

Case Study

BOOK.

VOL. 2

assecO

BIOMETRICS, MOBILE APPLICATIONS, OMNICHANNEL, E-SIGNATURE,
CYBERSECURITY, BIG DATA, CLOUD, OPEN SOURCE, SMART CITY,
E-SIGNATURE, OMNICHANNEL, MOBILE APPLICATIONS, BIOMETRICS,
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SMART CITY, OPEN SOURCE, CLOUD, BIG DATA, CYBERSECURITY

Dear Ladies and Gentlemen,

The role of computer science has never been more important than it is now. The year 2020 has redefined the impact of digitisation of individual sectors on the economy - not only in terms of process automation, but also in terms of security. It has been technology that has proved to be a tool that has enabled millions of people around the world to adapt to new conditions and to function in a new reality.

At Asseco, we meet the needs of tomorrow; therefore, we focus on creating innovative and advanced solutions that will enable our clients to maintain business continuity in times of such great change. We listen to market needs and act flexibly. We constantly invest in R&D, develop our products and think outside the box, as this is the only way to implement innovative projects on an international scale.

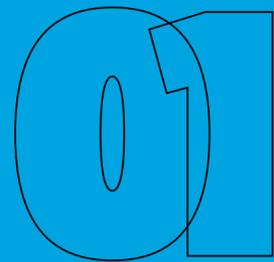
For almost 30 years, we have been present wherever technology and business connect with everyday life. The experience and know-how of all of the Asseco Group's companies gathered during that time allow us to build top-quality solutions that meet the individual needs of even the most demanding customers. Therefore, not only do we improve their competitiveness, but we also have a real impact on the comfort of life of many people.

By creating the technologies of the future, we implement projects that ensure the success of companies from all sectors of the economy. They are a source of unflagging inspiration that has contributed to the creation of the latest edition of the Asseco Case Study Book. Here you will find innovative projects that have been carried out in cooperation with our clients in various parts of the world. We hope that this edition will also be an impulse for you not only to carry out innovative projects, but will show you how much business benefits from the world of new technologies.

Asseco Team

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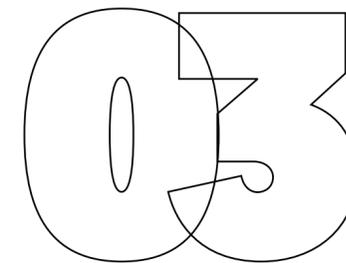
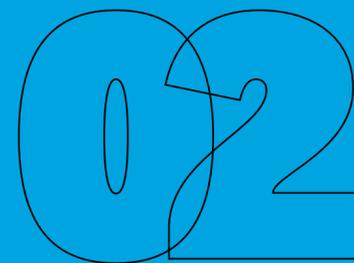


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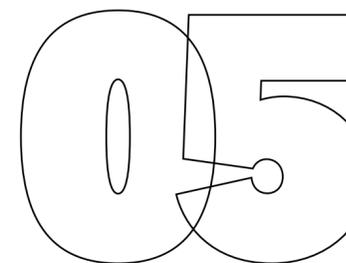
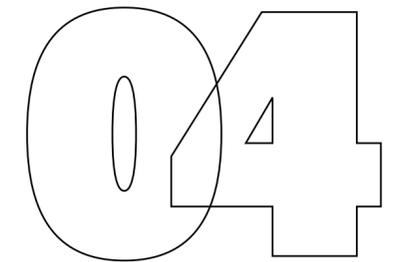


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Chapter one |
BANKING

ORIENT COMMERCIAL JOINT STOCK BANK: CUSTOMER-ORIENTED.

Client.

Orient Commercial Joint Stock Bank (OCB) is one of the largest banks in Vietnam, enjoying a leading position on the domestic market. It has nearly 200 trading units in all major cities and economic zones in the country and employs about 6,000 people. It aims to become a financial institution distinguished by top-quality, fully-digital services. The bank has been developing very dynamically. In 2018, OCB's profit amounted to over EUR 68.35 million, and a year later it increased to EUR 124 million.

The banking sector in Vietnam is characterized by high growth dynamics. It includes over 40 domestic and international players, which makes it a highly competitive environment. Therefore, in order to attract as many new customers as possible it is necessary to be a market leader. Vietnamese consumers value technology and innovation much more than in other countries. Their expectations have become the catalyst for the launch of a new, intuitive Internet and mobile banking system responding to the needs of users and allowing for

a flexible creation of an offer. In order to reach that goal, OCB chose the Asseco Customer Banking Platform (Asseco CBP) – an Internet and mobile banking system providing institutions with unlimited possibilities in offering new products and services. The implementation was conducted by Asseco Central Europe (Asseco CE) in cooperation with Asseco Poland.

Implementation.

The functional scope of the project, which began in 2017, included the implementation of the Asseco CBP system, which offers a wide range of possibilities to adapt the Internet banking functionality to the needs and habits of clients, both by themselves and the bank. The system was based on an omnichannel platform, which made it possible to build an environment ensuring consistent customer service, in which a client freely migrates between access channels and chooses the most convenient time and way to access the bank. What is important, a client gets the same high standard of service in every channel. In turn, OCB has gained a source of valuable knowledge about how and when clients use its banking and what they need at a given moment.

The system's modern architecture has made it possible to adapt Asseco CBP efficiently to the requirements of both the bank and its clients. It has been based on the unique concept of mini-applications, which allows users to freely shape their banking and take advantage of the wide range of products available on the remote access platform. Therefore, the bank is able to implement and launch new services faster, thus shortening the time of their market launch.

The system is used by almost 100,000 active clients on a daily basis and their number has been constantly growing. The most frequently used features are Accounts management, Payments (Internal, External, Fast transfer 24/7), Standing orders, Savings, Bill payment, Cards, Loans, Deposits, e-Wallet, Loyalty. 45% of credit cards in the bank are sold exclusively through its digital channels.

The biggest challenge for this project was to adapt it to the cultural and market specificity of this vibrant country. It was important to meet the high expectations of the Vietnamese, who are not interested in the contemporary, business-as-usual (i.e ordinary) banking. They only focus on top-notch innovations and latest technology perks. That is

why it was so important to bring these perks to the production, because only such an approach could enable the bank to become the innovation leader.

The project ended in April 2019 and was carried out in a very short time. The period from the first analysis to the production launch of the system lasted only 9 months, and 3 months later the bank's clients could already use the solution. Asseco also provided OCB with warranty services for one year.

The delivery was carried out by Asseco CE and Asseco Poland both remotely and onsite. The two companies worked closely with experienced professionals from Slovakia, the Czech Republic and Vietnam, including a local partner company Fintek based in Ho Chi Minh City. The success of this project has marked the beginning of a long-term cooperation between Asseco and OCB, which is also planning to implement the Asseco Advisory Banking Platform (Asseco ABP) - a solution supporting the work of advisors. It enables the use of a unified and coherent customer service interface, regardless of the systems used in the bank.

The system's modern architecture has made it possible to adapt Asseco CBP efficiently to the requirements of both the bank and its clients.

Key benefits.

The Asseco system and its implementation have provided the institution with a solid market advantage, making OCB the leader in omnichannel banking in Vietnam. The project has been appreciated by both clients and industry experts, thanks to which the bank has been honored several times for its achievements in innovation. In 2018 it won the „Best New Omnichannel Platform” award and in 2019 the „Asia Pacific Entrepreneurship Awards”. In the same years, it received the prestigious „International Finance Award for Digital Banking” from IMF Magazine in the UK.

The implemented solution has enabled the bank to meet the expectations of demanding customers. It has also provided OCB with an efficient tool allowing it to offer new products and services. This has translated not only into increased sales, but has been also appreciated by private investors and international funds. They have assessed the changes in the bank’s approach very positively, which has resulted in several very attractive investment offers. By leveraging these investments the OCB will be able to continue its growth and maintain the market leader position.

“The modernization of the bank and its online services was the main goal of the Asseco Customer Banking Platform’s implementation in Vietnamese Orient Commercial Bank. This solution has created a modern and user-friendly environment for the clients of this institution” – said Jozef Klein, CEO of Asseco Central Europe.

“Asseco is not only a leading provider of software for financial institutions in Poland, but has been also consistently building its position on foreign markets. It offers software and provides services to banks in over 30 countries, and the agreement with Orient Commercial Joint Stock Bank is another step towards strengthening our Group’s international position. It is also a good example of the fact that Asseco’s solutions have gained the recognition of institutions from various parts of the world. What is most important, they also meet the high expectations of users, especially demanding ones like those in Vietnam” – said Zbigniew Pomianek, Vice President of the Management Board, Asseco Poland.

Project in numbers:

4

prestigious awards for the project implementation

9

months passed until the system’s production launch

45%

of credit cards sold in digital channels

> 100,000

customers using the solution

VOLKSWAGEN BANK: HIGHER GEAR OF CORPORATE BANKING.

Client.

Volkswagen Bank GmbH Sp. z o.o. Branch in Poland (Volkswagen Bank) is an institution that provides banking services related to the purchase and operation of cars, including Volkswagen, Audi, SEAT, ŠKODA and Porsche brands. It is part of Volkswagen Financial Services (VFS), which also offers leasing services and service packages to individual and business customers. Many years of experience gained on foreign markets make the financing of vehicle purchase the field in which the bank is the best specialist. It guarantees not only profes-

sional service and the security of all concluded transactions, but also focuses on the constant improvement of the offer for its clients.

It was the desire to continuously improve the quality of provided services that influenced Volkswagen Bank's decision to implement innovative technological tools that would allow for the optimization of many corporate banking processes and enable the efficient adjustment of the institution to the regulator's requirements. The Bank was looking for a proven solution which would improve, among others,

the service of enterprises and allow to build a permanent competitive advantage. The solution was to be characterized not only by an open architecture, but also by flexibility, enabling the efficient management of the product portfolio and the safe and quick implementation of changes. Therefore, Volkswagen Bank decided to continue its cooperation with Asseco Poland, which was responsible for the implementation of the Asseco Enterprise Banking Platform (Asseco EBP) – an omni-channel electronic banking system for business.

“Modern corporate banking requires a fresh look at a company and providing it with effective and secure financial management. Companies expect individual and professional approach, as well as efficient and flexible service. Therefore, the key issue is to use modern omni-channel systems, which completely change the philosophy of functioning of financial institutions. Thanks to the project implementation, Volkswagen Bank is able to better identify clients' needs and thus create a tailor-made offer” – said Mariusz Karchut, Key Account Manager, Asseco Poland.

“A financial institution's reaction speed is very important for companies. This is a key issue especially in cases where waiting for a bank's decision may bear financial consequences for a company. Therefore, Volkswagen Bank has relied on modern Asseco's solutions for corporate banking, thanks to which it could improve a number of business processes” – said Marek Lulek, Deputy Director of Commercial Banks Division, Asseco Poland.

Implementation.

The project began in November 2018 and was divided into two stages. The first one assumed the implementation of new electronic banking. In the next one, Asseco carried out the migration of clients from the old def3000/CEB solution to the new one.

The new transaction system is based on the concept of mini-applications, which allows the Bank to shape and launch banking products and services in the Internet banking system free of charge and quickly. Thanks to a wide range of functionalities, it provides comprehensive support for entrepreneurs in the area of financial services. At the same time, it ensures integration with the financial and accounting systems of corporate customers and the security of executed transactions.

