IBA
GROUP

Bank Digital Transformation

What challenges in the financial industry we know?

Transition to online
COVID-19 has accelerated the introduction of online services: purchases of goods and services, booking, banking are now most often offered via apps.

Custom offers
Corporate customers and individuals want to receive products and services from banks are most relevant to their needs. Real-time marketing systems and advanced analytics are trending.

Cyber risk growth
Interdependence between actors in the banking ecosystem, introduction of new technology, obsolete enterprise software of banks and financial organizations increase and complicate cyber risks.
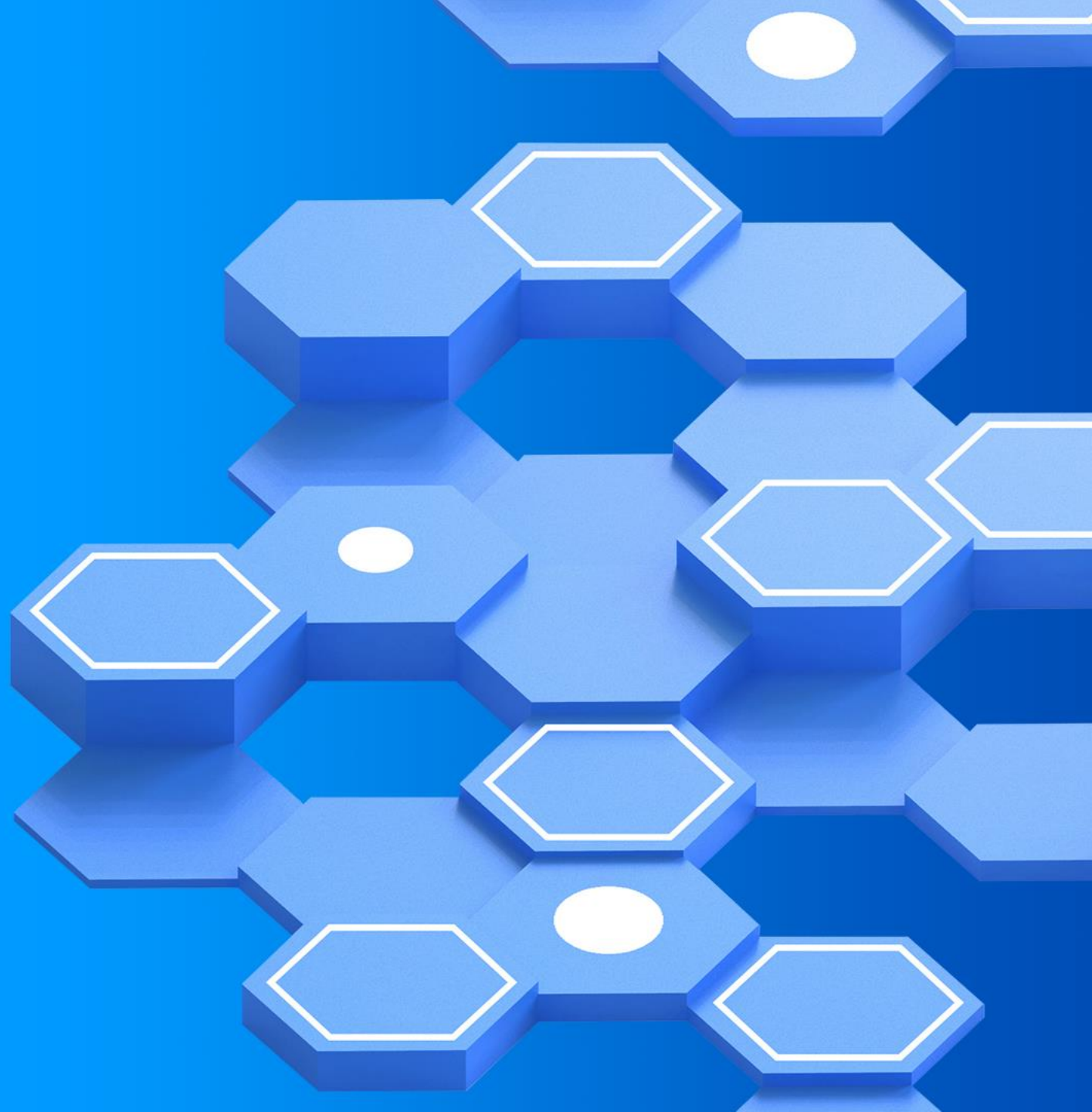
What business challenges are we ready to address?

1. Remote Banking and Payment Services

2. Analytics and Efficiency

3. Marketing and Customer Experience

4. Automation of Business Processes in the Bank
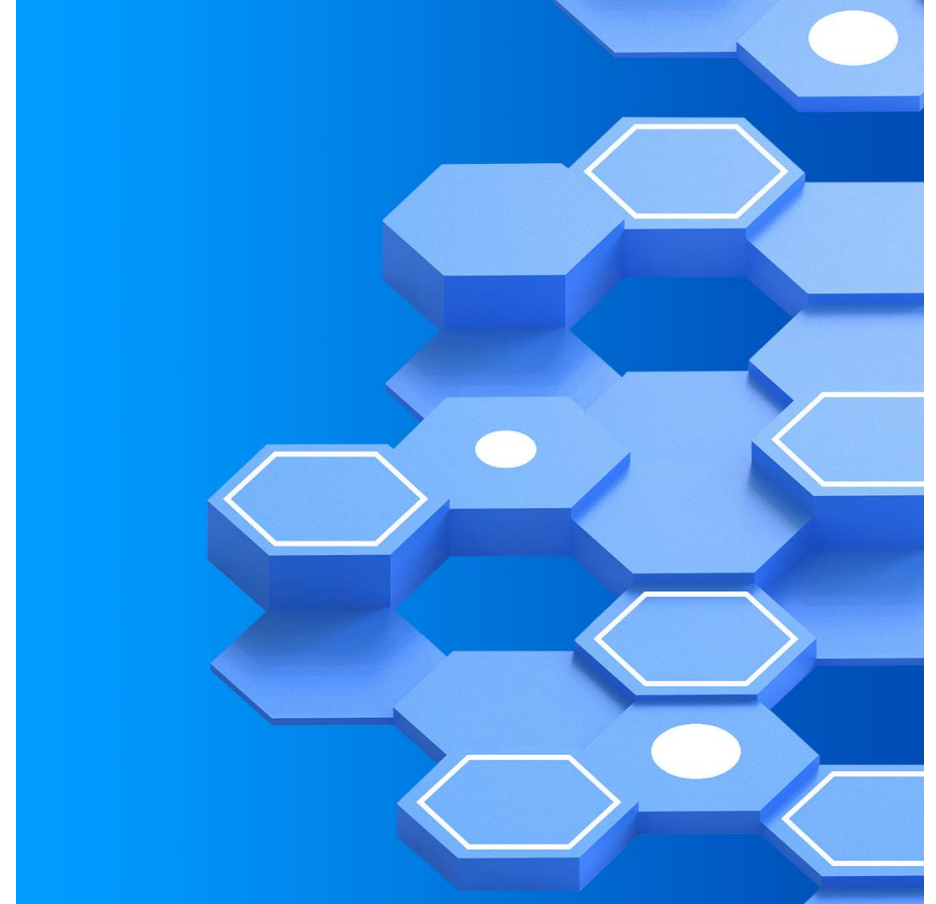
Remote Banking and Payment Services

Acceptance of proximity payments

IBA GROUP

Business Challenge

Increase the number of corporate customers and facilitate proximity payments for them.

IBA Group Solution

tapXphone

tapXphone turns any NFC-enabled smartphone into a POS terminal. Using a smartphone, companies may accept payments for goods and services with proximity bank cards and other proximity payment methods, such as watches, wristbands, rings.

Learn more: tapxphone.com
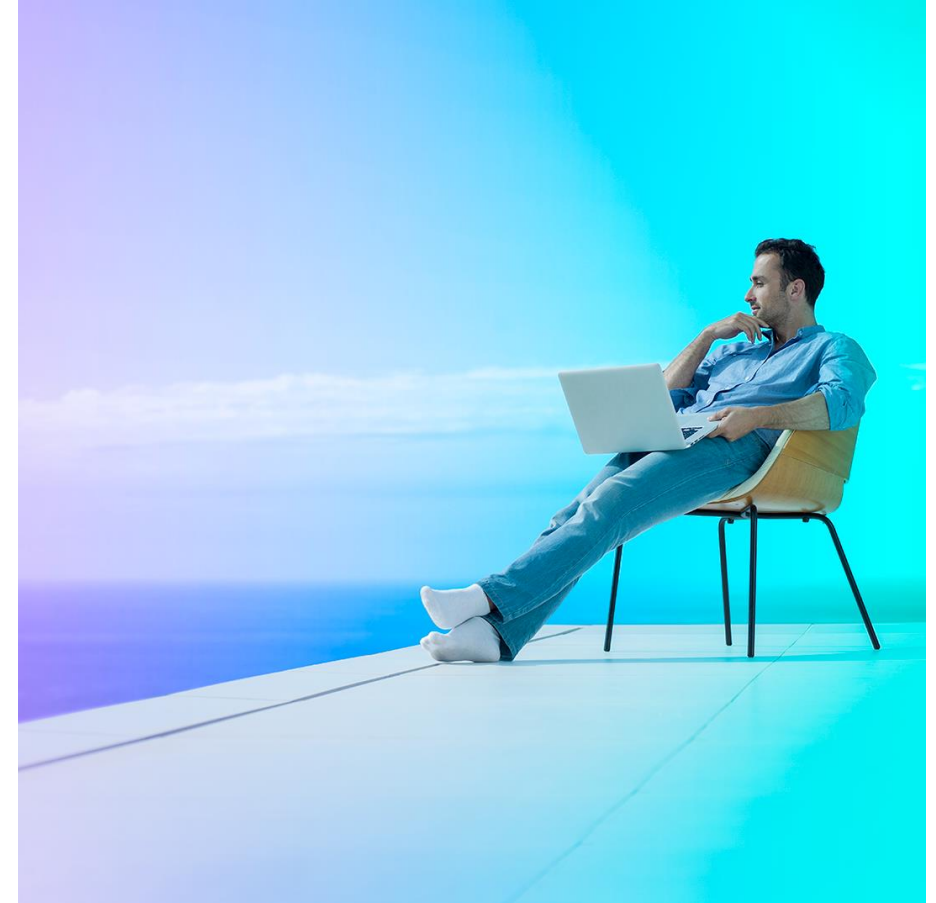
Remote customer service

Business Challenge

Improve customer experience and provide round-the-clock access to bank services.

