



GPW:

Rapid Implementation of Modern System for Brokers.

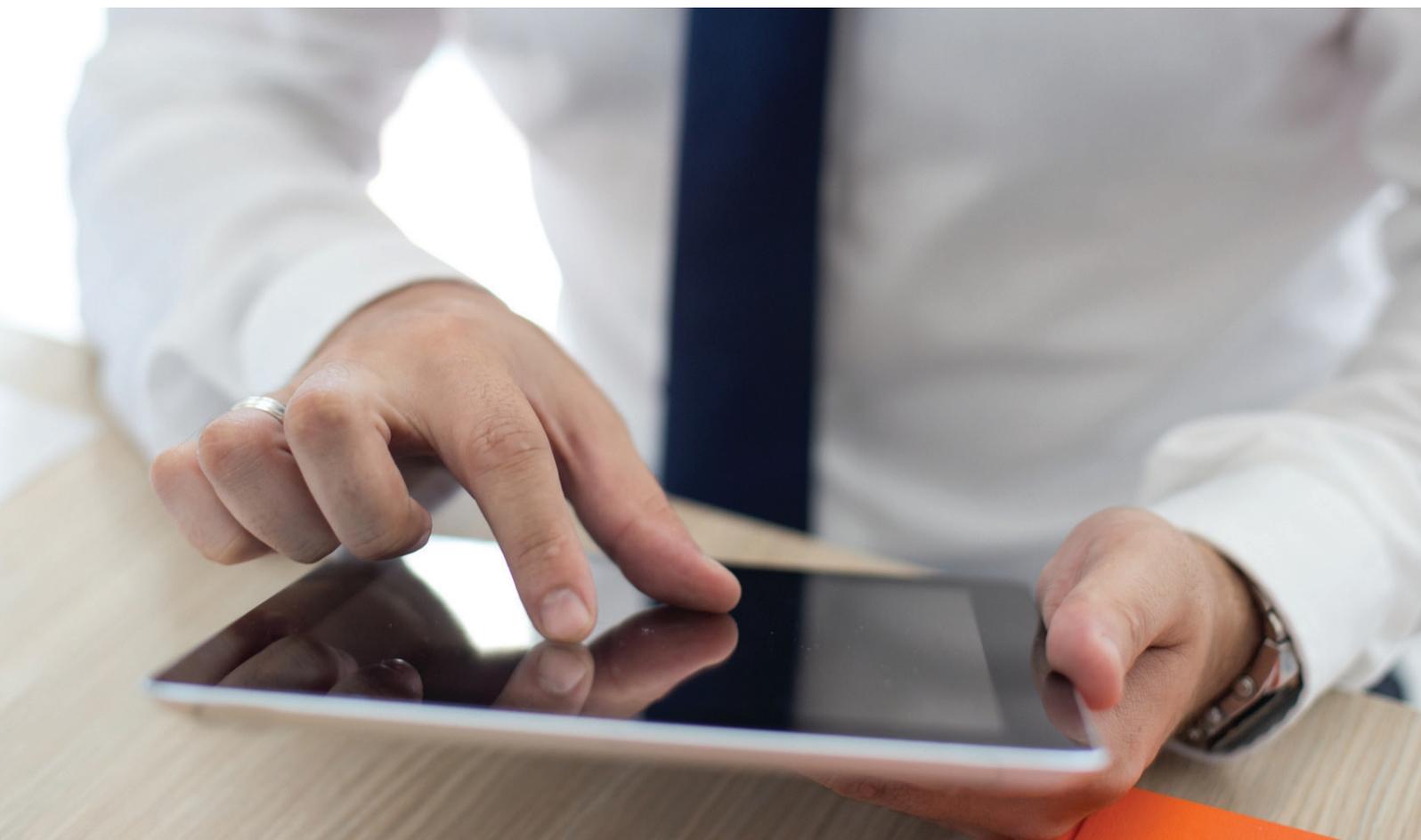
Customer.

The Warsaw Stock Exchange (the WSE) is the largest exchange in the region of Central and Eastern Europe. With over 25 years of experience, high security of trading, operational reliability and a wide range of products, the WSE is one of the most recognizable Polish financial institutions in the world. Its markets include shares and bonds of over one thousand domestic and foreign issuers, as well as derivative instruments. In 2016, it generated sales revenues of PLN 310.9 million and had 187 employees.