Under the project, Asseco has implemented the following mini-applications: Accounts, Transfers, Deposits, Cards, Loans, Messages and Applications. Additionally, it has moved e-banking solutions from the bank's infrastructure to the Data Processing Centre (CPD) in Wrocław. In order to reach these goals, the implementation team had to develop a new model of cooperation at the operational and maintenance level.

During the project, the bank decided to implement the Asseco Open Banking API (Asseco OBA). This resulted from the need to meet the requirements of the European Union PSD II Directive, which defines the principles of cooperation between banks and payment service providers, i.e. the so-called TPP (Third Party Providers) in the area of open banking. It was also connected with the introduction of the so-called Strong Customer Authentication, which guarantees a higher level of credibility and resistance to fraud. Therefore, the project team implemented a mobile application for order authorization - Asseco MAA (Mobile Authorization and Authentication), which uses PUSH messages as an alternative to SMS messages.

A big challenge in this part of the project was the date of entry into force of the new regulations, but thanks to the efficient organization of work, the implementation team introduced all changes on time. It was composed of over 70 Asseco experts and the bank's 20 employees who worked closely together at each stage of the implementation.

Project milestones.

Providing solution for UAT tests

Preparation of CPD infrastructure for installation of systems

Implementation of new electronic banking

Migration of bank's clients to new Asseco EBP system

Provision and pairing of Asseco MAA mobile token

Stabilization of solution

Preparation of infrastructure and implementation of Asseco OBA

“As a financial institution, we are aware that the security of funds and the simplicity of solutions that enable efficient financial management are issues of utmost importance to clients. We are constantly striving to create an offer based on innovation, so that our customers have access to all services in one place. Our offer is one of the best on the market, which is confirmed by the second place in the July ranking of company accounts of the Bankier.pl portal. Thanks to our cooperation with Asseco, which has lasted for over 20 years, we have been successfully adapting to market changes and introducing digital solutions for our clients. Therefore, we have decided to implement an omni-channel electronic banking system and an interface corresponding to the open banking API standard. Currently, together with Asseco, we are working on the development of a hybrid application that will enable the use of our offer on all mobile devices. We strive to be a pioneer in the provision of financial services and we believe that our solutions will achieve the intended goal” – said Ronald Kulikowski, Director of Volkswagen Bank GmbH sp. z o.o. Branch in Poland.

Key benefits.

The implementation has allowed Volkswagen Bank to develop its omni-channel strategy and build a lasting competitive advantage. Thanks to Asseco EBP, the client is free to decide which banking service and communication channel they will use. In addition, the activity initiated in one channel is continued in another, without losing data or quality.

The new electronic banking has provided the customers of Volkswagen Bank with an efficient and quick access to modern banking products. Thanks to the application of RWD (Responsive Web Design) they can use their banking on both stationary and mobile devices. They also have the possibility of a mobile authorization of ordered instructions, which now takes place with a single click.

The implementation of the project has enabled the efficient management of the bank's portfolio and significantly accelerated the launch of the new offer on the market. It has also established the bank's position as a partner for business, which not only watches over and helps to manage a company's finances, but also recognizes its needs and helps implement them.

Thanks to the implementation of the omni-channel platform, on which the new e-banking is based, the bank has gained the opportunity to cooperate with fintech companies that can deliver new mini-applications without the involvement of Asseco. In turn, the introduction of a two-stage authentication has significantly improved the security of operations; the implementation of the Asseco MAA mobile token has reduced the costs of SMS messaging.

“Volkswagen Bank GmbH Branch in Poland offers financial products to both corporate and individual customers. We were among the first in Poland to introduce internet banking, which we have been adapting to new regulatory requirements and market trends. We are constantly improving our solutions so that the customer path is as intuitive as possible and at the same time safe. We want our clients to be able to manage their finances in a simple and easy way. That is why we decided to implement one of the most secure authorization methods, namely VWFS Mobile Token. This allows us to protect our clients' transactions against increasing hacking attacks, in accordance with the highest standards adjusted to PSD2 regulations. Our activities allow us to build a competitive advantage and, most importantly, to maintain customer satisfaction at the highest level” – said Daria Pawęda, Director of the Development and Customer Service Department, Volkswagen Bank GmbH sp. z o.o. Branch in Poland.

Project in numbers:

1

year to implement Asseco EBP

3

new solutions for business

20

persons from bank involved

70

persons from Asseco involved

92

companies have gained access to modern banking

> 13,500

customers migrated to new system

> 14,000

migrated real accounts

IT is

STABILITY

BANK GOSPODARSTWA KRAJOWEGO: FRAUD RESISTANT.

Client.

Bank Gospodarstwa Krajowego (BGK) is a state-controlled financial institution whose goal is to support the social and economic development of Poland and the public sector. The bank also initiates and participates in the cooperation between business, public sector and financial institutions. It plays a significant role in the implementation of the Strategy for Responsible Development, which is the Polish state's key document for shaping mid- and long-term economic policy. Finally, the bank is responsible for handling governmental financial programs and distributing related funds among others.

Like most banks in Europe, in 2018 BGK was faced with the challenge of introducing the EU IV AML Directive, to which the Polish law was adapted by the Anti-Money Laundering and Terrorist Financing Act. It introduced a number of provisions forcing financial institutions to

change their approach to eliminating events leading to abuse. It was the legislative changes that made BGK decide to implement a solution that would enable it to meet the Act's requirements, including efficient transaction reporting to the Regulator - General Inspector of Financial Information (GIIF). The bank's authorities wanted the new system to ensure not only effective AML prevention, but also to be tailored to the specifics of the institution's activities and internal procedures. Growing time pressure and high dynamics of changes in the new law's provision made BGK decide to cooperate with a proven IT provider. It considered Asseco Poland to be the best to achieve this objective. The company was entrusted with the task to implement the Asseco Anti-Money Laundering system (Asseco AML).

Despite time constraints and numerous challenges, the project was carried out at express pace. The system was launched in July 2019 - 2 months after the start of preparatory works related to the implementation.

Implementation.

The project, which began in June 2019, aimed at providing BGK with a modern IT tool for the comprehensive analysis of financial transactions, efficient detection of money laundering events and prevention of other suspicious activities. Asseco AML was also supposed to mitigate internal and external operational risk. To reach that goal, the Company implemented a set of functionalities allowing for:

- reporting transactions to the regulator
- monitoring of transactions
- assessing customer AML risk
- verifying customers and transactions for presence on sanction lists and in the PEP (Politically Exposed Person) database

The project required an adjustment of other BGK systems to the legal changes. This meant that the process of data loading to Asseco AML system from several data sources had to be unified. The combination of all this information was necessary to carry out comprehensive AML Compliance processes. This stage of the project required strong commitment of both the Asseco team and the bank's employees who verified the correctness of the new functionalities implemented on an ongoing basis.

An undoubted challenge in this project was the short implementation time. It was resulted from the date of entry into force the new

method of reporting transactions to the GIIF, which was to take effect on July 13, 2019 - less than a month and a half from the beginning of the project. It was an extremely short period for testing and then launching the tool on production environment.

An additional difficulty was the fact that on June 11, 2019 the Ministry of Finance published new templates of electronic documents which were to be used for reporting transactions to GIIF. Therefore, the project team had to make further modifications to the reporting tool prepared for implementation less than a month before their introduction. The fact that some points in the Polish AML Acts were unclear did not help in adapting the system to the legal changes either. Therefore, in order to avoid any doubts related to the interpretation of certain definitions, terms and concepts, the Asseco team monitored the regulator's guidelines on an ongoing basis and analyzed all modifications of the provisions in order to verify them thoroughly in terms of possible changes in the system.

Despite time constraints and numerous challenges, the project was carried out at express pace. The system was launched in July 2019 - 2 months after the start of preparatory works related to the implementation. This was thanks to the 13-person Asseco team, which worked closely with BGK's project team.

“The implementation of this project has allowed us to improve the effectiveness of process management in the Compliance area, in the meaning of monitoring and ensuring compliance of the bank's operations with the applicable legal regulations. The Asseco AML solution has also significantly reduced the possibility of money laundering and improved prevention of other fraudulent activities” – said Anna Trytek, Director of the Compliance Department, Bank Gospodarstwa Krajowego.

“The implementation of the AML system has allowed BGK to prevent fraud more effectively, in particular in the AML area, and to meet the obligations imposed by the regulator. The adaptation of the solution to the specific nature of our business and internal procedures, as well as the automation of analytical and reporting processes, were of great importance in this project. They have allowed to increase the efficiency of operations, while limiting the involvement of employees. As a result, our AML analysts team can focus on the in-depth analysis of the cases generated by the system in the defined time frames, which has recently been significantly shortened by the regulator” – said Jarosław Żółtowski, Director of the Financial Security Office, Bank Gospodarstwa Krajowego.

Key benefits.

As a result of the project implementation, BGK received a modern tool for effective fraud detection, which ensures the automation of analytical and reporting processes while limiting the involvement of employees in manual work. As a result, the AML team can now focus on the in-depth analysis of cases generated by the system and react efficiently within the time frames resulting from legal requirements. The implementation has made it possible for BGK to streamline and accelerate the transaction reporting process to the GIIF. Each of the registered transactions is validated, which guarantees that the report complies with the requirements imposed by the regulator.

Thanks to equipping the system with a package of business rules, the bank can quickly identify above-threshold and suspicious transactions. It also has the ability to create the pattern of customer behavior in the context of transactions performed by a customer, which enables the detection of abnormal activities.

The implementation of the project has allowed, among other things, to conduct better assessment of customers' vulnerability to money laundering. Thanks to the efficient analysis, the bank can quickly identify suspicious transactions.

“The scale of financial crime and the losses recorded by banks due to fraud have been constantly increasing. Additionally, the legal regulations in the AML area generate new obligations and force institutions to implement further client verification procedures. The selection of an appropriate tool supporting the fight against fraud is a key decision impacting the effectiveness of preventive actions and the level of compliance with legal requirements” – said Jarosław Bryl, Business Intelligence Division Director, Asseco Poland.

“The Risk&Compliance systems, including Asseco AML, are developed thanks to many years of experience, analyses and cooperation with financial market institutions and law firms. To meet the contemporary market needs, we employ highly competent mathematicians and programmers in our teams, as well as experts with many years of experience in compliance. At the same time, we are constantly cooperating with financial institutions, thanks to which our systems are very well adapted both to the changes taking place in their business environment and to the high dynamics of the regulatory environment as well as internal procedures and processes” – said Marcin Cegliński, Head of the Compliance Systems Team, Asseco Poland.

Project in numbers:

2

months of implementation period

13

IT specialists participating in the project

> 25

AML risk factors supporting in-depth customer analysis

200

rules supporting AML processes

309

reports to GIIF generated by system

> 31,700

incidents generated by monitoring rules in operation

< 20 million

operations monitored by system

| Payten

UNICREDIT BANK: SIGNED BY TECHNOLOGY.

Fuelled by a constant search for enhanced customer experience and cost efficiencies, modern banking is striving for optimization of its processes by leveraging the latest technologies. With the digital landscape incorporated in today's busy lifestyles, paperless signing and streamlining branch activities have been in focus of many innovative banks. One of them, a pioneer in many domains, UniCredit Bank, has partnered with Payten, member of Asseco, with a goal to establish the first paperless branch in Serbia.

Customer.

UniCredit Bank Serbia is a member of the UniCredit Group, a successful pan-European commercial bank that also offers investment and corporate banking to its clients. It has an extensive network of branches in Western, Central and Eastern Europe. In addition to many recognitions, in 2019 UniCredit was awarded as The Best Bank in Serbia by two prestigious financial magazines, Euromoney and The Banker.