IBA Group Solution

<u>Mobile and Internet banking</u>

Mobile and web application guarantees customers 24/7 access to the bank services. Customers may independently manage accounts, pay utility bills or other orders, open deposits, apply for loans, order bank cards.

The solutions reduce the burden on bank representatives, increase the number of purchases of banking products and customer satisfaction.

Remote customer communications

Business Challenge

Improve customer service and reduce the load on the call center.
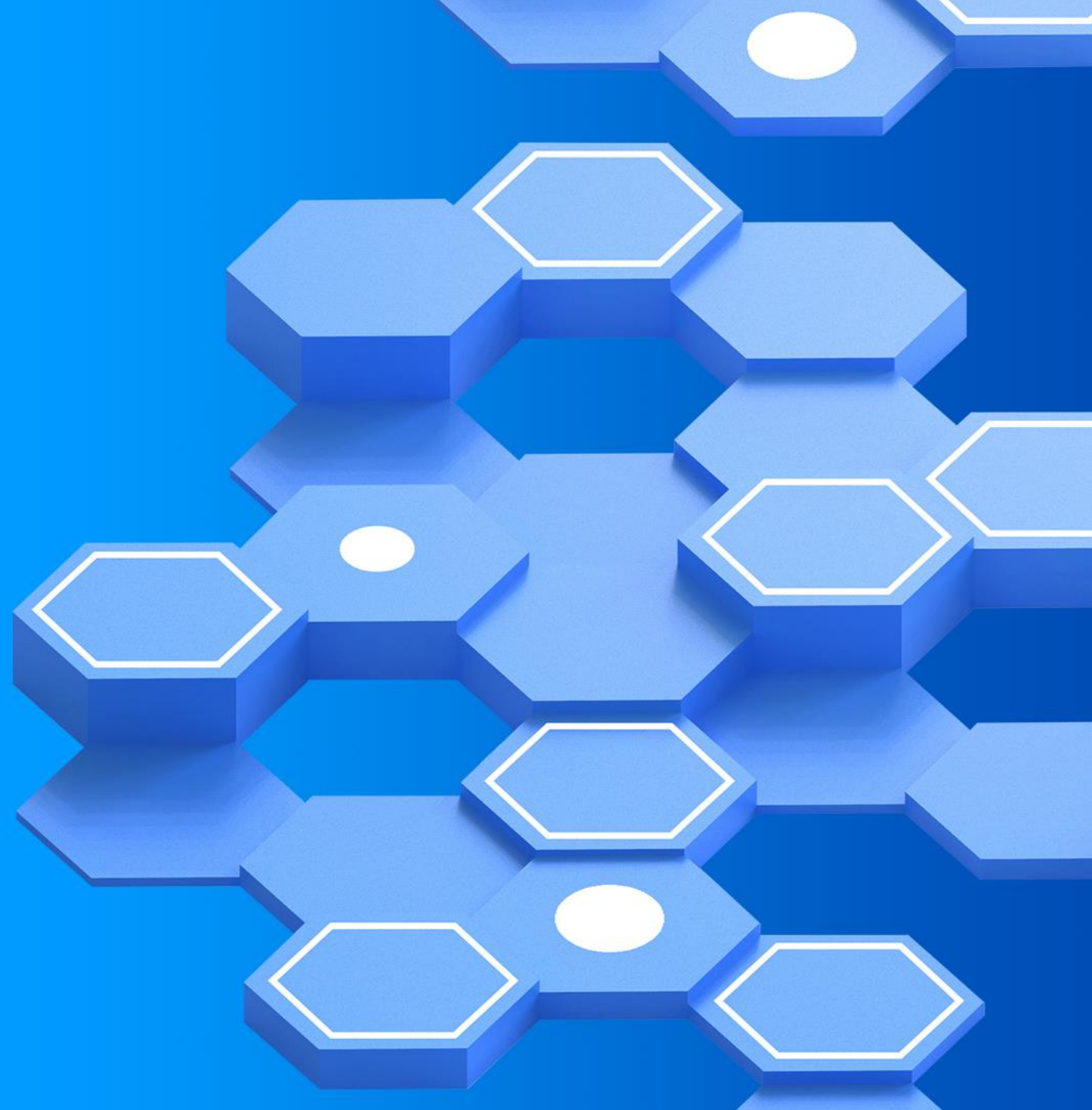
IBA Group Solution

Chatbots

Chatbots and voice assistants increase the quality of customer service, reduce the cost of the call center and improve its performance.

Using chatbots, the staff gets rid of processing the same type of calls, which increases the number of processed requests. Employees turn efforts to address non-standard requests. The waiting time for customers in the queue is reduced, their requests are resolved faster, statistics are being accumulated.

Analytics and Efficiency

Preparing and structuring data

Business Challenge

Structure data for analytics systems.

IBA Group Solution

Enterprise Data Warehouses (DWH)
Enterprise Data Warehouses (DWH) accumulate information in a single source about the company's business for external and internal users: management, employees and customers.

These solutions help optimize costs, minimize business risks and improve bank performance.

Data analytics

Business Challenge

Learn useful knowledge from available information and improve business insight.

IBA Group Solution

Qlik, Tableau, SAP BO, IBM Cognos, Microsoft Power BI Solutions
BI systems in banks improve the quality of risk management, accelerate reporting to the regulator, facilitate modeling of financial flows and the financial situation of the bank.

Systems help to extract useful knowledge and create competitive advantages from existing data, analyze data in real time and make management decisions based on them.

Data analytics

Business Challenge

Analyze data throughout the bank and obtain up-to-date analytical information during decision-making.

IBA Group Solution

SAP Analytics Cloud

SAP Analytics Cloud is a unified analytics application for business intelligence, planning and predictive analytics.

The solution assists in making smarter decisions in all areas of business: finance, procurement, HR, sales and marketing.

SAP Analytics Cloud provides consolidation
of various data sources in one analytical reporting package

Cost-benefit evaluation

Business Challenge

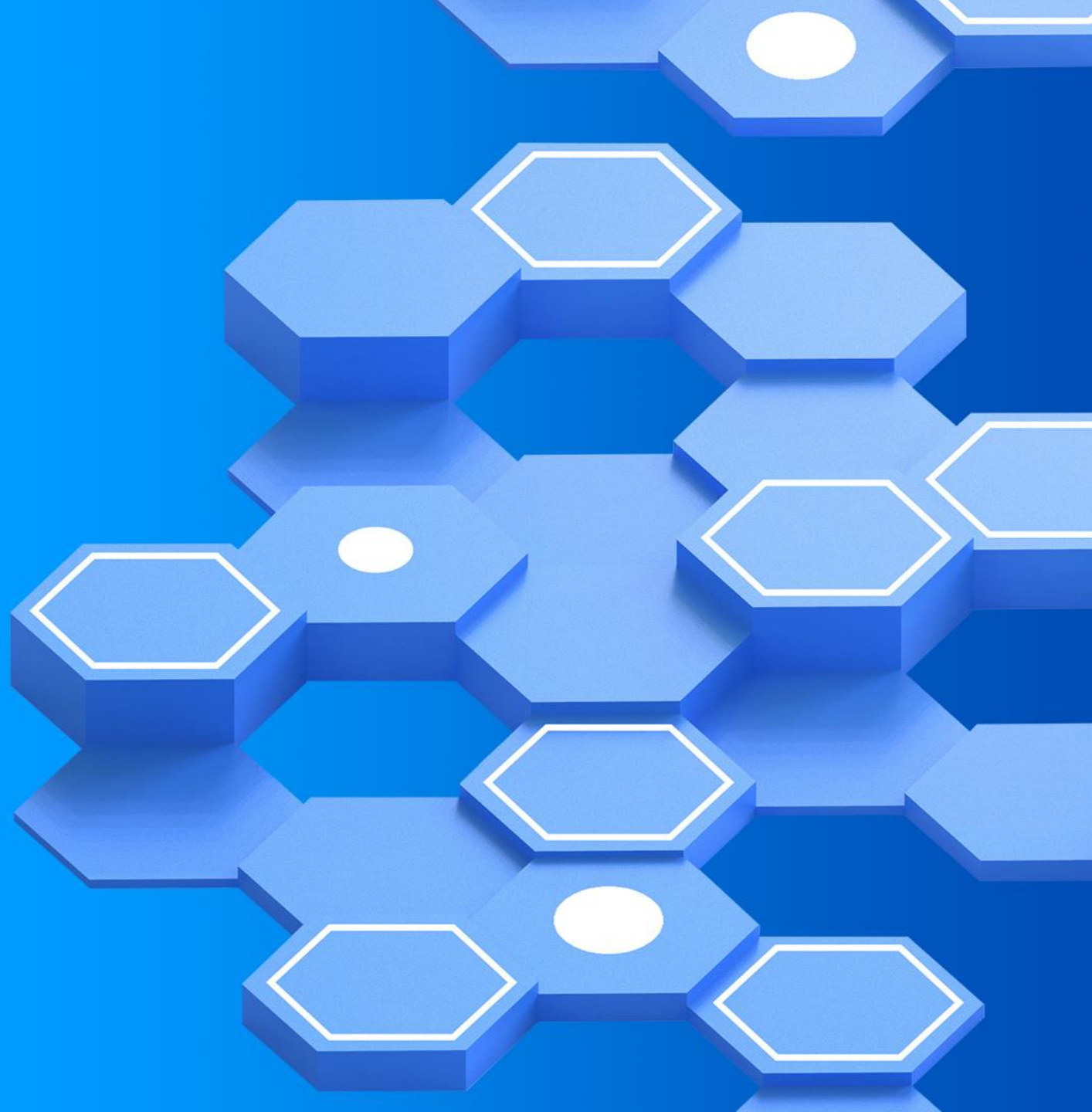Analyze profit-earning capacity of individual business segments.