In 2017, the WSE was faced with the challenge of adapting its IT system to the requirements of the EU Markets in Financial Instruments Directive (MiFID II), which significantly changed trading in securities and derivative instruments in the European Union (EU). The introduction of the new regulations required modification of existing solutions in many key areas responsible for information processing, including orders placed by market participants. It was also necessary to adapt the WSE's system to a more detailed scope of data on current financial instruments' stock prices.

An important part of the changes was also to increase the comfort of stockbrokers, who needed flexible and effective IT tools. Market conditions also required the construction of a new and highly useful user interface, whose modernity, intuitiveness and high reliability were to ensure comfortable access to the system, anywhere and anytime.

The achievement of the above objectives and the scale of the planned changes were the reasons why the Management Board of the WSE decided to change its existing trading system. Therefore, on May 11 2017, the company signed an agreement with Asseco Poland for the implementation and launch of Promak TS - a modern system providing access to UTP (Universal Trading Platform), which was to be available to the WSE's clients in the form of a dedicated application under the TradeApp name, as well as in the Internet version as WebTradeApp.



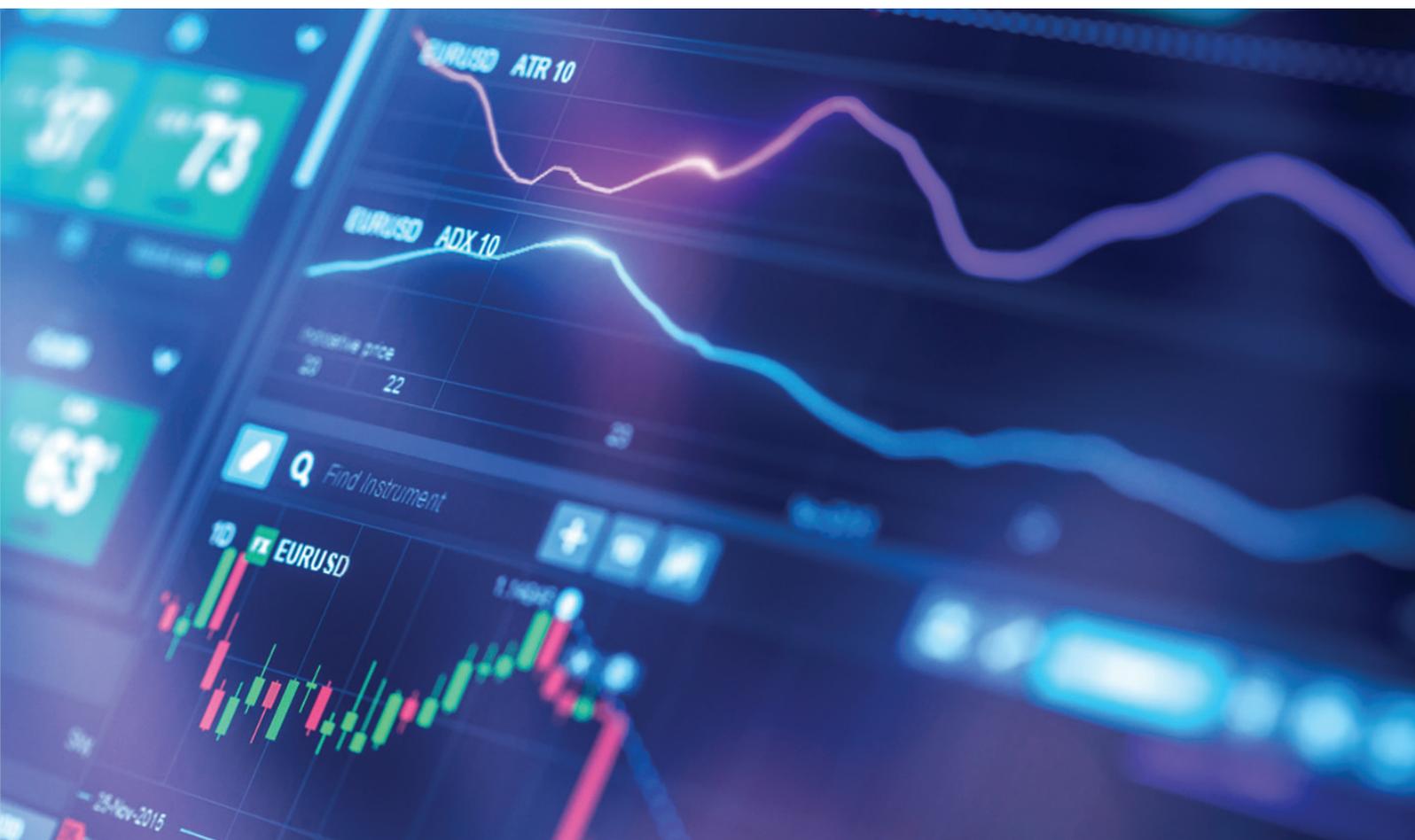
Implementation.