With biometric signatures, customers can provide their handwritten signatures on tablets when withdrawing money at a branch office of UniCredit Bank.

Challenges.

At the time when UniCredit Bank intended to start the project, the legal landscape in Serbia did not officially recognize paperless signature since the Bill on Electronic Signatures was not approved by the National Parliament yet. For the bank, this meant handling additional procedures, the involvement of the Commissioner for information of public importance and personal data protection, and submitting supporting documentation. However, convinced in the necessity of digital

transformation in many aspects, the bank was devoted to finding a way to make the paperless signature processes live and available to its customers, while remaining compliant with the current local laws and regulations.

Furthermore, the project also envisaged integration with certain segments of the bank's system, which required additional time, detailed analysis and great devotion in order to complete the project successfully.

Implementation.

Payten delivered necessary hardware equipment, including special tablet devices and signature pens, and the software required for completing a cash desk process with a biometric or digital signature. Furthermore, an additional functionality was implemented in the form of a marketing module that enables the display of promotional material on tablet devices.

The project was completed in close cooperation among bank's dedicated teams from diverse sectors, Payten resources and Euronovate as Payten's partner. Paperless signing has been enabled by ENSoft, a solution for digital signing and storing of digital signature, with the support of modern tablets ENSign 10 and ENSign 11.

The project's main stages encompassed marketing module deploy-

Project in numbers:

72

UniCredit paperless branch offices in Serbia

> 500,000

biometric and digital signatures made in 2018/2019

ment, implementation of biometric and digital signature for the cash desk process, which includes one signatory and one document, and ultimately account opening and loan contracting, which requires multiple signatories and multiple documents.

Why implementing a biometric and digital signature?

With biometric signatures, customers can provide their handwritten signatures on tablets when withdrawing money at a branch office of UniCredit Bank. During the signing process, many elements are measured and tracked, such as the pressure, speed, movement, and a lot of other parameters that make a signature unique. Therefore, it

is almost impossible to forge a handwritten signature in any way. Although someone might copy one's signature in graphic terms, they can hardly copy how one does the signing, which is tracked and stored during the signing process. The signature is at all times kept in a protected signature database.

Certified digital signature refers to the signing process using an ID card, which is another option that UniCredit Bank Serbia implemented in its branch offices. Instead of a signature provided on a tablet, an ID card is read and a qualified digital signature is transferred as part of the document that needs to be signed.

Key benefits.

The bank has gained various benefits, some of which will be more visible in the future once the paperless signature process is implemented across other bank processes, such as account opening and loans. At the moment, the cash desk process, which includes pay-in and pay-out with one signature and one document, is digitalized, easier and faster, for both bank agents and customers. Some of the most important advantages encompass:

- Faster completion of transactions
- Cost-saving regarding paper and printing
- Increased transaction security
- Optimization of archiving and search processes
- Automated processing thanks to reduced paperwork
- New marketing opportunities gained by the introduction of the tablets for digital signing

Furthermore, the bank has added value to the services it offers to the existing and new customers using the latest technology that complies with international digital signature standards. The expectations are that, in the future, providing more than one signature on multiple documents will be enabled, such as signatures of two people in different locations at different time.

“UniCredit Bank in Serbia has recognized the requirements of its customers in the digital era and a general tendency of shifting operations to digital channels, while simultaneously balancing security, cost, and convenience of new services. Thanks to our long-standing and successful cooperation with Payten, the paperless signature process was launched in mid-2018 at all branch offices of UniCredit Bank Serbia. We were the first bank to provide this service to its customers on the local market and we look forward to future innovative projects together with Payten” – said Saša Bilanović, Head of Digital Banking, CX and Contact Center, UniCredit Bank Serbia.

IT is

GRUWTF

| Asseco South Eastern Europe

INTESA SANPAOLO: ENDLESSLY MODERN.

Client.

Intesa Sanpaolo is one of the leading banking groups in Europe with about 1,000 branches and 7.2 million customers. It operates in 12 countries, such as Hungary, Croatia, Egypt, Albania, Slovenia, Serbia, Romania, Slovakia. The Group is divided into 6 divisions, each responsible for a different area. One of them is international activity, which is carried out, among others,

by 10 banks belonging to the International Subsidiary Banks Division (ISBD). Intesa Sanpaolo's goal was to provide customers with a unique and uniform experience in all channels - both digital and traditional. It also wanted to offer its clients the access to advanced banking products and services. Therefore, in 2015, it began the cooperation with Asseco

South Eastern Europe (Asseco SEE), a company from the Asseco Group. Its objective was to develop and implement an innovative mobile banking solution in 5 banks belonging to ISBD: CIB Bank in Hungary, Alex Bank in Egypt, Privredna Banka Zagreb in Croatia, Intesa Sanpaolo Bank in Albania and Intesa Sanpaolo Bank in Slovenia.

Implementation.

The goal of the implementation was to create a modern mobile banking system as part of the Intesa Sanpaolo Group's internal digital transformation project called DigiCal, covering 5 markets: Hungarian, Croatian, Albanian, Egyptian and Slovenian.

Intesa Sanpaolo wanted DigiCal to introduce a completely new quality of customer service. Therefore, in the first phase of the project, instead of focusing on technology, the implementation team started with a thorough analysis of user needs. This approach allowed to create an omni-channel solution that ensures the same experience in all channels. Owing to this, the customer can choose the most convenient way of access to banking and get the same high standard of service.

DigiCal has made available online and mobile banking, as well as wearable and digital customer service applications. The system ensured a comprehensive handling of applications, payments, agreements, sales processes and contextual marketing, which was based on the Adaptive Elements platform. It ensures a rapid development of native mobile applications by reusing adaptive elements. Each of them is implemented on both mobile platforms (iOS and Android), which guarantees the same quality and user experience. This solution

is ideal for large scale mobile projects, which require speed and the highest level of security.

A big challenge for such a complex project was not only to adapt the new system to the specifics of each institution, but also to the regulations in force in a given country. This was especially true in Egypt, where the Asseco SEE team had to develop a solution supporting both Arabic language and different spelling, which, unlike in European countries, is right-to-left (RTL).

DigiCal provided 5 banks from the Sanpaolo Group and their clients with access to a modern banking system and innovative forms of payment. It has also been appreciated by industry experts. In March 2016, just after the first implementation of the application in CIB Bank in Hungary, DigiCal received the „Mastercard Bank of the Year” award. Additionally, the system received very high ratings from users, as evidenced by the opinions shared in App Store and Google Play.

“Technology has been changing the DNA of banking. This means that banks need to be prepared for a change in order to build positive and long-term customer relationships. Only those which understand this have a chance to function in such a competitive market. That is why we decided to implement this project. Owing to it we have managed to solve problems resulting from different levels of digital maturity in the countries we operate in. Thanks to DigiCal we have a modern tool that we can adapt efficiently to the needs of each market” – said Maurice Lisi, Director of Omnichannel and CRM Division, Intesa Sanpaolo.

“This project has undoubtedly strengthened the partnership between Asseco SEE and Intesa Sanpaolo Group and opened new opportunities for further cooperation. Thanks to its implementation, we have managed to create an application with a sophisticated technical architecture, innovative mobile features and a visionary approach to user experience. I am convinced that it will help the Intesa Sanpaolo Group to stand out from the competition and take a leading position in this fast-growing and demanding markets” – said Slavko Žnidarić, Mobile Solution Manager, Asseco SEE.



Chapter two |

PAYMENTS & INSURANCE

ATLANTICO EUROPA: OPEN TO NEOBANKING.

Client.

ATLANTICO Europa is a Portuguese retail bank that specializes in long-term deposits. Since 2009 it has been providing high quality financial services to clients from over 60 countries. Despite its rather short history, the bank is a very dynamically developing institution, which attaches great importance to both increasing its competitiveness and the convenience of its users, so it willingly introduces innovations.

In 2019, due to a decrease in margin on interest rates, the bank faced a new challenge on searching for new revenue sources. It also wanted to take advantage of the business potential associated with the development of the European payment market, resulting from the introduction of the PSD2 directive. Therefore, it was looking for tools that would

provide it with an opportunity to expand its cooperation with fintechs. Since 2018, ATLANTICO Europa has been using ACM (Advanced Card Management) - the Asseco PST's system, which supported, among others, debit, credit and prepaid card operations. As the European payments market evolved with the PSD2 initiative, it was clear that also ACM had to expand along in order to allow the bank to enter the new business area. The system is 100% service-based, so the shortest way to achieve the goal was to create the Payments Services Hub - a payment platform for fintechs. This way the bank could acquire a channel capable of supporting a huge transaction volume. In order to complete the project, the bank chose Asseco PST, a company from the Asseco Group.

The implementation of the project provided ATLANTICO Europa with the opportunity to expand its offer, which allowed not only to provide new services but also to open up to new customers.

Implementation.

The main goal of the project was to develop and implement the Payments Services Hub, a new module of the ACM system. It had to be fully scalable in the following areas: channel endpoint - gateway for fintechs, bookkeeping procedures, transaction clearing, commission calculation and accounting ledger generation.

The ACM system had already been adapted to the PSD2 directive. It had also supported instant and SEPA payments (Single Euro Payments Area), as well as local payment services schema (recharging pre-paid phones and transport cards, payment of invoices, taxes). This allowed the project to focus on two main developments:

- Support of huge transaction volumes with few customers (fintechs). In addition, the system had to be able to process concurring transactions over the same DDA account (Demand Deposit Account), while guaranteeing its available balance unviolated.
- Automatic processing of refunds from the DDA's in order to ensure a 24/7 non-stop service, and simultaneously continue to reconcile the clearing and accounting ledger.

The project lasted 3 months and was carried out with the participation of a small team of 4 programmers, and its implementation allowed to achieve all the assumed objectives.

Project in numbers:

3

months was the implementation time

4

programmers executed the project

14%

is the revenue share generated by Payments Services Hub in 2019

Key benefits.

The implementation of the project provided ATLANTICO Europa with the opportunity to expand its offer, which allowed not only to provide new services but also to open up to new customers.

Payments Services Hub became another source of revenues for ATLANTICO Europa and the solution accounted for about 14% of the bank's total sales in 2019. The interchange fees and commissions collected by the bank along with the interests charged over the credit lines completely changed the nature of the institution's business activity.

IT is

FOR THE FUTURE

| Necomplus

BANCO SABADELL: MOVES WITH THE TIMES.

Client.

Banco Sabadell is the fourth largest private banking group in Spain in terms of assets. It has been recording rapid growth, achieving in 2019 a net profit of EUR 768 million, which marked an increase by 134% year-on-year. It employs over 24,000 people and offers a full range of financial services, provided with full professionalism and the highest standards of service.

The Bank addresses its offer not only to individual and corporate customers but also provides modern services to non-governmental organizations and religious institutions. With them in mind the Bank decided to launch IT solutions that would introduce Spanish churches into the 21st century and improve the way funds are transferred to them. For the implementation of this project the Bank chose Necomplus, a company from the Asseco Group.

Implementation.

The objective of this unique project, which began in June 2018, was to implement the eDonations system in churches and thus enable the faithful to make electronic donations. This meant the modernization of one of the oldest, very traditional institutions whose members had had no previous contact with contactless payments. Necomplus aimed to create an innovative solution which, thanks to the use of the Near Field Communication [NFC] technology, would allow users to make donations with the use of credit cards, smartphones or watches.