IBA Group Solution

Profitability and Performance Management Solution (SAP PaPM)
Using a financial performance management system, employees determine the profitability of products, departments, customers with breakdown by a single transaction, identify profit drivers, predict the impact on the profitability of various business strategies, analyze data in real time and assess financial risks.

Marketing and Customer Experience

Budgeting

Business Challenge

Allocate the promotion budget across media channels in a most efficient way.

IBA Group Solution

Marketing Mix Modelling
A solution for optimal allocation of marketing budget across media channels. Using mathematical models, banks can determine the factors affecting advertising and the weight of these factors in customer acquisition and profit.

Customer profiling

Business Challenge

Analyze clients, generate a "customer profile" and understand the structure of the customer base; predict customer attrition and create targeted marketing campaigns.

IBA Group Solution

Solution based on machine learning to generate "customer profile" and assess customer base

The solution uses machine learning to evaluate the borrower's creditworthiness and analyze its transactions. The system forms "profiles" of bona fide and unreliable borrowers, classifies borrowers by risk group: assesses the possibility of lending and sets loan limits, interest and repayment period.

Based on the information collected, the solution categorizes the customers of the bank and develops a "profile" of the most profitable customers.

Customer experience management

Business Challenge

Improve communication with bank customers .

IBA Group Solution

SAP Customer Experience
SAP CX facilitates well-arranged interaction with B2B, B2C segments and creates a streamlined communication with the customer across all channels: web, mobile applications, SMS, email and push messages.

SAP Customer Experience solutions create streamlined communication mechanisms and provide customers with a comprehensive, personalized experience of interacting with your business

Preparation of personalized offers

Business Challenge

Personalize marketing offers and deliver them to customers on time.
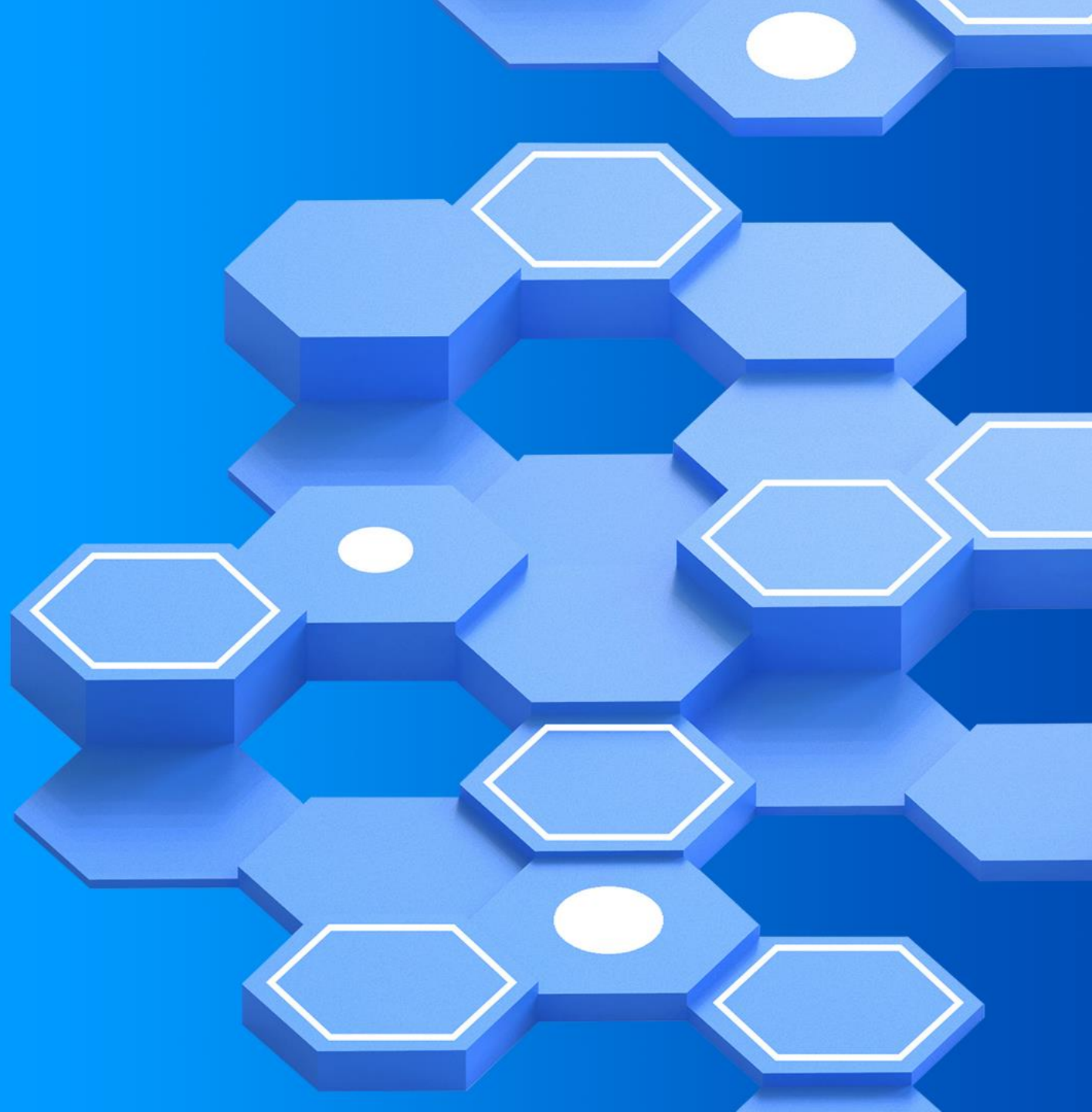
IBA Group Solution

Real-time marketing

The solution receives data from different sources in real time: website, mobile banking, transactions and rejections, call centers, chat bots, social media. Then it consolidates it in a single repository, verifies the accuracy, the absence of duplicates, and generates Customer 360.

The solution analyzes marketing campaigns, creates business rules based on customer data and sends personalized offers to the customer's priority channels at the right time.

Automation of
Business Processes in the Bank
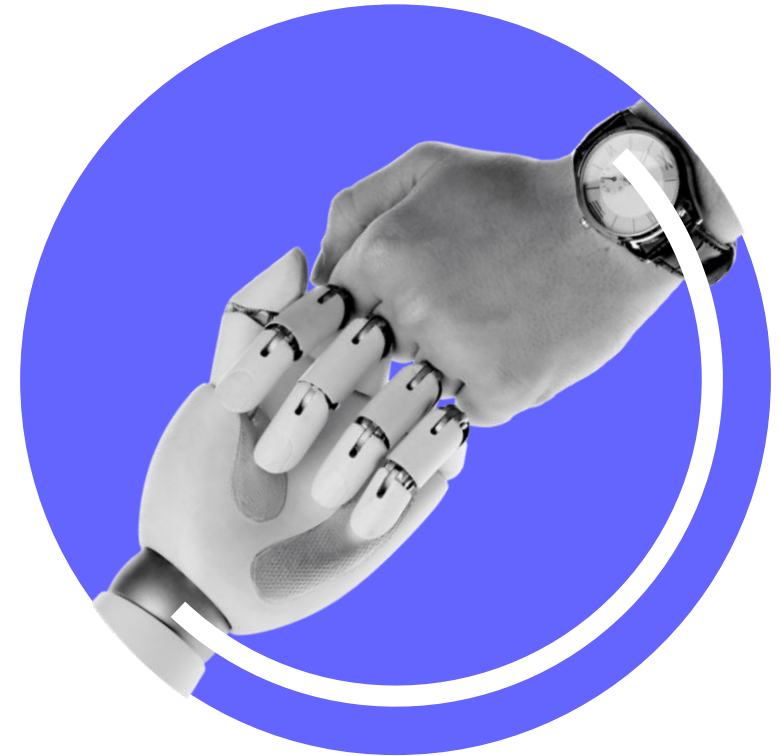
Document management

Business Challenge

Automate management of documents and data.

IBA Group Solution

·◌· EasyRPA

The platform helps to build, deploy, launch and monitor software robots. EasyRPA robots extract and enter data into applications, transform and validate it, analyze information and generate reports. EasyRPA supports ERP and CRM systems, integrates using user interfaces of applications. Machine learning and OCR implemented. Processes are automated by developers, not business users.

Learn more: easyrpa.eu/

Document management

Business Challenge

Automate management of documents and data.

IBA Group Solution

Document automation with RPA powered by WorkFusion, Automation Anywhere, UiPath
The robot simulates human actions: works with web applications in a browser, performs operations in Excel, generates Word documents, receives and sends emails.

Implementation of RPA solutions accelerates data retrieval from documents, filling out forms in corporate systems, reduces errors and increases staff efficiency.

Services Offered to Banks

Data Engineering

Programming the collection, storage, processing, search and visualization of data. Data Engineering allows building stable ETL and ELT processes for data mining and processing for analytics systems, machine learning algorithms, Data Science. Qualitative data is made available to employees.

Deployment of Data Warehouses, Data Lakes

Developing solutions for storing and processing data volumes that your own enterprise systems can no longer cope with, and integrating them with customer IT systems.