The aim of the project, which began in September 2017, was to provide selected trading participants cooperating with the WSE access to a modern, safe and reliable trading solution compliant with the MiFID II regulation. Its implementation was also to enable the internal consistency of the activities of these organizations with the new regulations.

Asseco's task was to develop IT tools, both in the form of web applications and applications installed at the Client's station, containing functionalities enabling:

- monitoring of the state of the market and stock exchange prices, including a presentation in the form of charts,
- analysis of the offer and transaction book on the indicated instrument,
- management of the baskets of instruments' prices being reviewed,
- order flow management (registration, modification, cancellation),
- controlled access to the order book,
- management of system users and rights of system users.

For the Client, the unquestionable challenge was the short time required to implement the project, consistent with the date of entry into force of MiFID II, and the need to implement the requirements formulated on the basis of the dynamically changing content of technical standards. Another challenge was the need to implement the system in the WSE's environment, which, due to the specificity of its operations, imposes high requirements on safety, reliability and availability.



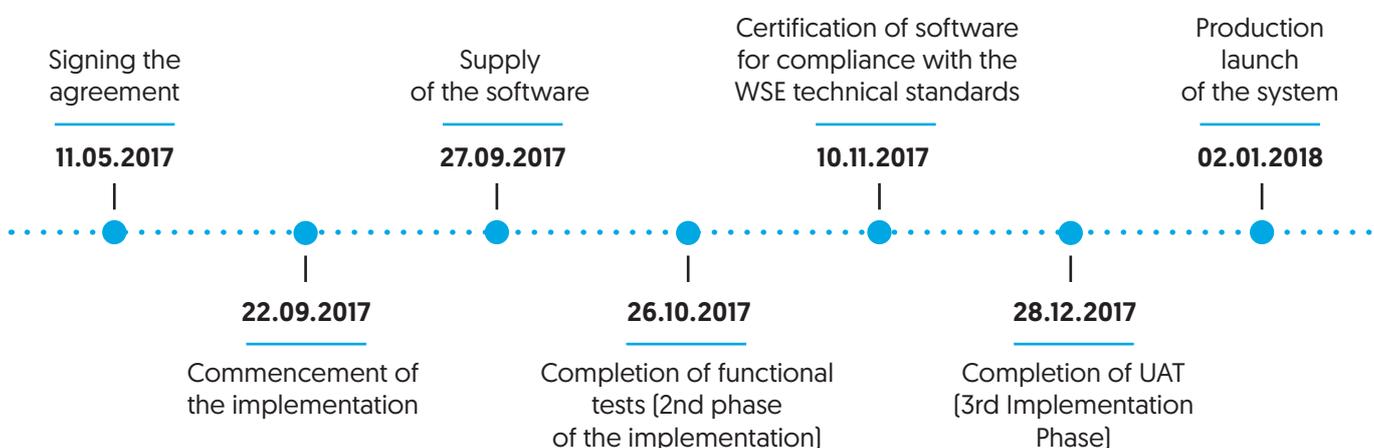
In the initial phase of the implementation, Asseco was granted access to a test environment in which a significant part of the activities was conducted remotely. The implementation also included automation of the installation process of the entire IT environment of the WSE. Owing to this, the initial phase of the implementation, as well as the update of the version of the system, was performed with the use of a „single button“. This allowed to maintain high efficiency of activities, increase the speed of reaction and improve the tests taken, as well as mutual software reviews.