The terminals' design and the method of installation were also of vital importance. Therefore, in the first stage of the project, special church lecterns were built to hold the terminal and in the next stage, votive candle stands were added.

In Banco Sabadell, Necomplus implemented the software adapted to Vx680 POS with customized functionality and a user interface for donations. The company provided:

Thanks to eDonations, the faithful can make quick cashless transactions with a card, phone or watch instead of putting money on a collection plate.

- access to network statistics, which can be filtered according to donation collection points, their types and terminals, among others
- access to online map displaying eDonations installations
- integration with Necomplus PI ticketing system for the management of eDonations installations & maintenance

The project was completed in November 2018, and a team of 4 IT specialists was responsible for its implementation.

In the initial stage, these pioneering terminals were installed by Necomplus in over 240 parishes in Spain. In 2019, a more comprehensive and portable version of the eDonations ecosystem was created, with collection boxes which can be customized and include both the terminal and a cash slot.

The users did not need much time to get adjusted to the new solution in churches. This was achieved thanks to the simplicity and intuitiveness of use, which made the initial barrier disappear quickly.

eDonations is a non-cash donation collection system used by more than 440 entities, such as foundations, NGOs and religious institutions. It offers a high level of personalization, so it can be used by any organization that receives financial support in both cash and digital form. It uses easy-to-transport POS devices, which ensure fast transfer of collected funds and their better protection against possible theft.

Key benefits.

eDonations is a pioneering solution, which was the first to offer functionalities for digital handling of the donation process. With its help, it was possible to modernize one of the oldest institutions in the world and introduce it into modern technology.

The software developed by Necomplus played a key role in the transition from traditional to digital donations. The convenience, intuitiveness and security of this type of funds collection have made eDonations increasingly more popular. More than 4,000 entities in Spain have declared their willingness to use the system to improve the financing of their social projects.

POS devices in churches have increased the number of donations by 25%. They have also offered a great convenience for those who do not always have cash with them. Thanks to eDonations, the faithful can

make quick cashless transactions with a card, phone or watch instead of putting money on a collection plate.

“The aim of this project is not only to increase the profitability of the Bank, but above all to support our customers in their digitalization process, seeking to strengthen the relationship in the long term. That is why institutions pay only a reduced commission, which covers the operational costs resulting from the use of the system. Owing to this, almost the entire amount of the donation is transferred to the institution” — said Santiago Portas, Director of Religious Institutions, Banco Sabadell.

Project in numbers:

4

specialists responsible for the implementation

5

months – the project implementation

> 240

parishes using eDonations

> 4,000

entities in Spain willing to implement the system

| Asseco Lithuania

MOTOR INSURERS' BUREAU OF THE REPUBLIC OF LITHUANIA: **JUST IN CASE.**

Client.

The Motor Insurers' Bureau of the Republic of Lithuania (MIB) is an association of 8 insurance companies operating in the country. Its aim is to coordinate activities related to a compulsory motor liability insurance (MTPL), among other things. The MIB also runs an information center and is a body dealing with claims and compensation payments.

The association attaches great importance to the safety and comfort of drivers, for whom accidents and road collisions are always a stressful experience. In addition, it usually takes a lot of time to fill in the related paper declaration. That is why the MIB has decided to implement IT solutions that would simplify this process. To this end, it began the cooperation with Asseco Lithuania, a company from the Asseco Group, whose task was to develop two solutions - the Draudimoivykiai.lt application for the declaration of vehicle traffic accidents and a self-service solution for managing accident history as well as insurance documents.

Implementation.

The implementation began in November 2018 and its goal was to create innovative IT tools providing both drivers and insurance companies with intelligent management of a post-accident procedure. The project aimed to improve the process of reporting road accidents and handling related insurance documents. The new applications were to be characterized by intuitiveness, reliability, high availability and efficiency of operation, which, on the one hand, would facilitate and speed up work of the association and insurance companies, and on the other hand, provide them with access to information about an incident immediately after completing a declaration.

All Lithuanian drivers have gained access to the Internet system for reporting road accidents and collisions.

In order to reach these goals, Asseco Lithuania implemented two solutions at the MIB. The first one, Draudimoivykiai.lt, an accident reporting application, was equipped with a mobile electronic signature, Smart-ID authentication functionality and an additional possibility to log in using a Google or Facebook account. The solution provided the following functionalities:

- Declaration of a traffic accident with a possibility to call emergency 112
- Completing vehicle license plate numbers and verifying their registration within the MIB registries
- Automated completing of driver's data (personal data and contacts) for registered users
- Email validation solution for unregistered users
- Uploading accident photos using hints and drawing a traffic accident diagram
- Defining damages, accident circumstances and reporting the time and place of an accident by using device GPS location
- Indicating traffic accident witnesses
- Confirmation of responsibility for the accident by the culprit
- Signing a declaration by both drivers and submitting it to the MIB's Information System
- Generating a declaration file and informing the users about the next steps

The implementation of the application required a change in the data protocol for accident declarations, therefore Asseco Lithuania took care to unify it with the official address register. Additionally, it provided the possibility to add GPS coordinates to an accident reporting application form. Additionally, the application's demo version was made available, which allows drivers to test it beforehand. The second application, whose objective was to support the employees of the MIB and insurance companies, provided:

- Reminders about expiring insurance contracts, notifications about the status of the registered accident
- Monitoring of road accident history, insurance documents and receivables for the MIB
- Submission of information requests and applications for payment of insurance benefits
- Claim application for accidents that have occurred in other European countries

Project milestones.

[Preparation of a data protocol for accident declarations](#)

[Creation of a detailed graphical interface design of the application](#)

[Development of a pilot version of the application](#)

[Testing of the pilot version of the application](#)

[Unifying the data protocol with the official address register and adding GPS coordinates to documents](#)

[Application acceptance testing](#)

The implementation required the integration of the solutions with the MIB's information system. It was completed in November 2019 and implemented by Asseco Lithuania's 5-person team, which reacted to the client's needs and suggestions on an ongoing basis. The project also involved 3 specialists from the MIB and experts from each of the 8 insurance companies.

The MIB's Information System has been developed by Asseco Lithuania since 2002. The purpose of the system is to collect, store and distribute data about the issued insurance policies in one central database located at the MIB. Additionally, the system provides a claim administration functionality, data analysis service and is integrated with more than 20 systems of other institutions, including police and bank registers. The system functionalities are regulated by the Law on Compulsory Motor Third Party Liability Insurance.

Key benefits.

The implementation of the project has provided all drivers of the Republic of Lithuania with access to a very convenient solution that provides the possibility to report road accidents and collisions online. Owing to the application they can carry out the whole process immediately after an incident and thus reduce the time needed for filling in documents manually.

The solution assists the user step by step in the process of documenting an incident, taking photos, etc. It provides all the necessary instructions needed to properly fill in a declaration, which eliminates

possible errors. It also allows to collect necessary information from other drivers involved in an accident.

Thanks to the automatic submission of the declaration, both the MIB and its affiliated insurance companies have gained immediate knowledge about the events involving their clients. They also have a tool that streamlines the handling of declarations and simplifies related formalities. Through this tool, they can monitor the history of cases on an ongoing basis and are informed, among others, about expiring agreements and the administrative status of the reported traffic accidents.

Project in numbers:

2

solutions

20

internal users

> 600

accident declarations registered by the application in the first 5 months

> 4,700

registered users

~ 1.5 million

potential users of the solution

Chapter three |

PUBLIC ADMINISTRATION

MUNICIPAL TRANSPORT AUTHORITY IN RZESZÓW: NEXT STOP TO SMART CITY.

Client.

The Municipal Transport Authority (ZTM) in Rzeszów is an organizational unit of the Municipality of Rzeszów. It is responsible for the functioning of the city's public transport, including bus stations. It manages the Local Bus Station in Rzeszów as well as its infrastructure and IT systems dealing with monitoring, vehicle traffic and passenger information, among others. The station is the largest public bus transport interchange in the Podkarpackie Voivodeship. Private and public carriers use it as a hub for local, long-distance and international vehicle transport.

With a goal to improve the comfort of tourists and residents, ZTM de-

ecided to implement modern bus traffic management tools at the Local Bus Station in Rzeszów. It was interested in an innovative solution which would provide travelers and drivers with the best conditions. Therefore, in 2016 it decided to implement the „Local Bus Station” Interchange Management System. For the implementation of this project it chose the consortium of Asseco Data Systems (ADS) and ML Systems. It was responsible for developing a dedicated monitoring and lighting system and providing access to information that would facilitate travel planning. The investment was co-financed from the European Union (EU) funds.

The innovation of the solutions used at the Local Bus Station made it the most modern facility of this type in Poland, which has become the pride of Rzeszów and the center of bus transport.

Implementation.

In the project, ADS was responsible for the creation of the bus station's modern IT infrastructure. The goal was to provide passengers with safe and comfortable use of public transport, both on local and long-distance routes, and enable convenient access to information. To this end, ADS implemented the Interchange Management System which provided ZTM with the following functions:

- static timetable management
- automatic response to changes in ongoing bus runs based on information obtained from vehicles
- displaying dynamic passenger information on platform boards, collective boards and monitors in the waiting room
- automatic voice announcements both in the waiting room and on platforms
- information about current events in the local area

- registration of vehicles entering and leaving the station
- monitoring of vehicles' duration of use of stop platforms
- automatic ticket sales
- monitoring of the building and the station area

The Interchange Management System is a modular, coherent platform which facilitates the management of the interchange point by automating several processes. In order to ensure the maximum data security, the central software has been installed on a computing cluster. It is equipped with a backup system and the function of data replication to another location. The system is managed from an operator station or remotely via the Internet. This allows to maintain the correctness of ongoing bus runs, control vehicles on the maneuvering area and monitor the safety of travelers (thanks to the system of 36 camer-

as). The software is equipped with a module for creating and editing timetables. It also provides all types of bus run markings defined in the Regulation of the Minister of Transport, Construction and Maritime Economy on timetables.

As part of the project, ADS has equipped all bus stops with double-sided LED boards. They inform passengers about upcoming bus runs at the entire interchange point, possible delays and changes of bus positions on platforms. People with disabilities can find a dedicated button on each board which enables them to listen to information contained therein. Additionally, the system has enabled the operators to automatically play voice messages, based on predefined content. In addition, ADS has implemented a monitoring system which allows to charge carriers correctly for the use of the facility and inform the relevant services about the cases of unauthorized entry. The station

“This is the first system of this kind in Poland, because Rzeszów was the first to diagnose the problem and its negative impact on the functioning of the city transport. I am pleased that it was our team which carried out this pioneering project, allowing to create an intelligent and ecological facility. The station is fully covered with photovoltaics - the panels are located on the facade, bus shelters and even blinds. The air conditioning system can automatically adapt to the weather outside. As a result, it is a zero-emission and energy self-sufficient structure” – said Paweł Sokołowski, Director of the Digital City Infrastructure Division, Asseco Data Systems.

building, platforms and maneuvering area have been equipped with video surveillance, which allows the staff to track potential threats. ADS has also provided and installed the ANPR and overview cameras – the former recognize license plates and the latter identify vehicle categories in a local analytical software, among others. They automate the processes of vehicle control and reporting of detected infringements. In turn, the efficient backup system has ensured high throughput and data security. All active devices are located in a dedicated server room equipped with several security features.