Open API for enterprises

Development, adaptation and deployment of Open API solutions in the bank's IT infrastructure. Analyzing the readiness of the Customer's IT infrastructure for the implementation of the Open API, taking into account the stated goals. Offering consulting on monetization and security design of the deployed Open API.
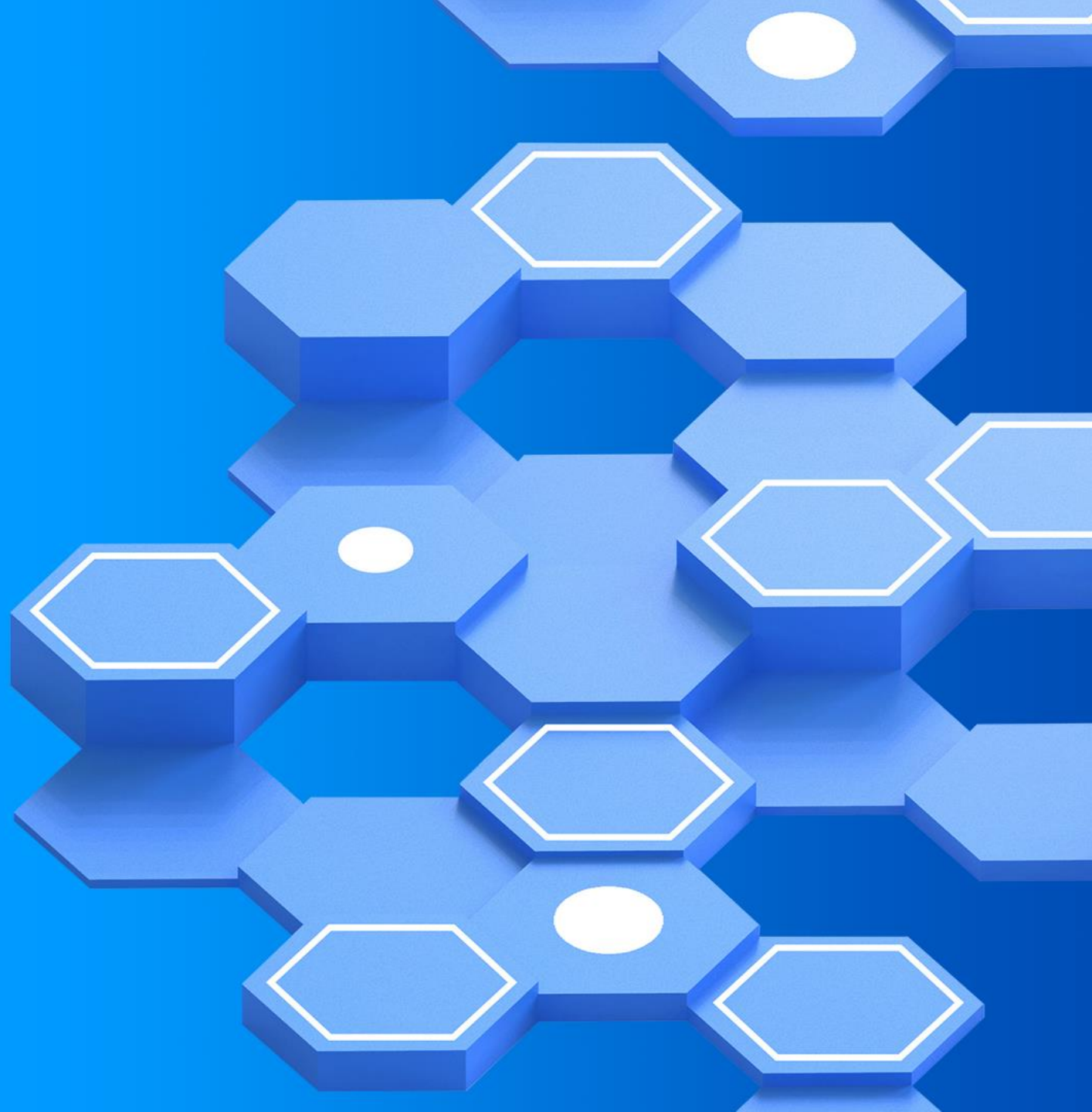
IBA Group completed 30+ projects in the banking and financial industry

for customers from Germany, Czech Republic, Slovakia, South Africa and other countries.

Recent projects for banks

IBM Cloud Pak Compatibility for a Commercial Bank

Background

A large Eastern European commercial bank faced the complexity and cost of scaling and the impossibility of introducing new functions caused by the current organization of data storage and infrastructure.

1. The client was developing a mobile application for Internet banking and the introduction of new features, such as online card processing from a website or application and the ability to make online payments. Existing solutions didn't satisfy the client due to severe user interface issues and the inability to use them on some smartphone models. Moreover, it wasn't possible to add planned features.

2. The bank owned and expanded its on-premise infrastructure, using customized solutions of its own design. When optimizing consumption, part of the capacity was idle waiting for loading, requiring maintenance, and taking up space. The total cost of maintaining server rooms, cooling, repairs, maintenance personnel, and data backup increased significantly.

3. Constant state audits required employees of different departments to generate comprehensive reports for each auditor's request. The requests were repeated and the actual data from the databases had to be collected manually. In the last audit, the organization was unable to provide two reports because they didn't have a technical base to collect information about transactions, which caused serious problems with passing the audit.

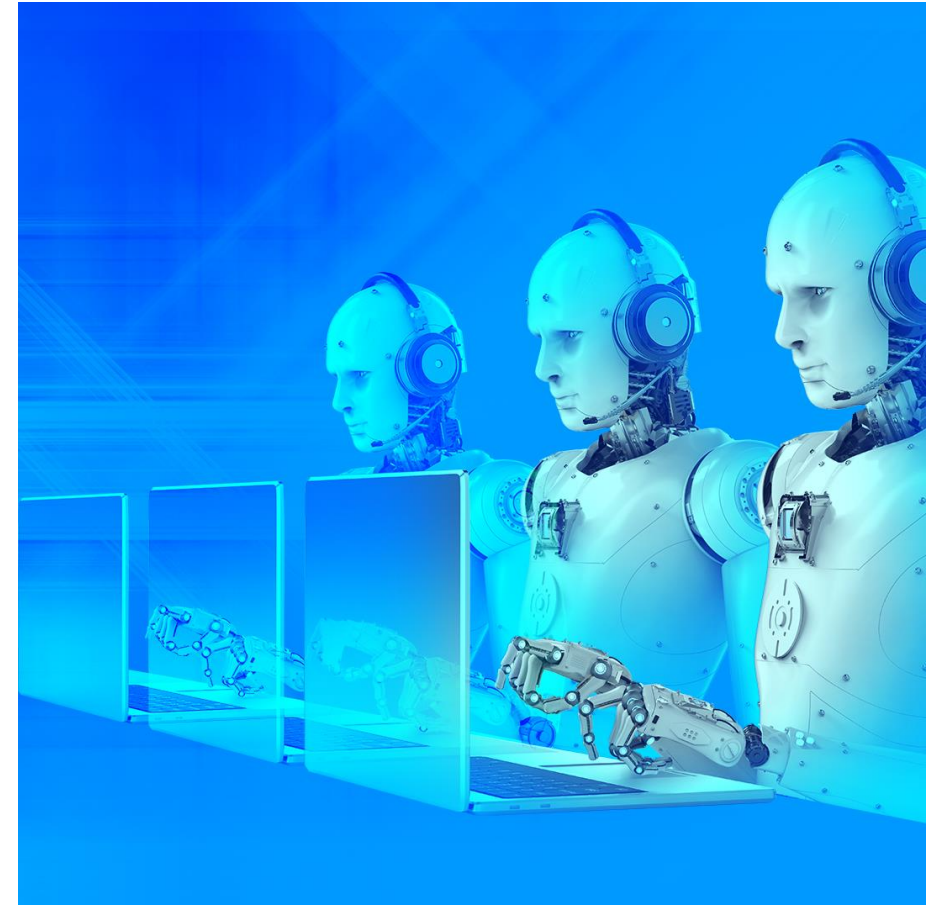# IBM Cloud Pak Compatibility for a Commercial Bank

Business Challenge

The biggest challenge was using on-premises infrastructure, which brought with it the constant need to support the hardware in the face of increasing data volumes. The bank required new approaches to working with data:

1. Maintain or improve the experience of using the bank's products.
2. Reduce the increasing share and maintenance of their own server and infrastructure space.
3. Remove technical restrictions for the development of new features.
4. Ensure technical readiness to serve auditors' requests.

Results

1. The bank was able to abandon 80% of their server space and equipment in favor of a cloud service provider. No infrastructure failures were recorded within two months after the improvements were made by the IBA Group team, compared to 13 failures previously.
2. Cloud-native architecture approach based on RedHat, OpenShift, and appropriate cloud alternatives for existing services.
3. Cloud Pak for data as ETL/ELT. Cognos service for data audit features. Multi-cluster data aggregation using DataStage. Fault-tolerant data storage in two data centers for the required 99.99% uptime.

IBM Cloud Pak for Compatibility

IBM Cloud Pak Compatibility for a Commercial Bank

IBA Group Solution

Data management solutions to cloud migration service

Having identified the challenges and goals, the IBA Group architects set about developing a solution. Representatives of the bank focused on fault-tolerant and easily scalable systems that have proven themselves reliable and could be easily maintained by the bank's IT specialists.

The following solutions were identified:

- Migrate the client to cloud infrastructure;

- Install OpenShift from RedHat;

- Adapt client services to IBM Cloud Pak.

The most suitable analogs of the client's existing services were selected from the Cloud Pak. A separate item was the visualization and reporting system implemented by Cognos Analytics.

Benefits our customer received by moving data management to a cloud service

1. The customer got the opportunity to use the new functionality immediately upon completion of the development and testing stages.

2. No problems were noticed in the event of a failure of the main system, with the client receiving a backup system with a previous working version. This acted as an immediate replacement while the problem was fixed.