Despite the time constraints and the complexity of the project, it was completed very quickly. As early as in November, i.e. only 3 months after the commencement of the implementation, the software was certified for the compliance with the WSE technical standards. On December 28, 2017, User Acceptance Tests (UAT) were completed, which showed that 100% of the designed functionality was delivered and executed in accordance with the specification. The system was launched on the first trading day of 2018.

Asseco was also responsible for conducting training sessions for the WSE, which was then to present the solution to the market. In this area, too, good cooperation and efficient project implementation resulted in the WSE's representatives appreciating the professionalism of the supplier and inviting Asseco to jointly conduct training sessions for Polish brokers.

The implementation of TradeApp and WebTradeApp on the WSE was carried out by 24 qualified specialists of Asseco, who were supported in the process by a team of the WSE's experts assigned to the project. The project was based on close cooperation of the combined teams - business-IT-contractor - which ensured optimal effectiveness of the implemented activities and enabled constant monitoring of the progress of works and avoidance of discrepancies with the original assumptions. Currently the system is used by 19 Exchange Members from Poland and the EU, 13 of whom use WebTrade App, and 9 use Trade-App. Over the next 3 years Asseco Poland will also be responsible for providing maintenance services.

Project milestones.





We consider the new system to be modern and effective - it meets the requirements of the current EU MIFID II directive and equals the offer made available to customers by modern global exchanges, such as the London Stock Exchange [LSE]. Since the beginning of 2018, the WSE's clients have gained access to current market information as well as order and brokerage house risk level management. TradeApp is a testament to the commitment of the WSE - the leader in Central and Eastern Europe - to reach technological excellence – said Dariusz Kuřakowski, the Member of the Management Board of the WSE.

Key benefits.

Since January 2018, the WSE has had one of the most modern solutions for trading in financial instruments, which meets the requirements of the current EU MIFID II directive. It provides investors with access to the WSE's markets and full control over transactions.

The implementation of the system had a positive impact on the international perception of the WSE. Thanks to the implementation, the WSE has become one of the most modern trading exchanges in the world. Solutions of this class are used in Europe only by the London Stock of Exchange [LSE].

The implementation of the project allowed the WSE's clients to have secure access to current market information and efficient order management. As a result, it brought efficient and fast communication, as well as improved the conclusion of transactions and the control of the stream of transferred orders.

Thanks to the implementation, the WSE has obtained a solution that allows stockbrokers to resign from costly IT tools of third parties - the so-called OMS class solutions. They have also gained the freedom to choose the method of accessing the UTP trading system, thanks to which information on the current state of the market and prices of instruments can be obtained by means of two independent solutions.

Thanks to TradeApp and WebTradeApp, market participants were guaranteed secure access to the WSE trading system and the possibility of using external functionalities at any time and any place in the world – without any geographical restrictions.

Asseco has been developing software for capital market participants for many years, but for the first time we were able to cooperate with the Warsaw Stock Exchange [the WSE]. It is a great distinction for us, but also a valuable experience. The institution creating a trading floor has its own specificity, which should be taken into account when implementing the project - these are first of all extremely high requirements in terms of IT security of the applied solutions. In addition, there was considerable time pressure due to the entry into force of MIFID II. The successful implementation of the project proves that even during the period of significant regulatory changes, modern IT solutions can be effectively implemented and additional value for market participants can be built – said Artur Trunowicz, Director of the Capital Market Division, Asseco Poland.

Project in numbers.



19 Members of the Exchange use the system

13 use WebTrade App [including 4 from outside Poland]

9 use TradeApp [including 7 from outside Poland]



4 months from implementation to launch of the system



24 qualified Asseco specialists

Asseco for capital markets.

Asseco Poland is a supplier of the PROMAK solutions dedicated to the financial sector, which effectively support the work of brokerage houses, banks, depositaries and investors, both individual and institutional. Asseco Poland is also the largest Polish IT company listed on the Warsaw Stock Exchange and the sixth largest producer of software in Europe. It leads international Asseco Group, which operates in 54 countries and employs over 24,000 people.