The station has been provided with the most modern equipment, including interactive colorful LED panels on platforms and in the waiting room, which inform about bus runs, a special button, which activates voice information for blind people, a 24-hour ticket vending machine and an infokiosk - all these functionalities help plan a journey more conveniently. The facility is fully covered with photovoltaic panels, which results in a zero-emission and energy self-sufficient public facility.

The implementation of the system was completed in December 2018, one month before the opening of the Local Bus Station in Rzeszów. The innovative solutions used there make it the most modern facility of this type in Poland. It has become the pride of Rzeszów and the bus communication hub.

As part of the improvement of public transport in Rzeszów, ADS simultaneously implemented the „Extension of ITS bus stop infrastructure” project for ZTM, under which the company developed the Intelligent BUS Stop Monitoring System. It was integrated with Resovian Intelligent Transport System and electronic passenger information, which has been functioning for several years now, including monitoring of the parking area, interactive bus stop panels and ticket vending machines. The project supplemented the existing infrastructure with 6 additional ticketing devices and 16 new electronic passenger information LED panels. A system of intelligent traffic supervision in bus bays was also installed at 47 Rzeszów bus stops. The installation equipped with video surveillance and information processing equipment, as well as the necessary telecommunication devices, provided the residents with greater safety and comfort of using public transport, and allowed to detect cases of illegal use of ZTM’s bays on bus stops.

The project implementation, which lasted from March to December 2018, was appreciated by both users and sector experts. In 2019, during the Smart City Forum Gala, it received the Smart City Award in the „Smart City Solution” category.

“By implementing another innovative project with Asseco, Rzeszów has strengthened its leading position in the market of Smart City solutions, of which we are very proud. I am convinced that this new undertaking will contribute to greater comfort of Rzeszów’s citizens using public transport” – said Marek Ustrobiński, Deputy Mayor of Rzeszów.

Key benefits.

Thanks to the project implementation, the Local Bus Station in Rzeszów can now offer a new, higher standard of communication with passengers, who can plan trips on their own, using the so-called info kiosks installed at the interchange points. They also have easy access to the most up-to-date information, adapted to the needs of disabled people.

As a result of the successful implementation, ZTM is now equipped with a system that monitors vehicles using the station's infrastructure, makes it possible to verify authorizations and report irregularities. Finally, it enables easy updating of the timetable and verifying adherence to it by bus drivers.

Asseco's solution has increased the safety of travelers. The cooperation between ADS and ZTM has allowed for the integration of all ICT solutions with other public transport support systems already operating in the city.

The use of intelligent, modern data collection analytics ensures access to a wide variety of information, and thus a central supervision of the station's functioning. Thanks to the project, Rzeszów is home to the first energy self-sufficient bus terminal in Poland.

“Digital solutions supporting the functioning of transport in Rzeszów are a very good example of spectacular investments, which certainly should be mentioned when talking about Polish Smart Cities. Owing to this project, the capital city of the Podkarpacie region is now equipped with a number of innovative systems supporting communication and increasing the comfort of travelers, and the Local Station has become its best *showpiece*” – said Andrzej Dopierała, President of the Management Board, Asseco Data Systems.

Project in numbers:

16

months of project implementation

36

security cameras ensuring safety of travelers

~ 800

bus runs per day monitored by the system

6,100 m²

of area monitored by the system

> 10,000

passengers served daily

26,000

meters of cabling used

~ 1 million

vehicles using the station annually

IT is

IDEA



WARSAW CITY HALL: CIVIC INVESTMENT.

Client.

The Warsaw City Hall is a public administration unit responsible for public safety and order, education, infrastructure, as well as the environmental protection and promotion of Poland's capital city. It pursues its objectives through the city authorities and 18 auxiliary units - the districts of the Capital City of Warsaw.

An important part of the city hall's activities is the management of the municipal budget, from which each year some share of funds is allocated for the implementation of the projects selected by the residents. It is within the framework of the civic budget that Warsaw residents can create, submit and vote for the selected initiatives. Owing to this, they have a real impact on what will be created in their

immediate vicinity, in other districts or in the whole of Warsaw. The city authorities wanted to make it easier for the residents to participate in this process because they had to visit the city offices in person each time they wanted to submit an application or vote for a project of their choice. Therefore, in 2019, on the occasion of the next edition of the citizens' budget, the city hall decided to implement a new design of the zet.WIBO application and to modify the functionalities to improve the work of Warsaw's officials. For the implementation of the project the city hall chose Asseco Data Systems (ADS) - the developer of the solution. The company was entrusted with the task of adapting the application to the new requirements.

The system has improved the management of the civic budget in all districts of Warsaw. It has also increased the involvement of the capital city's residents in the submission and selection of projects to be implemented.

Implementation.

The main objective of the project was to automate the process of implementing the civic budget in the field of vote counting, results analysis and reporting, as well as communication with the citizens. According to the agreement, ADS was responsible for modifying the zet.WIBO application and adapting it to the specific needs of the city hall. The project was based on the Kaizen Japanese business philosophy, which assumes constant improvement of the functioning of individual processes. This is done gradually, with the support of all parties involved in the implementation, which allows for a selective elimination of any detected inconsistencies. Such an approach allows to improve the operation of the application at every stage of the civic budget process.

The adaptation of zet.WIBO to the new standards required the modification of two parts of the application - both the one intended for the residents and the one including the tools used by the employees of individual offices, districts and units. The application's functionalities have been modified so to allow Warsaw residents to remotely modify the submitted applications, view the project evaluation card and verify the level of their implementation, as well as participate in virtual discussions making it possible to submit their comments and suggestions. ADS has also provided the users with access to the full history of projects implemented in the previous five years - they can be located on an interactive map created especially for this purpose.

The goal of zet.WIBO's operation is to ensure the transparency and credibility of all the processes taking place, including full identification of the choices made by the residents. The application also ensures a high level of security features, which allow not only to keep the data confidential, but also to verify the correctness of the votes cast and reduce the risk related to the use of someone else's identity.

The biggest challenge during the project was the automation of activities and the implementation of tools improving the implementation of the civic budget in 18 districts of the city and at the city-wide level. This involved the need to give about a thousand employees the roles and permissions that were necessary to handle the process properly. The Warsaw City Hall has been using the zet.WIBO application since 2014. Since then ADS has been responsible for maintaining the solution and adapting it to the subsequent editions of the civic budget.

“The development of e-services is very important for the proper functioning of local governments, therefore in this project we focused on the automation of the process of implementing the civic budget. Extending the zet.WIBO application with new functionalities has significantly improved the process of counting of votes, their analysis and reporting of voting results, as well as the communication with residents. Today they can submit their proposals and vote not only in the offices, but also online and thus decide remotely which project will be implemented”

— Ewa Kolankiewicz, Director of the Social Communication Centre, Warsaw City Hall.

Project milestones.

Determination of technical and substantive requirements

Analysis of specifications

Implementation of changes in zet.WIBO application

Providing test environment

Production launch of application

Key benefits.

The project has improved the management of the civic budget in all districts of the capital city of Warsaw. It has allowed, among other things, to reduce the number of incorrectly submitted applications and speed up the whole process. It has also contributed to increasing the involvement of the capital's residents, who can now remotely engage in activities in their neighborhood and co-decide on spending local budgets. As a result, over 105,000 people took part in the 2020 edition of the budget, (88% electronically), i.e. by 17.5% more than in the previous year. Through the application, they can not only submit and vote for projects online, but also have access to the history of their activities since the creation of their account.

Thanks to the project implementation, the city hall's employees have gained a number of tools that allow them to increase the efficiency of office work and reduce the paper circulation of documents. The digitization of this process has significantly accelerated and facilitated, among others, counting votes, verifying the correctness of applications, as well as filtering and sorting them. Through the application, the users can also easily verify the status of individual projects, send a message, add documentation to projects, and generate the necessary statements.

“zet.WIBO has been on the market for several years and we are pioneers in this area. The product is being extended along with the development of the participation idea in Warsaw. We can safely say that it is the capital city officials who set the tone for the changes introduced in the zet.WIBO application, and Warsaw is our most demanding partner. As the solution's provider we listen carefully to our customers and respond to their needs. We are building a solution that is open to further development” — said Tomasz Winiarski, Head of the SaaS Solutions Team, Asseco Data Systems.

“The solution we have developed in Asseco Data Systems has been operating in Polish cities since 2013. However, it is not always a ready-made product in a box, as its functionalities are often modified according to the expectations and specific needs of customers. This is especially important for the largest cities. In each project, we analyze the detailed approach of decision-makers to the entire process of the civic budget, including the issues of transparency, the way of accounting and reporting activities, or communication with the residents. All this to provide a tailor-made solution” — said Jarosław Jastrzębski, Vice President of the Management Board, Asseco Data Systems.

Project in numbers:

18

Warsaw districts covered by application

80%

number of electronic applications increased to 88% in last edition

~ 1,000

employees with access to zet.WIBO

~ 2,000

projects filed for 2020

> 105,000

votes cast in 2020 edition

~ PLN 83 million

allocated from 2020 civic budget

> 1.7 million

inhabitants of capital city with possibility to submit projects and vote online

| Asseco Central Europe

MINISTRY OF INTERIOR OF THE CZECH REPUBLIC: IN FRONT OF RESIDENTS.

Client.

The Ministry of the Interior of the Czech Republic is the public administration's central body responsible for the internal security of the country and the preservation of public order, among other things. It also focuses on the implementation of the e-Administration Strategy of the Czech Republic, which assumes the digital transformation of the public administration entities across the country.

In 2016, the Ministry decided to build Citizen Portal - a platform that was to constitute a single, centralized access point to e-services. The project implementation was the responsibility, among others, of Asseco Central Europe (Asseco CE) - a company of the Asseco Group, which co-developed the solution's architecture and implemented its selected front-end elements.

The project was carried out under the umbrella of the National Agency for Communications and IT Technologies (NAKIT), which is a strategic partner of the state providing communication and information services for the rescue service, security forces and public administration.

“The implementation of this project has significantly improved the communication between the citizens of the Czech Republic and public entities. Asseco CE contributed to the creation of this platform as a key developer of individual front-end parts. Our new concept of the solution is based on the idea of creating a single access point to administrative services” — Michal Polehňa, Public CZ Business Unit Director, Asseco Central Europe.

Implementation.

The aim of the project was to build and create an omni-channel platform that would ensure efficient and secure communication between the citizen and the public entities of the Czech Republic. Under the project, the following key functionalities have been implemented:

- Life Situation Guide
- Issue Status Monitoring
- Notification Services
- Overview of an Individual's
- Data Processed by the State
- Central Payment Gate
- Information Channels
- Guaranteed Document Storage
- Third Party Services Panels

Key benefits.

The platform has allowed citizens to access state electronic services efficiently and quickly. Its launch was also a big step in the development of digital transformation of the public administration in the Czech Republic.

Thanks to Citizen Portal, the citizens, as well as business entities, can solve various life situations from one place. It has also made it easier

The platform is supported by the Microsoft Azure software and uses a complex integration approach. It is based on innovative open source technologies that make it possible to modify existing modules and further expand the solution according to future needs. Its development also required the implementation of authentication tools, such as an electronic identity card. In addition, one of the goals was to provide online access to key services, such as information about disability, overdue payments, criminal record and all data related to social security.

Citizen Portal allows the services of individual state administration entities to be made available. It is based on the publication of the so-called tiles for which a tool is created as well as the rules for registering them. This creates a kind of e-Administration Framework, enabling various entities to access services on this umbrella portal. The first

for users to access information on, among other things, the progress of their application processing and the amount of fees due [with the possibility of paying them directly via the portal].