3. Adding hardware capacity was no longer the customer's main concern, as now monitoring systems automatically suggest necessary changes. Scaling is implemented as needed in a few clicks by the bank's engineers.

4. Increased customer business growth.

5. Increased customer satisfaction due to the high speed new functionality and the quality of services provided.

Bank performance management system

Business Challenge

Deploy a bank performance management system: Enterprise Data Warehouse and BI reports, planning and budgeting solutions.

IBA Group Solution

We designed and deployed a centralized data warehouse and ETL processes (data extraction, transformation and loading processes) to ensure data quality.

IBA Group has also introduced data marts, management and regulatory reports, configured IT infrastructure and trained bank employees to operate the new system.

Results

Now it is easier for employees to analyze the costs and profitability of products, conduct PL factor analysis and manage risks. The system implemented cost allocation and transfer pricing, created models and dashboards for Internet business and ATM analytics.

Managers get more detailed reports to make managerial decisions
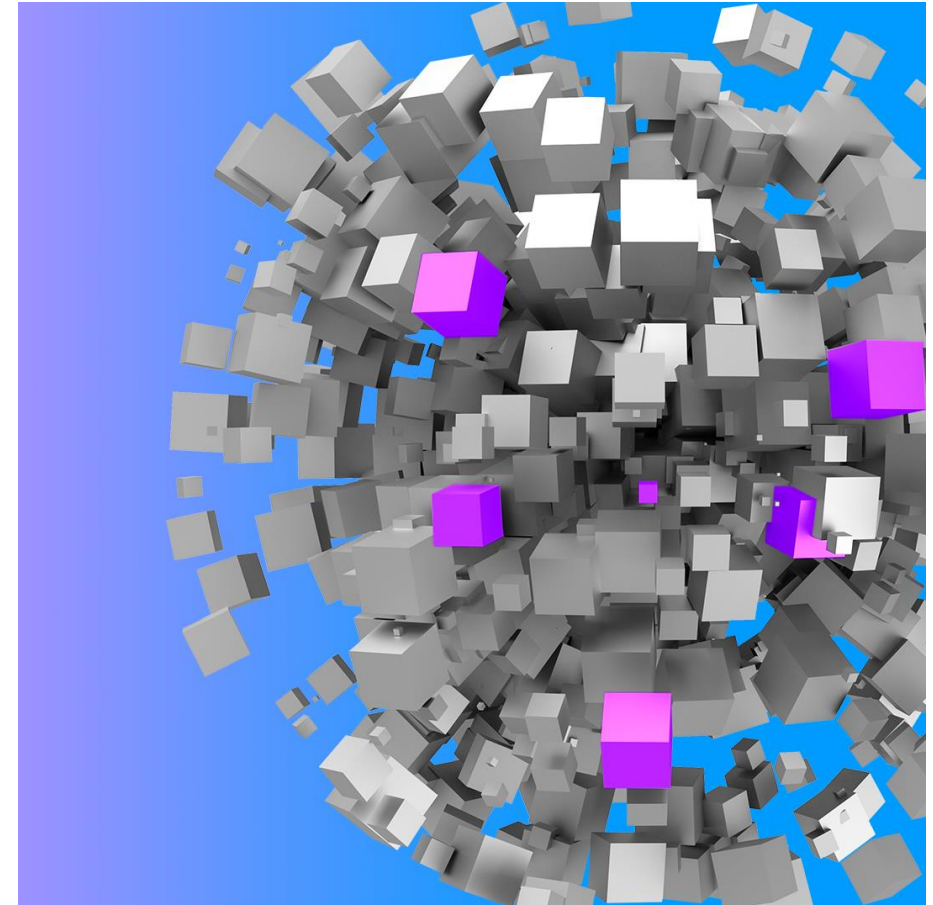
Cognos, InfoSphere DataStage, Linux, MS Windows, Distributed Application, Oracle, JDBC, WebServices

Automation of financial document management on the EasyRPA platform
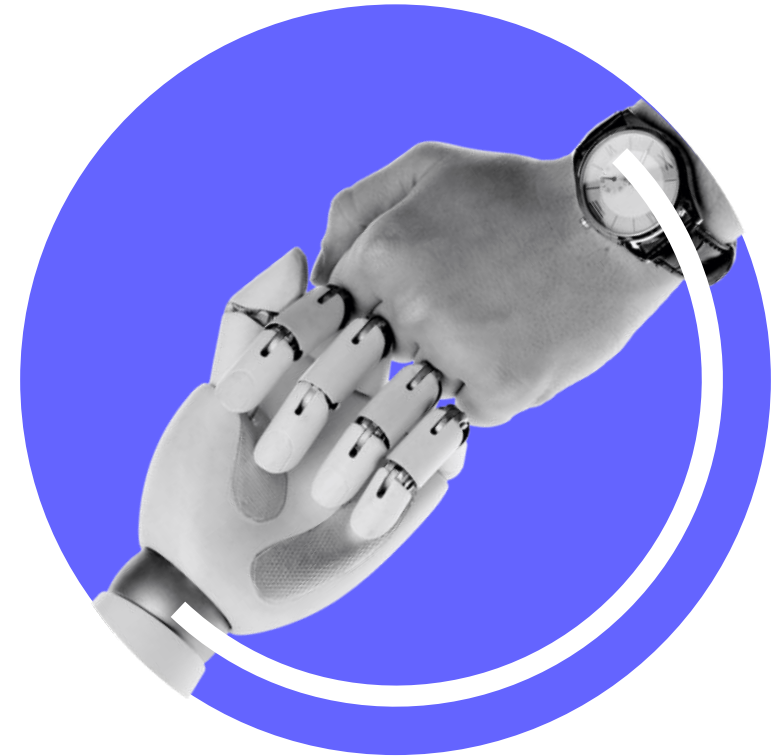
IBA GROUP

Background

The customer receives daily transaction data in the form of text files. The financial information from these files must be processed and entered into an Excel pivot table, in which the checksums are reconciled. Further, this table is uploaded into an application that converts the data into a format suitable for import into the internal banking information system.

Business Challenge

Automate the process of entering data into the pivot table and information system of the bank using an RPA bot.

Results

The robot saves the employee's working time, and reduces the cost of paper and printer maintenance. The PivotTable is a reporting tool and can be quickly re-generated using a robot if changes occur. Previously, all adjustments were introduced manually for a long time. Also, for a future project, the customer was offered assistance in formalizing business logic.

EasyRPA by IBA Group

IBA Group Solution

The task could be addressed in several ways, for example, by developing a java application. For the pilot project, we chose automation on the EasyRPA platform, since it has a ready-made toolkit for describing the logic of processes. In addition, in the future it will be possible to expand the use of the robot, entrusting it not only with the preparation of a summary report, but also with other tasks.

In the course of the project, IBA Group professionals faced several challenges:

1. It is difficult to correctly enter information from financial documents, because the necessary data are located in different parts of the files and make up only 1-2% of all information contained therein. Before the introduction of the robot, it was most convenient for the customer's employees to print these text documents (about 50 sheets), mark them with a marker and manually enter the necessary data into Excel.

2. Every day the logic of document analysis changes; it has many special cases. If there are certain elements on the page, then one algorithm is applied, if there are none - another algorithm is activated. For each type of data block, there can be several ways to extract information, depending on the content of this block.

3. Raw data is provided in the form of text files with unstructured information. We had to write a parser to process various formats of these files (from 5 to 10 formats).

We agreed with the customer employees on the extent of logic for automation, documented it, implemented and demonstrated the correct operation of the robot.

The bank improved marketing campaign analytics

Business Challenge

Develop a solution based on the Big Data platform that visualizes KPI of marketing campaigns and processes data from various sources in real time. Formulate data processing rules and promptly create individual offers for customers.

IBA Group Solution

The IBA Group team developed a set of applications for monitoring the performance of marketing campaigns. It assists in analyzing the progress of campaigns in real time, calculating their KPIs and identifying efficient and inefficient communication channels. Our professionals designed a data warehouse based on Hadoop, implemented data loading and processing in QlikSense.

The solution provides a personalized offer to the customer at the moment when it is most relevant to him. It continuously analyzes information about the customer and his actions, measures the performance of the marketing campaign and improves it.

Results

The solution allowed reducing the costs of marketing campaigns through the creation of individual offers and the use of optimal communication channels.

Qlik, EPM, Linux, Distributed Application

The conversion rate was 2x higher than expected.

IBA Group and Visa implemented tapXphone payment solution in the bank

Business Challenge

The goal of the project is to introduce small businesses that are heavily dependent on cash to the digital economy: delivery services, food courts, small shops. The bank was looking for a simple and cost-effective solution to offer customers contactless payment and make it easier to do business anywhere and anytime.

Results

Now any business may connect to acquiring services without buying additional equipment. To take advantage of contactless payment, all you need to do is download the mobile app. With tapXphone, shoppers can pay with a card where was used before: when visiting fairs and recreation areas, paying for delivery services or buying flowers in a small shop.

Now any business may connect to acquiring services without buying additional equipment.

tapXphone, Tap to Phone

IBA Group and Visa implemented tapXphone payment solution in the bank

IBA Group Solution

IBA Group has developed an innovative mobile application for the bank powered by tapXphone payment solution. It turns NFC-enabled Android smartphones and tablets into a full-fledged POS terminal for accepting contactless payments.

The solution is based on Tap to Phone technology supported by EMV, the international standard for payment by bank cards. Each transaction contains a dynamic cryptogram ("token") that cannot be reused. This technology allows financial institutions and fintech companies to build their own acquiring and offer their customers a service for accepting payments via a smartphone with the same security protocols as a regular POS terminal.

Particular attention was paid to the security of the mobile application. Thanks to PIN-on-Glass technology, the seller can accept even large payments: when the buyer enters the PIN, the numbers on the screen are arranged in a random order that is changed every time the application is used. So it is impossible to track the sequence of the numbers by traces on the screen. The tapXphone payment solution also meets all the security requirements of international payment systems and the Payment Card Industry (PCI).

