has shown the usefulness of RPA for fraud detection, real-time monitoring. Integration with artificial intelligence allows to analyze huge volumes of data to detect irregularities.

RPA tools for financial regulatory compliance can help with data collection for reports, data management, authorization and overall cybersecurity.

RPA is a convenient tool for carrying out large volumes of repetitive tasks, including payment processing, reconciliations, communication with clients on the background of growing number of transactions.

Increasing regulatory standards in client identification within the framework of financial monitoring imposes significant operational costs on banks, increases responsibility for human errors. RPA tools with artificial intelligence can take some of this burden off. Client service expectations have increased, and RPA can help with all of these challenges by automating applications based on rule-based criteria with minimal human interaction and handling of client requests. RPA reduces human error, helps institutions comply with regulatory requirements, increases accuracy and speed of data processing, detects fraud, and educates clients. Since banks collect a lot of sensitive information, they are required to comply with rules that protect consumers and ensure the stability of the financial system. Ideally, RPA should be an organic component of a bank's business continuity plan.

Purchasing commercial RPA software remains the most popular way to implement RPA among the world's leading banks. In our opinion, banks should use the services of third-party experts immediately at the task setting stage to understand their own needs, regulatory requirements, scale of investments, implementation timelines, expected impact and technical capabilities of RPA based on industry best practices.

When choosing software, it is worth considering not only the cost of the product. Ease of use, namely RPA software, should provide easy-to-understand functions, clear and informative graphics, smooth navigation between different modules, clear text and sufficient flexibility for easy automation of basic processes, rapid training of personnel and adaptation to sales technologies and support of banking products. Security in processing confidential information, moving data sets between systems, preventing unauthorized access, making changes or disclosure of information. This is achieved by encrypting the data. Ease of implementation, compatibility with existing systems, and machine learning capabilities to load data from unstructured data.

The management of the bank to choose between the options of RPA software development by its own IT specialists or the purchase of a ready-made product should determine, firstly, the range of processes requiring automation, taking into account regulatory requirements and business needs, repetition and complexity; if the business processes are

too specific to use a ready-made solution, then it will be beneficial to develop an individual solution; secondly, the availability of RPA solutions on the market that can be adapted to tasks of different levels of originality and complexity, the ability to receive user feedback on the software [5].

The use of RPA will continue to grow in the financial sector in the coming years. In principle, RPA can cover all client transactions, presenting incredible cost-saving opportunities for organizations.

In our opinion, the effectiveness of robotics can be increased by identifying transactions with a high level of human error, as well as clear performance criteria for the project. Such indicators can include transaction speed, data quality, absence of errors, ensuring information security, the level of job satisfaction of bank's staff. Robotization should not threaten business continuity.

The bank can implement such projects by creating working groups with a wide range of functions. Such groups, consisting of IT, business, control, risk, and accounting specialists, can adequately and quickly identify work processes that deserve automation. The efficiency criteria of robotization should be chosen to save staff working time, avoid losses caused by human errors.

For certain business processes, the main criterion may be the speed of execution while maintaining a high level of security:

The processing of loan applications involves many routine operations (in Ukrainian banks, this includes verification of personal data, requests from credit history bureaus, property registers, statements of account movements, checking whether the applicant is included in the list of persons under sanctions, identification of related parties). This allows to get information faster and more reliably to make a decision about eligibility for a loan. The increase in efficiency allows to reduce the time spent by the staff, while ensuring the bank's compliance with regulatory requirements.

In the segment of private banking (serving very wealthy clients), the emergence of robot advisors was an innovation. The world's first robot-advisor from Betterment was launched in 2008 as a low-cost automated digital investment platform that provides algorithm-based financial advice. In 2024, this platform was recognized as the Best Overall Robo Advisor by the Wall Street Journal.

Accordingly, foreign scientists immediately began research. In particular, D. Barile, D. Secundo and K. Bussoli consider Robo-Advisors (RA), built on the basis of artificial intelligence, as a new form of service that digitizes and automates investment decisions in the financial and banking industries to provide low-cost and personalized financial advice. Consulting robots use algorithms to individually select investment and savings portfolios for clients, understand needs, and predict behavior. One of the main incentives in robotization was the desire to ensure the profitability of private banking in the face of declining product margins. The second reason is the appearance on the market of clients who are capable of self-service and desire to reduce the cost of transactions without compromising quality. These are low-cost, accessible and transparent automated platforms that make financial advice more accessible to a wider audience, helping client managers better serve clients.

Three conditions were necessary for the application of RA: artificial intelligence, machine learning and client desire. The robot processes huge arrays of information faster than a human and provides investment solutions. Despite the high price of the software, such a platform is more profitable than retaining employees for standard operations. Although these platforms are automated, they offer advice tailored to individual financial goals and risk tolerance. Such robotics is actually already blurring the line between private banking segments and a wide range of wealthy clients. Guaranteeing the safety of using the RA channel consists of protection against hacker attacks, privacy violations, and system failures. It is appropriate for Ukrainian banks to purchase ready-made products for this business line rather than to develop their own version. This is supported by the availability of competitive offers from suppliers. Such robotization does not require banks to open additional accounts or make fundamental changes to the operation of existing programs. The competitive advantage of a modern bank is the compatibility of robot-advisors with banking applications. Some large retail banks have already acquired RA software providers: it is becoming more profitable and safer than outsourcing. However, we should not expect robot advisors to replace human advisors in the near future, and the reason is the habits of wealthy people to communicate in person.

Robotization brings fundamentally new opportunities for bank marketing. This should be seen as a positive side effect as client information is generated from various sources. Robotics facilitates the analysis and forecasting of consumer behavior, speeds up and reduces the cost of preparing targeted offers to clients for products and services.

At the same time, the automation of many transactions for banks is associated with the need to solve internal problems caused by culture and workflows. First, there is the inertia of the banking sector in the segment of traditional banks, lagging behind fintech companies in the application of software, a biased attitude towards system integration with modern cloud applications and artificial intelligence, as well as data migration. Secondly, in practice, it is very difficult to ensure the standardization of all processes when different departments are involved in their implementation. Therefore, RPA solutions will require not only process standardization, but also service collaboration. Third, banks operate under stricter regulatory requirements than other sectors of the economy. In particular, licensing, information privacy, risk management and reporting. However, RPA offers the flexibility to adapt to new regulations and is able to provide a higher level of security than humans.

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