Thanks to the use of modern Internet and mobile applications and notifications, the platform has ensured fast and effective provision of public services, which can be accessed from any device.

publishers were the Czech Social Security Administration, the General Health Insurance Company, the General Financial Directorate and the Vysocina Region with its eAmbulance health system.

The development of the solution, which provided the users with centralized, intuitive and secure access to state electronic services, was a very demanding project. The creation of Citizen Portal was an important step in the digital transformation of the public administration in the Czech Republic. The project was also appreciated by industry experts and in 2018 it was recognized by the Microsoft Awards in the Public Administration and Modern City Development category. It also achieved the top position in the eGovernment THE BEST ranking in the Central Projects category - every year, the list distinguishes the most interesting IT projects implemented for the public administration sector in the Czech Republic.

The launch of the Citizens' Portal was a milestone in the digital transformation of public administration in the Czech Republic.

Chapter four |

HEALTHCARE

| Asseco Poland

VOIVODESHIP HOSPITAL COMPLEX IN TORUŃ: WITH LARGE DOSE OF E-HEALTH.

Client.

The L. Rydygier Voivodeship Polyclinical Hospital in Toruń is the largest public hospital in the city, and one of the largest in Poland, with five units located in different parts of Toruń. The facility meets the highest standards of hospital treatment. It employs about 2,000 people and every year it hospitalizes over 90,000 patients and provides about 250,000 consultations in outpatient clinics.

In its activity it focuses on continuous improvement of the quality of services provided and the comfort of patients, therefore in 2019, as the first hospital in Poland, it decided to implement the Medical Information mobile application. This is a solution developed in-house by Asseco Poland, which provides its clients with remote access to information on their treatment and examination results via mobile phones. Importantly, the entire process takes place in compliance with the highest security standards for the protection of sensitive data. This was the first production implementation of this solution in Poland, and it was carried out by Asseco's long-term partner - Infocomp Sp. z o.o.

Implementation.

The aim of the project was to implement the Medical Information application, which ensures efficient exchange of medical documentation between the Voivodeship Polyclinical Hospital in Toruń and its patients. In order to ensure better access to test results stored in the EDM repository of Asseco Medical Management Solutions (AMMS), the hospital authorities decided to extend the scope of implementation, including full integration of the solution with the laboratory testing module. On this occasion, an electronic signature was implemented in the laboratory, which was integrated with EDM for the first time in Poland. It involved

“The Voivodeship Polyclinical Hospital in Toruń is one of the largest health care institutions in the Kujawsko-Pomorskie Voivodeship. Our priority is to provide patients with quick and convenient access to medical services. This is possible thanks to applications such as Medical Information developed by Asseco, among others. The solution enables them to access test results and hospital treatment information cards from their mobile phones. This significantly saves their time, and at the same time shortens the queues” – said Sylwia Sobczak, Director of the Voivodeship Hospital in Toruń.

preparing the hospital system to support this process so that the test results could be efficiently transferred to the EDM repository and the patient's phone.

An unquestionable challenge in this project was to automate the transmission of medical records and test results to one system. An important element of the implementation was also ensuring the highest standards of data security, so that only the users of the application would have access to confidential information and would be able to independently decide what they download from medical facilities, and what they store and make available.

Infocomp also supported the unit in the preparations for the introduction of the new solution. For this purpose, in units subordinate to the

Voivodeship Polyclinical Hospital in Toruń, a 24-hour registration for mobile patients was launched, where people wishing to start using the application can set up an account, obtain all necessary information and technical support. The Company also conducted training for the staff of various parts of the hospital, so that the employees can be contacted by patients regarding Medical Information. In addition, Infocomp, together with the hospital management, implemented an information and education campaign, which included launching a dedicated website and prepared information materials, such as leaflets and posters. The implementation of Medical Information took place without any disruptions to the work of the hospital. It was carried out by the 7-person team of Infocomp, additionally supported by Asseco's specialists.

“This is the next stage of digitization of the Voivodeship Hospital in Toruń, in which Asseco actively participates. Asseco Medical Management Solutions, an IT system that supports both the medical and administrative parts of the hospital, is already operating in the facilities. We are pleased that once again we have been trusted and we can participate in the development of this facility so that it can offer its patients services at the highest level. The Medical Information application, which we have recently launched, guarantees mobile access to medical documentation and its electronic exchange between units. This significantly saves time of both users and employees of the medical unit” – said Krzysztof Groyecki, Vice President of the Management Board of Asseco Poland.

“Infocomp has been cooperating with Asseco for many years. Together we participate in the process of digitization of medical institutions, both large hospitals and outpatient clinics. The Voivodeship Hospital in Toruń is an example of how, using the latest technologies, it is possible to create a uniform IT system for a unit that serves its patients in five different locations in Toruń. We are pleased that thanks to a joint effort and many months of work, we can now provide patients with mobile access to their medical data. I think it is a good start and I hope that soon other medical centers of the Kujawsko-Pomorskie Voivodeship will follow the example of the Voivodeship Hospital in Toruń and implement the Asseco Medical Information application. Everyone will benefit from it, and most of all the patients themselves” – said Michał Maksymowicz, President of the Management Board of Infocomp Sp. z o.o.

Project milestones.

Generation of documents from AMMS and laboratory system to EDM (in PIK HL7CDA format)

Implementation of electronic signature in lab

Registration of the unit in the HUB connector, enabling communication between the client and the hospital

Registration of the first test patients in the application

System tests, configuration patches

Providing training for staff

Launching information and education campaign

Production launch of the system and ongoing patient registration

Key benefits.

The project has saved time for patients who no longer have to come to the hospital and wait in line to receive their test results. Thanks to the application, they gained mobile access to their medical records, which they currently receive on their phones - without the need to visit the unit.

The implementation of Medical Information has also significantly shortened the waiting time for the results of the examination, which are sent to the patient's phone within about an hour of their completion. Through the application, patients can now receive e-Prescriptions, sign up for a visit in hospital affiliates, create a list of facilities visited and gain access to the most up-to-date data on them.

The application contributed to increasing the level of computerization of the hospital and the quality of services provided. It allowed to im-

prove communication between the unit and patients, while maintaining a high level of data security and confidentiality. Ultimately, it will also enable beneficiaries to send their medical data to their doctors before a visit, which will allow them to reduce the time spent on administrative matters during consultations. In this way, the specialists will be able to use it for examination and conversation with the patient.

Thanks to the implementation of the project, the hospital has gained a modern solution that is constantly developed and adapted by Asseco to the needs of patients. Thanks to the introduction of new functionalities, the users of the application will soon be able to register not only a visit to a selected specialist, but also receive notifications of the creation of new documents or upcoming visits to the hospital.

„Medical Information not only follows global trends in health care, but is also part of e-Health projects and allows to speed up the process of EDM implementation in Poland. The uniqueness of the application lies in the fact that, unlike other solutions of this type, there is no portal behind it that processes and collects sensitive information. Asseco does not reach for patient data, but only manages communication and data security. Only the patient and the medical unit that provided the information can access it” – said Szymon Chamuczyński, Director of Mass Products Department in the Healthcare Division of Asseco Poland.

Project in numbers:

< 1 hour

is the time in which a patient receives test results

5

units benefiting from application within one system

39

branches where applications can be accessed

70

trained employees

~ 5,000

examinations a day signed by e-signature

> 95,000

patients with access to applications

It is

as



the new

| Asseco Poland

GRANICZNA MEDICAL CENTRE IN KATOWICE: ALWAYS TO YOUR E-SERVICE.

Client.

The Graniczna Medical Centre in Katowice is a modern unit which has been providing basic health care services and specialist consultations since 2005. It serves several thousand patients, who make about 6,000 visits per month - both within the framework of the contract signed with the National Health Fund (NFZ) and commercially. The patients are served by about 50 employees, who provide the highest-quality service and medical care.

Considering the unit's continuous development, at some point the

authorities of the Graniczna Medical Centre in Katowice faced the challenge of providing services to a growing number of patients. Therefore, the facility started looking for a proven and modern IT solution that would not only improve internal processes, but also allow for the efficient management of medical records. The new system was also supposed to increase the comfort of employees' work and improve communication with patients, while maintaining a high level of data security. During the solution's selection, its reliability

and intuitive operation was of great importance, because the unit intended to carry out possible staff training as fast as possible. The authorities of the Graniczna Medical Centre in Katowice recognized mMedica as the best tool to achieve these goals. It is Asseco Poland's proprietary solution, which provides comprehensive support for outpatient clinics. The implementation was the responsibility of TMT SYSTEM – Asseco's Silver Partner, which has been engaged in informatization of medical facilities for several years.

Implementation.

The project's goal was to facilitate the registration process and communication with patients. An important part was also to improve two processes – the access to medical records by the medical personnel and the preparation of records for a doctor by the registration staff. The project's implementation was a complex process, which required

the adjustment of the activities of individual areas of the facility, as well as a number of its infrastructure elements. It included the development of the ICT infrastructure and the creation of a data archive, responsible for collecting documents in electronic form. To ensure their efficient handling, the Electronic Medical Documentation (EDM) module and a

number of additional functions were implemented, including Xpress Skan, which enables scanning documents from multifunctional devices and scanners directly to mMedica. The system was equipped with the eResults+ module and integrated with laboratory and diagnostic test units. The implementation also included eRegistration and SMS notifi-

cations to make it possible for patients to receive reminders and make appointments electronically, without having to leave home. Another addition was the Medical Information application, which significantly improves the process of communication with a patient.

The biggest challenge in this project was to choose an appropriate model for building the ICT infrastructure. Of key importance here was a thorough analysis of the needs of the entity, which wanted the new system to ensure comfortable and failure-free operation and a high level of data security. The solution was also supposed to allow for an efficient expansion in the following years with modules ensuring further integration in the area of e-Services. In order for the system to meet all the assumed objectives, a model was selected which allows for flexible operation within the unit and the use of the solution by potential cooperating entities.

Additionally, the Graniczna Medical Centre in Katowice took part in the e-Leaves, e-Prescriptions and e-Referrals pilot tests conducted by Asseco Poland. As a result, the unit was ready to issue these documents in electronic form much sooner.

The implementation of mMedica, which was a large and complex undertaking, was completed in September 2019. Its success was determined by very effective cooperation between all parties involved in the project. It was carried out by TMT SYSTEM's specialists, who reacted to the needs of the unit on an ongoing basis. The composition of the team changed in the individual stages of the implementation and it consisted of dozen or so people at the project's most crucial phase. The company could also count on the ongoing support of Asseco Poland's consultants.

Project milestones.

Defining the purpose and scope of the implementation

Analysis of available resources (hardware, software)

Development of the server room to meet the project's requirements

Expansion of the IT system with access to external additional services

Implementing individual mMedica modules

Providing training for staff

“The choice of Asseco was determined by the efficient migration of data from the previous system dealing with the settlements with the National Health Fund (NFZ) and the automation of the entire reporting process. While working with mMedica, when further modules were being developed, the system turned out to be better compared to other programs designed for entities with a similar profile. Its main advantage is intuitiveness, which, considering the large number of employees, is not without significance. As eServices are introduced, we have the opportunity to gain additional points while contracting services with the NFZ. A good example is obtaining a contract for the pilot POZ Plus program, where EDM and e-Registration were a requirement” – said Alina Mońka, Director for Organization and Development, the Graniczna Medical Centre in Katowice.