To use the solution, a business operator needs a smartphone or tablet powered by Android 8.0 and higher, which is equipped with an NFC chip with disabled root access (superuser rights) or developer access. To start working, just download the application from the Play Market, sign up and provide all the necessary user data.

Examples of business areas which may use the solution:

outdoor retail trade (fairs, food courts, etc.);

entertainment (parks, attractions, seasonal recreation areas);

payments in a queue, thus reducing the time for customer service;

sites, payment of fines;

joint fundraising;

delivery and postal services;

insurance agents;

event agencies.

Contactless payment by bank cards in Chisinau transport using the tapXphone payment solution

IBA GROUP

Business Challenge

Deploy a solution that will allow contactless payment for trips using bank cards in public transport in Chisinau.

Results

The pilot project was implemented jointly with the Visa payment system, the Bank of Moldova, the Chisinau Municipal Council and local carriers.

The introduction of contactless payment will provide passengers with the opportunity to choose fast, convenient and secure payments while traveling. Carriers, in turn, will be able to optimize the processes of accepting payments from passengers, and reduce the costs associated with the deployment of transport systems.

tapXphone, Tap to Phone

Contactless payment by bank cards in Chisinau transport using the tapXphone payment solution

IBA Group Solution

The solution is based on the tapXphone product: it turns an ordinary NFC-enabled smartphone into a payment terminal. Passengers apply a bank card or an NFC gadget to the fare collector's smartphone and pay for the trip in just a few seconds.

The tapXphone product is unique in that it does not require any special equipment other than the smartphones provided to the fare collectors. Thanks to this, users have the opportunity to quickly and securely pay for trip with a contactless card, phone, smart watch, fitness band or other NFC-enabled device.

The payment mechanics are similar to regular payments: just one touch with a card or NFC-enabled device is required. You don't need to download the app. The transaction is completed in a split second, after which the indicators on the smartphone light up and confirmation of a successful payment transaction appears. Payment cards of any banks are accepted for payment.

tapXphone, Tap to Phone

Test automation for a South African bank with JuNaSe

IBA GROUP

Background

The customer is developing a global banking application that allows bank employees to track banking operations, transactions, payments, transfers; simultaneously handle several packages of documents; make different types of transactions, etc. Initially, the customer used only manual testing. This required too many resources, especially during regression testing.

Business Challenge

Develop automated testing processes from scratch.
The main purposes include: speed up the project, reduce costs, and manage scaling.

Results

The team has built a stable and easy to maintain test automation process. 1000+ tests run automatically every night in 4 environments. Manual/regression testing time reduced significantly. Automatically generated report helps to identify problems in the shortest time.

JuNaSe solution by IBA Group

1000+ tests run automatically every night in 4 environments

Test automation for a South African bank with JuNaSe

IBA Group Solution

The project included development of a web application and a mobile application.

For the web application, the task was the following:

- develop a framework for automating web application testing from scratch;

- most of the functionality should be covered by autotests;

- same tests need to be run in 4+ environments.

For the mobile app, the team faced the following tasks:

- Introduce a framework for automating mobile app testing from scratch;

- same tests need to be run on two operating systems.

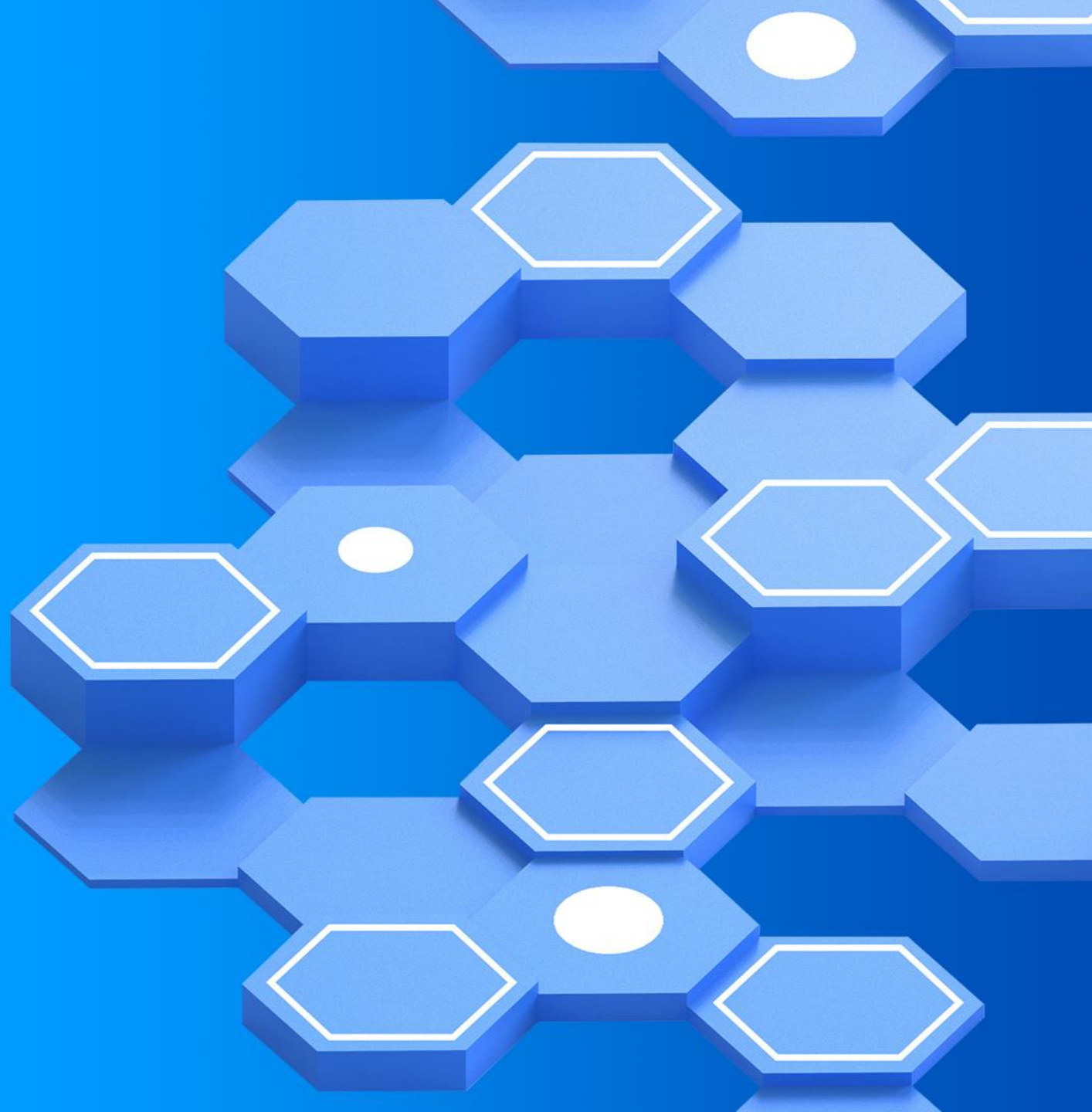During the project, the team was also engaged in:

- setting up a CI pipeline for automatic test execution;

- configuring automatically generated reporting.
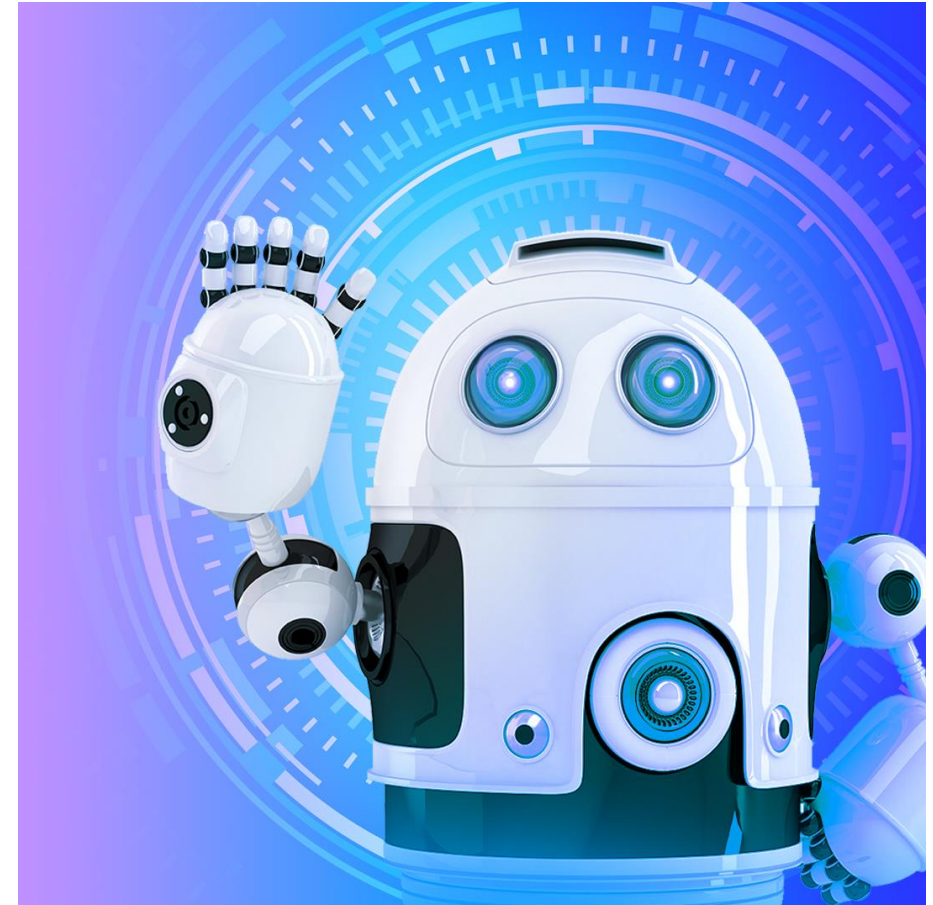
JuNaSe solution by IBA Group