“From the point of view of the project, carried out on such a large scale, it was very important to cooperate both with decision-makers in the Graniczna Medical Centre in Katowice, as well as with our partner which carried out the implementation and currently provides maintenance services. It can also be said that thanks to the consistent implementation of IT tools in the Graniczna Medical Centre in Katowice, the work of the entire facility has been optimized. This success is evidenced by the effects and opinions of the staff and patients” – - said Wojciech Kulbiński, Sales Manager, Asseco Poland.

“The opportunity to join the pilot program in the field of e-Leaves, e-Prescriptions and e-Referrals was very valuable for us. This was made possible by the mMedica system, which allows us to quickly and efficiently issue leaves and prescriptions in electronic form” – said Roman Spyra, President of the Management Board, the Graniczna Medical Centre in Katowice.

Key benefits.

The implementation of the project has allowed for the improvement of patient service already at the stage of the registration of visits, which are increasingly more often booked online. This has become a great facilitation for the unit's employees, who have also gained access to organized medical records of the patients. Thanks to mMedica all the documents are stored in one place.

The implementation of mMedica in the Graniczna Medical Centre in Katowice has provided the facility with the possibility of creating and sharing medical records in electronic form. This has significantly reduced the paper circulation of documents.

mMedica has provided the doctors with the option to view full medical data of the patients and their test results from a single system. It has also allowed for the efficient creation of document templates

and quick sending of sick leaves, without the need to log into the ZUS system and go through multiple authorizations.

The implementation of the system has significantly improved the communication between the patients and the unit and allowed to speed up their service. It has also significantly shortened their waiting time for medical records. Thanks to the Medical Information application, the patients no longer have to come to the unit for their test results, because they receive them directly on their mobile phones.

The unit currently has a modern and safe system whose effectiveness has been tested by thousands of clinics and individual medical practices in Poland. Through the system it has gained not only access to eServices, but also the ability to efficiently create, collect and store EDM, thus meeting the requirements of the regulator.

“We are a company that has been dealing with the informatization of medical facilities for several years. Our cooperation with Asseco, as a Silver Partner, enables us to carry out advanced projects, the best example of which is the implementation of the mMedica system in the Graniczna Medical Centre in Katowice. The task that was set for us in this project had to take into account several key aspects: the comfortable and failure-free operation of the system, the protection and security of the collected data, as well as the possibility of the system's further expansion with modules ensuring integration in the area of e-Services. All these aspects are met by Asseco's mMedica system” – said Michał Ferdyn, Co-owner of TMT SYSTEM.

Project in numbers:

50

employees of the unit using the mMedica solution

> 80%

of prescriptions issued in electronic form already 2 months before the introduction of the ePrescriptions obligation

6,000

visits per month

~ 10,000

patients with access to the Medical Information application

> 10,000

documents per month generated in electronic form

NOVÉ ZÁMKY UNIVERSITY HOSPITAL: UNDER THE CARE OF TECHNOLOGY.

Client.

Nové Zámky University Hospital with Polyclinic is a modern medical unit belonging to the Ministry of Health of the Slovak Republic, which provides services to about 152,000 patients. It has 21 departments and about 800 beds, and its proper functioning is ensured by about 1,300 employees.

The authorities of the facility place great importance on the quality of management and patient service. With the goal to increase the comfort of patients, the hospital decided to improve certain areas of its

functioning. It wanted, among other things, to reduce paper handling of documents and improve access to data. It also aimed at improving the area related to control and timeliness of medical equipment inspections, as well as their calibration and metrology in order to meet legal requirements and ensure safe use of medical devices. The preparation of overviews, cost controlling, etc. based on human searching and collecting of information from many sources, required a lot of administrative work. Despite the efforts of the staff, it was impossible to

prepare detailed cost overviews and benchmark for medical equipment. As a result, it was extremely difficult to decide whether to invest in new equipment or maintain the existing one. The lack of access to detailed lifetime costs related to single device was also a major barrier. Therefore, in order to improve this area of the hospital's operations, its authorities decided to implement Medical Equipment Management - a module of the MEDINETO system - a proprietary solution developed by eDocu, a company from the Asseco Group.

Implementation.

The aim of the project, which began in April 2019, was to improve the processes related to medical equipment and effective management of medical devices' life cycle. eDocu implemented modules responsible for the following functions:

- Reminder (OHS control, certificates of specified technical equipment, authorization of personnel).
- Ticket management (to create task for technician to control the device, it is possible to comment it, see the update, attach a photo or video).
- Work record (possible to record all performed actions on things or devices in the system, such as cleaning, revision, pressure test, revision of function).
- Calendar (overview of tasks and reminders related to each device).
- Checklist (list of tasks that need to be done on specific device).
- Report (history of all actions related to the device according to the type, date, organization or person).

The implementation covered all devices in the hospital, which were marked with special QR codes. Although the project required full data migration and import, it was completed in the record period of 6 weeks. Currently, all the documents, diagrams, schemes, tutorials, service books and lists, work records, and service contracts are stored in one system and can be accessed within seconds. The eDocu system also allows for constant supervision of all medical equipment in the hospital. Each device is linked with an iTag (QR or NFC code), so that the user, after scanning it with a smartphone, receives full data about the device on the phone.

MEDINETO continuously monitors the status of the devices and automatically notifies about the need to check them. All technical instructions,

contact data of the technician responsible for the repair, and repair history are visible in the system. Therefore, in case of damage, it is enough to scan the code from the device and thus gain quick access to technical data and its entire maintenance history. In addition, the system helps organize information about medical equipment maintenance requirements. It follows the life cycle of equipment and its scope of operation, and monitors the performance of tasks by subcontractors. Thanks to direct interactive connections between the devices and the database, hospital technicians have constant access to up-to-date data. This allows them to better prepare for work and always have the right tools and equipment with them. The iTags on the devices make it easy for them to see information and checklists directly on site.

Key benefits.

The solution designed by eDocu has brought numerous benefits to both the medical unit and its employees. They were visible immediately after implementation. They include:

- Immediate access to all device-related data and documentation even on the spot. The time needed for searching the relevant information was reduced from hours to seconds.
- The administrative work related to cost controlling and cost division for central overview and decision making was reduced from about 3 days to 10 seconds.

- A central, real-time overview of the status of devices allows for making the right decision quickly.
- Improvement of the problem-reporting process. Malfunctions are fixed upon scanning a respective QR codes by personnel, which increased the accuracy of device identification and lowered the administrative time to 5 seconds.

Project in numbers:

5

seconds to identify the device

6

weeks to complete the project

10

seconds full service check

21

wards of the hospital using the solution

152,000

patients with access to efficient medical equipment



Chapter five |

UTILITY & TELECOMMUNICATIONS

PGE DYSTRYBUCJA: WITH WELL CALCULATED ENERGY.

Client.

PGE Dystrybucja is a company which is one of the largest electricity distributors in Poland and employs about 10,000 people. With its network infrastructure, it ensures stable electricity supplies to over 5.4 million customers, living in a total area of about 122,000 km², which accounts for about 38% of the country's territory. It has 7 field branches, including those in Zamość and Rzeszów.

The Zamość Branch operates a power grid and provides services to customers in south-eastern Poland, in two voivodeships: Lubelskie and Podkarpackie. It operates on an area of over 15,200 km², serving about 434,000 customers from 27 cities and 141 communes. Electricity is transmitted by overhead and cable lines with a total length of 36,100 km.

The Rzeszów Branch operates in four voivodeships: Podkarpackie, Świętokrzyskie, Lubelskie and Małopolskie with a total area of over 16,300 km². Its range covers 147 communes. It serves almost 700,000 customers to whom it transmits electricity via overhead and cable lines with a total length of 39,300 km.

One of the priorities of PGE Dystrybucja's operations is to continuously improve the quality of services provided. The company pursues this goal through the consistent development and modernization of its power infrastructure and the introduction of modern technological solutions to networks, power equipment as well as IT and telecommunications. The company's two branches in Rzeszów and Zamość use

Asseco's proprietary system - AUMS Reading Data Acquisition (AUMS ADO), whose role is to handle all the processes involved in the acquisition of data from electricity meters. The solution consists of a central and mobile application installed on the PSION mobile devices based on the Windows CE operating system. However, over time, these devices used by controllers have faced major limitations, mainly due to their availability, price and technological barriers. Therefore, in 2019 PGE Dystrybucja decided to purchase new devices. Their operation required a modern mobile application. Asseco Poland was chosen to execute the project and the Company's task was to build and implement the solution in the Rzeszów and Zamość branches.

Implementation.

The project began in October 2018 and lasted a year. The goal was to build and implement an application for electricity meters reading based on Google Android. The new solution was to enable the work on a number of devices using the Google Android operating system, as well as the application's future development. An additional requirement was to maintain compatibility with AUMS ADO, so that the replacement of several hundred mobile devices could be carried out gradually.

In the first stage of the project, Asseco developed a prototype application that had to be compatible with the previous solution running on Windows CE. This was necessary for verifying the correct operation of the application on an ongoing basis. Full testing by the Asseco team was not possible without the support of the employees of PGE Dystrybucja, who, for a certain period of time, worked in parallel on two devices - the old, PSION type and the new one, with Android. It also allowed for testing various devices and verifying how they operated in the field, which made it easier to choose the best one.

The application's improvements and adaptation concerned in particular the areas cooperating with various electricity meters read by an optical probe connected to a mobile device. In addition, controllers' field work was optimized. The application itself, although adapted to a specific device model selected by PGE Dystrybucja, may run even on an Android smartphone.

The project, which ended in October 2019, was carried out by 6 Asseco specialists, who reacted to the client's suggestions and needs on an ongoing basis. By the end of 2020, PGE Dystrybucja is planning to replace the remaining devices so that all its employees will use Asseco's modern solution. The company also assumes further development of the new application in order to take full advantage of its capabilities, e.g. in the area of camera operation and GPS navigation.

Project milestones.

October 2018 - launch of the project and adaptation of the application's prototype version to work in the production environment

May 2019 - handing over the first version of the mobile application to PGE, commencing tests

September 2019 - production launch in the Zamość Branch

October 2019 - production launch in the Rzeszów Branch

October 2019 - acceptance of works and completion of the project

"The project was aimed at streamlining the work of people who obtain readings from electricity meters in the field. The new software on the new devices works much faster than the old solution, it also offers great development opportunities. Additionally, the security level of sensitive data stored on the devices has been increased through the integration with the MDM class software. We have been gradually preparing devices with AUMS ADO installed and handing them over to further controllers. We have been also collecting comments and observations from the users and passing them on to the contractor on an ongoing basis. We are committed to further development of the application, using the new capabilities of the devices" — said Marek Osiński, acting Head of the IT Department, PGE Dystrybucja's Rzeszów Branch.

Key benefits.

At present, PGE Dystrybucja has a modern solution which offers great configuration capabilities not only when it comes to the devices used by the controllers, but also the application itself. It provides greater convenience of program use and increases the security level of sensitive data.

The launch of the new application based on the Android operating system has provided PGE Dystrybucja's branches with access to a wide range of modern mobile devices - from smartphones to complex industrial devices. Owing to this, currently the branches do not face any limitations related to the choice of a supplier and equipment.

The solution's implementation has brought new functions, thanks to which, e.g. in case of an anomaly during meter reading, the controller can take a photograph of the measuring system and link it to a specific business process.

The implementation of the project has increased the comfort and efficiency of the controllers' field work. It has significantly improved the operation speed of the device and the installed application, and thus shortened the time needed to prepare an order to read the electricity meter, which currently takes about 10 seconds.