TOP-6 projects for banks
over the past ten years

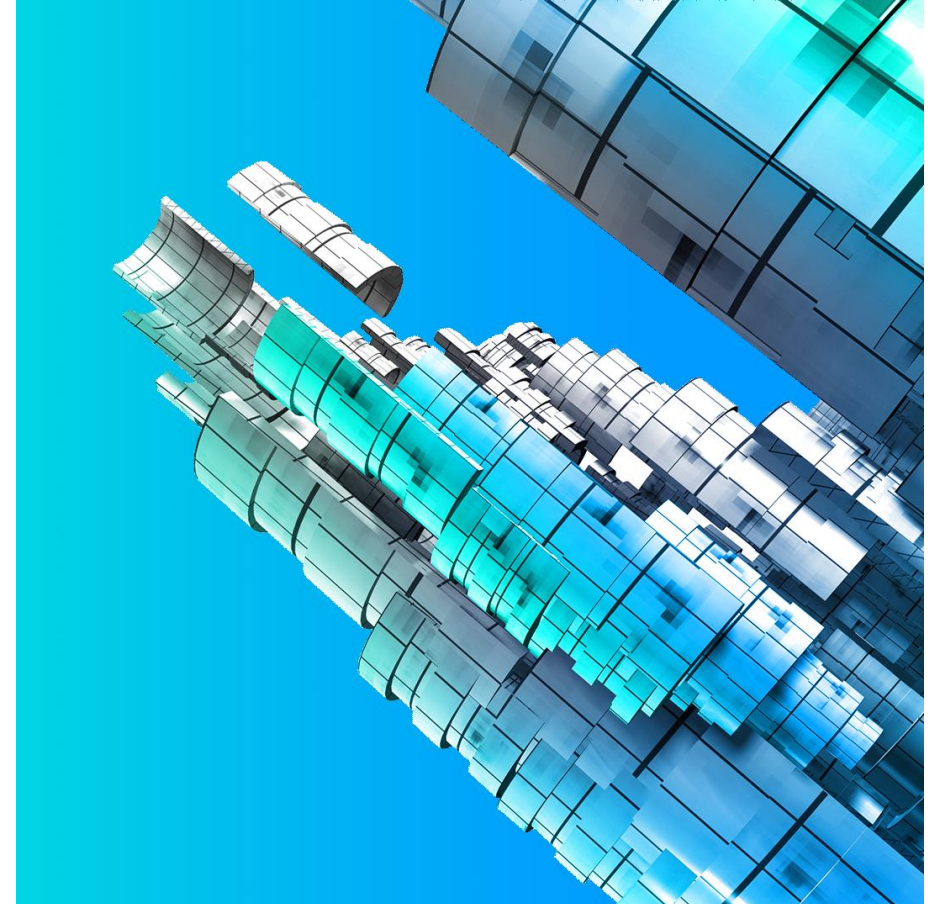# Report Preparation System

Business Challenge

Reduce preparation time and improve management reports.

IBA Group Solution

IBA Group developed and configured a Data Analytics System (DAS) and an Enterprise Data Warehouse (EDW), including: development and modernization of reports necessary to identify suspicious financial transactions; development of a "Market Risk Showcase" and processes for generating data on bank customers from EDW; development of ETL tools. Certified instructors from IBA Group trained the customer team to operate the new system.

Results

All information from corporate systems for analysis and reporting was consolidated in EDW and DAS. Bank employees can generate more detailed financial statements, which helps management make informed management decisions. After training, bank employees are able to independently support and improve the deployed systems.

Report preparation time reduced from ten to one day

Report Preparation System
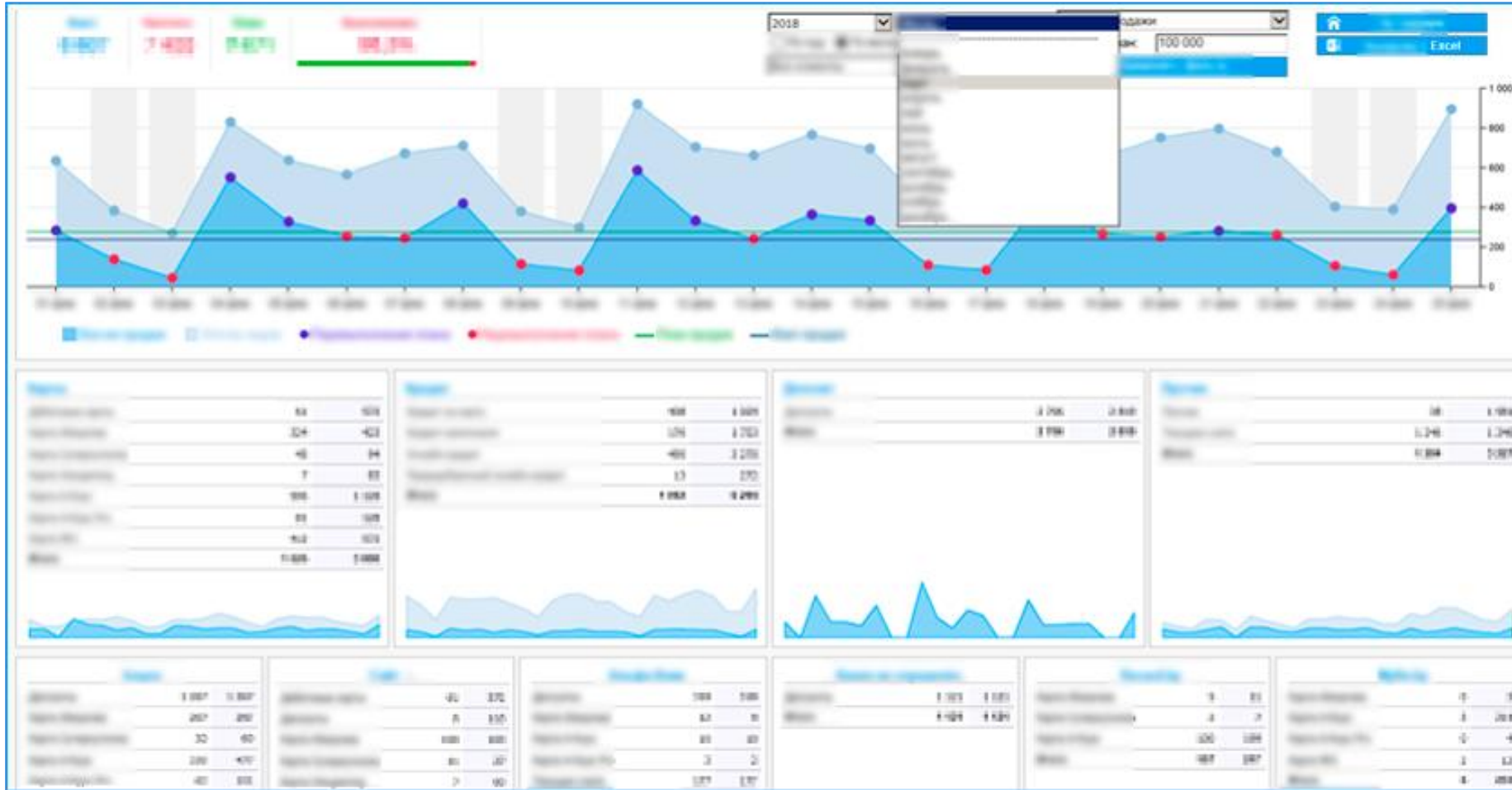
IBM, B2B, Cognos, InfoSphere DataStage, Linux, OS/400, Distributed Application, Oracle

Budgeting and Financial Planning System

Business Challenge

The bank needed to speed up the preparation and audit of the annual budget, automate budgeting business processes, improve the quality of planning.

IBA Group Solution

The IBA Group team improved the financial planning process. As a result, the transparency of business units performance and the commitment of the staff to improving the financial result of the Bank increased. Continuous automated control of budget execution was arranged. They managed to significantly improve the business insight in terms of factors affecting the financial performance.

Results

We implemented support for a full and closed planning cycle from the input of operating budgets (more than 100) to the approval of the plan and the preparation of consolidated statements in accordance with the requirements of both management accounting and the parent bank.

IBM, EPM, Cognos, Distributed Application

Budgeting time with a much more complex model has been reduced from 90 days to 10 days, and preparing a budget for a new business scenario now takes one day instead of a month.

Additional Customer Information

IBA GROUP

Business Challenge

Improve the quality of customer analytics and services.

Obtain additional information from open sources: social media and forums.

IBA Group Solution

The solution collects data from various external sources. Using semantic and cluster models, it identifies objects of interest. It complements existing dictionaries with business terms, calculates a satisfaction rating based on sentiment in comments and reviews, and visualizes sentiment data. Visualization is based on Qlik Sense, however any BI system can be used.

Results

The solution is applicable to any enterprises and organizations that provide services or sell products to a wide segment of the population, which can be discussed on forums, specialized websites and social media.
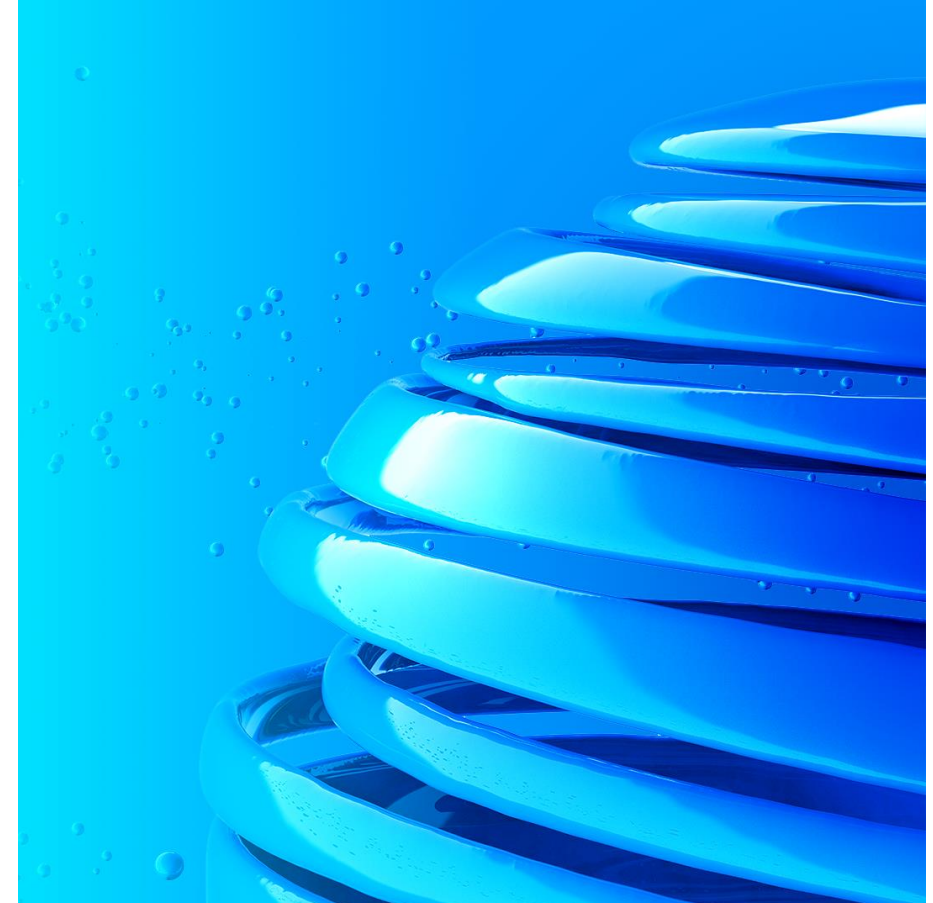
Open Source, QlikView, Qlik Sense, MS Windows, MS SQL, Python

Bank Implemented a Single Center for Vulnerability and Security Risk Analysis

Business Challenge

Scan distributed enterprise structures and web resources for vulnerabilities, organize support for portal technologies and web services.

IBA Group Solution

IBA Group analyzed customer requirements and categorized its assets. For each asset group, the solution offers its own type of scan. It automated notification of system owners and security officers about scan results. The analytical module of the system generates reports in flexible breakdowns: by assets, by groups of assets, by vulnerabilities, by owners, etc.

Results

The Bank received a single center for vulnerability and security risk analysis, which allows taking preventive measures in a timely manner and protect systems from internal and external threats

MS Windows

Procurement Management for a Major Bank

IBA GROUP

Business Challenge

Develop and deploy a bank property management system with an accounting block. The system should centralize information on ongoing procurement and make procurement procedures transparent to all participants in the process.

IBA Group Solution

The IBA Group team has developed and implemented a system that automates all stages of the procurement process: creating applications, creating purchase orders, registering and comparing suppliers' proposals, concluding an agreement and processing accounting source documents.
The system is integrated with existing enterprise applications: content management system, personnel management system, transaction management system, budget and financial planning system.

Results

The company introduced the solution into commercial operation in 2019. Thanks to the new system, the bank increased the efficiency of the procurement and execution of economic agreements.
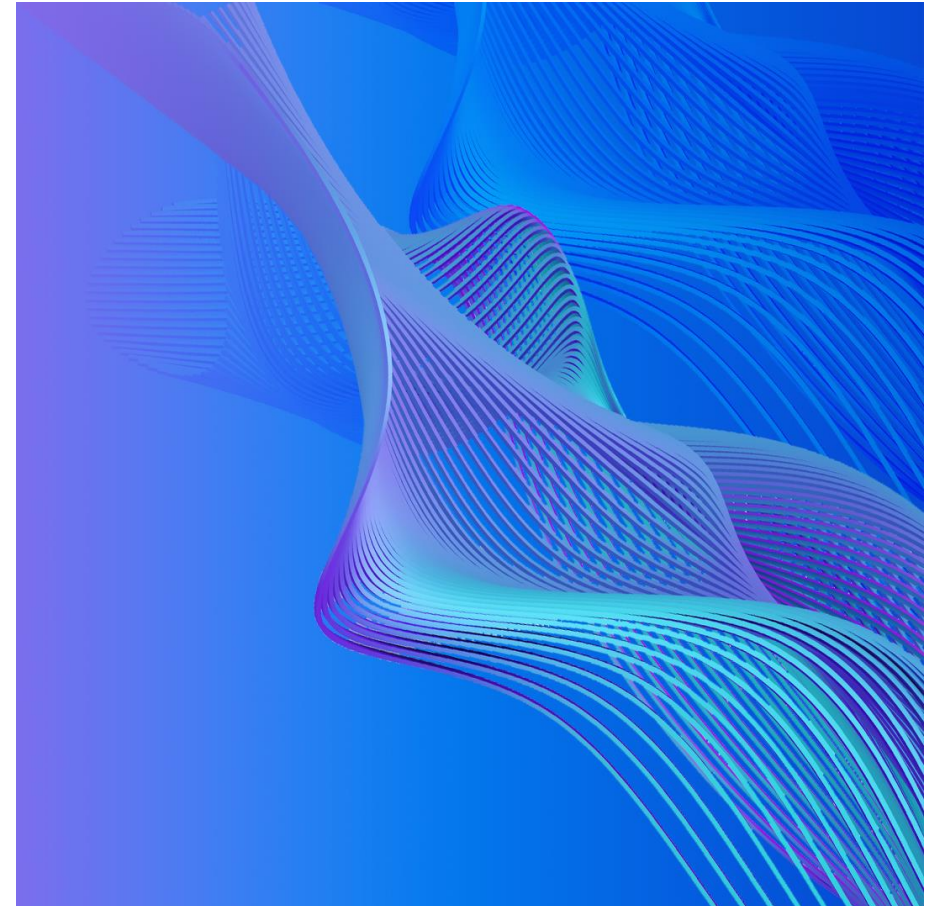
IBM, IBM FileNet, IBM Integration Bus, Linux, DB2, HTML, Java, JavaScript, SQL, XML, Eclipse, WAS

Enhanced Information Security

Business Challenge

Monitor changes and actions of employees in the system during the implementation of production tasks on the SAP platform and increase the number of users.

IBA Group Solution

IBA Group arranged monitoring of the use of critical business transactions, roles and permissions of SAP users, created an archive of operations for analytical reporting and analysis of suspicious situations. It set up preventive control of certain transactions and processes with online notification of emerging threats. The solution notifies security officers of suspicious activities occurring in critical systems of the bank.

Results

The deployed system automated the complex processes of information security of the bank and protected SAP applications against attacks.
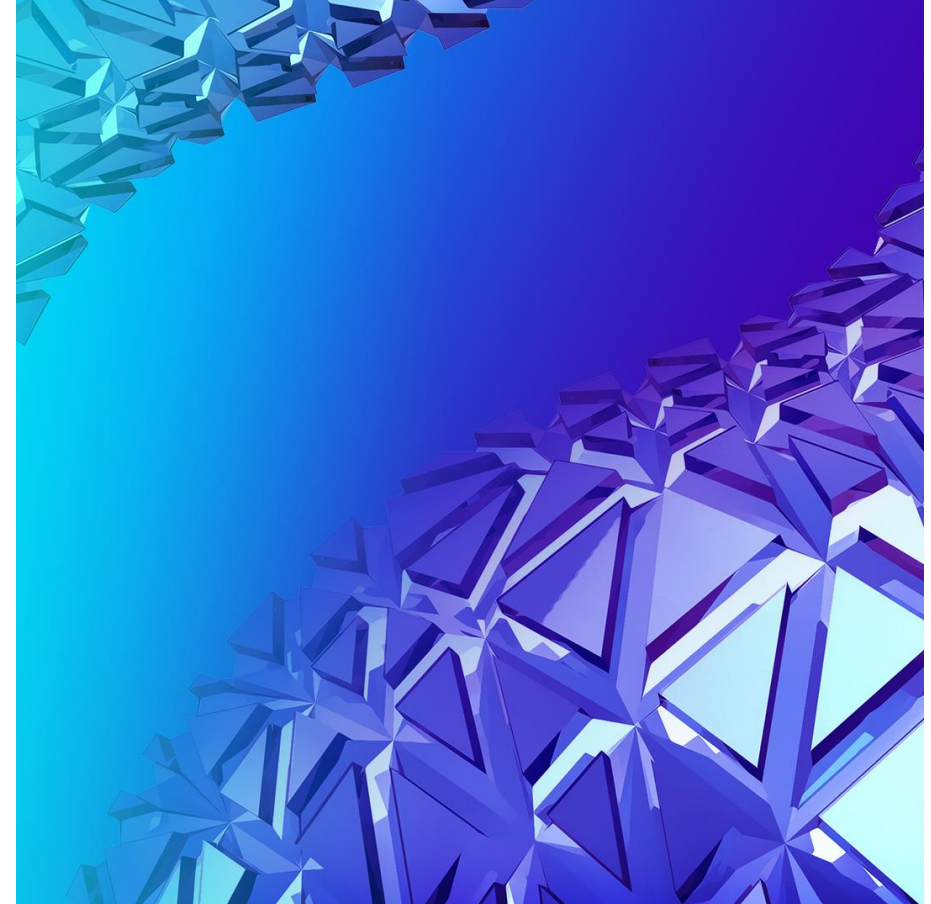
CheckPoint, ERP, SAP

Our Company Today

1. 30 years in IT business

2. 2700+ IT professionals

3. Offices in 15 countries, 13 development centers

4. Partner of leading vendors

5. Developer of proprietary solutions and products

IBA Group
info@ibagroup.eu
www.ibagroupit.com

IBA GROUP