“We have been cooperating with the PGE Group for years, implementing projects of varying degrees of complexity, providing maintenance, implementation and development services. A significant strengthening of this cooperation was the choice of Asseco as a partner for further development of systems and applications for the PGE Group's company. I am glad that we have been trusted once again” — said Magdalena Kaczmarek, Sales Director, Asseco Poland.

“From the beginning, the implementation of the project was a big challenge. When working in the field, while obtaining readings from electricity meters, any problem with the application is a very big nuisance for the user. In practice, each type of a meter has a different driver, communication with it is also different, so we wanted our application to increase the comfort of controllers' daily work. It is a big step in the development of one of our flagship systems - AUMS ADO” — said Dawid Materna, Project Manager, Asseco Poland.

Project in numbers:

1

year was the duration of the project

~ 6

experts from Asseco participated in the project

< 10

seconds is the reading order preparation time

~ 200

devices that will ultimately use the application

~ 200

employees who will ultimately benefit from the solution

It is

POWER

PRAŽSKÁ PLYNÁRENSKÁ: IMPLEMENTATION WITHOUT FAULTS.

Client.

Pražská Plynárenská, a.s. has been one of the major energy suppliers in the Czech Republic. Its subsidiaries are, among others, Pražská Plynárenská Distribuce, a.s. [PPD] and Pražská Plynárenská Servis Distribuce, a.s. [PPSD], which operate gas pipelines, spanning approximately 4,500 km, and distribute natural gas to some 420,000 consumption sites in the Capital of Prague and adjacent municipalities.

PPD's task is to ensure the safe operation, maintenance and moderni-

zation of the gas distribution network in the Czech Republic's capital. The company has high-quality technical facilities and employees with years of experience in the operation and construction of gas installations. In turn, PPSD provides, among others, comprehensive services related to operating, repairing and maintaining these installations. The company also operates in the area of the so-called gas reception installations and industrial gas pipelines.

PPD and PPSD wanted to improve their mutual cooperation and therefore they decided to implement the „Mobile support for field workers” project. It aimed at improving communication and ensuring better efficiency of maintenance activities in the field. Asseco Central Europe [ACE], a company from the Asseco Group, was responsible for the implementation of the solution.

Implementation.

The goal of the project, that started in 2016, was to put in place software supporting PPSD field staff in the following areas:

- technical audit and inspection activities
- elimination of malfunctions
- network leakage checks

The new system was to enable PPD - the distribution system operator - to plan maintenance tasks in the Operational and Technical Information System and commission them to the contractor - PPSD. The first stage of the project included a thorough analysis of the client's needs. It served as the basis on which ACE created a detailed concept of the new system's development. In the next stage, the company produced and then delivered a mobile solution, offering

the following functionalities:

- work order synchronization, including all supplementary information for workers delivered straight to their places of operation
- navigation to the distribution network equipment or to the place of work

- work description, distribution system equipment list and details
- distribution system objects visualization on a map, including descriptive information
- interactive forms for specific equipment or type of work
- keeping records of faults detected on site
- reporting back on the job done, including the number of hours worked, material used, vehicles used and costing
- creating photographic documentation and automatically assigning it to work orders

The input for creating a breakdown of jobs consists of various types of work orders from the Operational and Technical Information System, which a dispatcher assigns to individual field workers. In their mobile

Key benefits.

- Support for assigning and accepting jobs between the distribution system operator (PPD) and the key service provider (PPSD) in relation to the process optimization.
- Overview of current work progress.
- Elimination of paper-based work orders, records and manually created reports, resulting in significant cost savings.
- Optimization of labor resources and reduction of the time required for work orders.

devices (tablets), the field workers have an interactive inventory of assigned work orders available, which can be filtered by priority or planned completion date.

As part of the project, ACE also created a new interface for solutions cooperating with the application, which ensured its integration with the Operational and Technical Information System and the Geographic Information System (GIS). The company was also responsible for carrying out training courses for personnel.

Asseco Central Europe's application is built on the technologically advanced Workforce Management Solution (WFMS) technology, customized for Pražská Plynárenská. The application is designed for mobile devices powered by Android and currently used by approximately 80 PPSD field workers.

- Availability of a variety of up-to-date information in one place in the field to support decision-making processes.
- Ongoing data collection regarding the distribution system equipment condition, based on technical audit and inspection activities (malfunctions, faults, diagnostic metering), used as the supporting data for planning a network recovery.

Project in numbers:

80

PPSD field workers using the solution

> 700

orders sent via the app per month

4,500 km

of gas pipelines

420,000

gas consumption sites

| Asseco Poland

ORANGE POLSKA: DIGITAL WAREHOUSE OF OPPORTUNITIES.

Client.

Orange Polska, a company listed on the Warsaw Stock Exchange [WSE], is part of the Orange Group, a leading provider of telecommunications services in Poland, Europe and world-wide. Orange provides mobile and fixed-line telecommunications services, including voice calls, news and content services, as well as Internet access and television. It also offers ICT [Information and Communications Technology], leased lines and data transmission services. Additionally, it is involved in the construction of telecommunications infrastructure,

the sales of telecommunications equipment, and electricity trading. In Poland, the company is a leader on the mobile telephony, Internet and data transmission markets. It is the leading operator offering comprehensive telecommunications solutions available throughout the country. Its aim is to ensure the highest customer satisfaction by becoming the most popular provider of telecommunications, multimedia and entertainment services, using modern technologies. Constant development of the offer and the growing number of cus-

tomers made the operator decide to launch a modern environment for their service and replace one of the existing billing systems with a new, more efficient solution. In this way, Orange Polska wanted to streamline the billing of about 1 million services provided to several hundred thousand B2B subscribers and several dozen operators from the wholesale market. For the implementation of this demanding project it chose Asseco Poland.

Implementation.

The goal of the project was to implement a modern, flexible billing system based on OBRM [Oracle Billing and Revenue Management], which would provide Orange with the possibility of further expansion and access to advanced services. It was to operate not only online, but also allow for the registration of all operations in real mode with

full customer history. Asseco Poland was obliged to meet a number of guidelines, including very high ratios of invoice compliance between the new and old systems. A key part of the project was to turn off the old solution, which required one of the largest data migrations on the Polish telecommunications

market and one of the largest in Europe. All functionalities of the old system had to be reflected in the new billing environment [the so called AS-IS] in order to be able to fully map the existing business processes.. The biggest challenge during the implementation was the size and complexity of the solution, the interdependence of modules and the

lack of coherent and unified code quality management, forced by external factors such as the use of various technologies and systems. Its implementation required from Asseco to organize the work of programmers who were under great time pressure. They were also involved in many development and testing environments, and were additionally bound by their complicated and time-consuming procedures for the installation of environments.

Another big challenge was to keep up with the changes and new functionalities, which in the meantime were introduced to the old billing system. It required a thorough verification of the quality of implemented software at each stage of the project. To this end, the project team had to perform acceptance tests for about 5,000 test cases (TC). The preparation of such a large-scale system would not have been possible without the use of ACTE PLATFORM, Asseco's proprietary solution, which ensured the automation of internal tests, thus minimizing the risk of possible errors. This increased the efficiency of the entire process and

reduced the number of repetitive testing activities. Thanks to ACTE, the changes were implemented in the Continuous Delivery model, which, both during the implementation and the first months of the system's operation, was an important element of the project's success. Due to the importance of the solution and its complexity, a set of regression tests was performed each time when even the smallest changes were introduced – the tests lasted only several dozen minutes.

During the migration, within 72 hours, the registration data, service data, a set of billing records, as well as historical data of Orange Polska's customers using nearly 1 million services were transferred. This took place during one operation, while maintaining the level of provided services and ongoing operational work, carried out to the extent necessary to meet the regulator's requirements. The project, which ended in 2018, was carried out in close cooperation between the teams of Orange and Asseco, without which the implementation of this undertaking would not have been possible.

Project milestones.

Definition of requirements

Analysis

Implementation of changes in the system and integrated environment

Solution and migration tests

Migration of customers to the new system

Production start-up and solution switching

System stabilization

Update of the Core Oracle BRM system to the latest version available

“The new billing system offers advanced convergent services. In the future we will be able to develop the system's functionalities and adapt it to our needs on an ongoing basis. All this translates into a higher quality of service for our customers, which is our primary goal” – said Bruno Chomel, CIO, Orange Polska.

“Within the framework of our cooperation with Orange, which started over 25 years ago, we have taken part in many IT projects of different difficulty scale. Our task has been to develop and maintain selected groups of systems. We are glad that we could once again support Orange in building modern solutions. This is an example of great customer confidence and a confirmation of the Asseco team's competence” – said Paweł Piwowar, Vice President of the Management Board, Asseco Poland.

Key benefits.

The implementation of the new system has significantly improved the billing of subscribers from the B2B sector and partially with wholesale market operators. An additional advantage turned out to be the architecture of the solution, which enables its further expansion. Thanks to the project implementation, Orange Polska has now a modern, scalable and efficient billing system, which is consistent with the needs of such a large telecommunications operator.

The new solution has provided Orange Polska with a high level of configuration and personalization, as well as easy integration with other systems. It has also allowed to shorten „Time to Market” for invoicing additional goods and services.

“It was a breakthrough project, the implementation of which proved to be a huge challenge. We prepared a new billing system, transferred client data with the full history and did not disturb the company’s operations, and the switchover between the solutions went smoothly. This success would not have been possible without the huge commitment of the team and technological support provided by the ACTE system. Owing to it, we have kept our balance during the execution of demanding and complicated activities” – said Milena Siepiela, Project Manager, Asseco Poland.

“Thanks to the use of ACTE, we were able to ensure quick and safe verification of the system before its production start-up, both during the design works and during the implementation of subsequent modifications. The automation of regression tests was one of the most important processes that enabled the effective and, above all, safe execution of this complex project. There was no room for a compromise between quality and delivery time, and it was the ACTE system that enabled us to successfully achieve all the objectives” – said Sławomir Madej, Chief Operating Officer, Asseco Poland.

Project in numbers:

60

Asseco specialists involved in the project

72

hours lasted the system’s migration

~ 5,000

TC as part of acceptance tests

> 216,000

cups of coffee have been drunk

1 million

services billed via the system

It is

RESERVE



DZIĘKUJEMY, KÖSZÖNÖM, OBRIGADO, CẢM ƠN BẠN, HVALA,
GRACIAS, االيزج اركش, FALEMINDERIT, DĚKUJU, ХВАЛА ВАМ,
AČIŪ, ĎAKUJEM, THANK YOU, HVALA VAM, DZIĘKUJEMY,
KÖSZÖNÖM, OBRIGADO, CẢM ƠN BẠN, HVALA, GRACIAS,
االيزج اركش, FALEMINDERIT, DĚKUJU, ХВАЛА ВАМ, AČIŪ,
ĎAKUJEM, THANK YOU, HVALA VAM, DZIĘKUJEMY, KÖSZÖNÖM,
OBRIGADO, CẢM ƠN BẠN, HVALA, GRACIAS, االيزج اركش,
FALEMINDERIT, DĚKUJU, ХВАЛА ВАМ, AČIŪ, ĎAKUJEM, THANK
YOU, HVALA VAM, DZIĘKUJEMY, KÖSZÖNÖM, OBRIGADO, CẢM
ƠN BẠN, HVALA, GRACIAS, االيزج اركش, FALEMINDERIT, DĚKUJU

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