



**Asseco HOME: Reduction
of telecoms' operating costs
thanks to Big Data solution.**



Client.

The client is one of the leading telecommunication operators in Poland, serving over 10 million subscribers. It provides a full range of mobile and fixed-line services for both individual and business customers. The operator covers almost 100% of the population of Poland with its 3G network. Owing to the most modern network infrastructure, 99.7% of the population is within its reach, which corresponds to 97% of the country's area. The telecom also offers its customers the opportunity to use the full range of its financial services.

Telecommunication operators are among the most technologically advanced sectors of the Polish and global economy. They have specialized expert teams, appropriately modeled business processes and a rich IT tools environment. They have at their disposal huge data sets regarding customers, the level of sales and operational activity, among others. In addition, they receive trillions of bytes of new and unstructured information every day. They are also constantly expanding the range of their services, which is a significant challenge, both in business and technology terms.

New challenges require new solutions.

Greater availability of services, increasingly more data sets, constantly growing amount of processed information - these are the main reasons for the operator's decision concerning the necessity to implement modern IT systems that will support effective provision of services for individual and business customers.

The main goal of the project was to provide the most optimal and effective solutions for storing large volumes of data. The operator also wanted to increase the efficiency of the system and the level of effectiveness of profiling the offer related to the introduction of new products to the market, among others. An important part of the modification was to enable the data to be made available to a larger group of business users and to be processed online. An important element of the planned changes was also the reduction of the costs of the software and its maintenance.



To achieve all these objectives, it was necessary to invest in a BigData platform, which would not only allow for increasingly more information to be stored and processed, but would also be adapted to a linear increase in data processing capacity and efficiency. At the end of 2016, the telecom's authorities decided to modify the Hadoop platform and commissioned Asseco Poland to perform that task. The project has been successfully completed. Its implementation has been carried out in accordance with the assumed schedule and budget.

Implementation of new standards.

The aim of the implementation was to install a new, more efficient Hadoop cluster with additional software: Pig, Hive, Hbase, WebServices, Storm, Kafka and Ranger. The software is a part of Asseco Hadoop Open Modular Environment [Asseco HOME] - a Big Data platform, which follows the latest trends regarding the processing of large volumes of data in the OnLine mode. The uniqueness of the project was the adaptation of the OpenSource solution to the very high security requirements and, at the same time, an increase in the system's efficiency.

The implementation consisted of five phases:

- the preparation of the new Hadoop environment;
- the adaptation of the environment to the latest safety requirements;
- the adaptation of 60 applications operating in the old cluster to new environmental requirements;
- the migration of data from the old to the new environment;
- tuning the environment to new performance requirements.

The new system is one of the largest solutions of this type in Poland. Its great advantage is that it allows not only for the identification of events, but also for the subsequent real-time release of action, thanks to which the effectiveness of a marketing campaign or sales offer increases even tenfold if immediate action is taken from the moment of the event. This gives an opportunity to actively adjust the operator's business and marketing strategy to its consumers' preferences. This in turn translates into their increased loyalty and improved performance of the organization as a whole.



The costs of the implementation of the Hadoop cluster turned out to be very competitive in relation to licensed solutions, the value of which constitutes a significant part of Total Cost of Ownership (TCO) - i.e. the sum of all costs of an IT solution. In addition, despite the platform's enormous performance and technological complexity, it has also been possible to optimize the expenditures associated with its maintenance. Additional advantage is very high functionality of the solution and the fact that the telecom has become independent from software and hardware manufacturers.

The installation of the new Hadoop cluster has also completely eliminated the operator's previous problems associated with the old solution. They concerned the limited possibilities of production use due to system overload and the lack of necessary safeguards.

The implementation lasted 4.5 months and was carried out by a team of Asseco's five qualified specialists. After just 2 months from the beginning of the project, the first users were able to operate on it. Throughout the project, the service downtime associated with data migration lasted only 8 hours.

Asseco Hadoop Open Modular Environment.

Asseco HOME is a BigData platform based on open source solutions. The solution is based on Hadoop, Hive, Pig, Kafka, Storm and Ranger tools. It is linearly scalable, and thanks to the open source environment it is developed continuously. The efficiency of such solutions is confirmed by various applications by global Internet companies.

Despite its nature, HOME meets demanding IT security standards. Not only does the solution allow for storage and processing of petabytes of data, but it is also adapted to linear increase in both capacity and efficiency. The components of Asseco HOME are used in a wide range of applications and can be used by institutions and companies operating in various sectors of the economy, such as: public, banking, insurance or large sales networks.

Key benefits.

- Low costs of implementation and maintenance of the system resulting from the lack of the need to pay royalties.
- Achieving savings of several millions throughout the year by enabling users from different business areas to use the same data repository, without the need to build multiple solutions with different access rights.
- Possibility of storing large volumes of data.
- Adaptation to linear increases in capacity and data performance.
- Maintaining independence from the specific policies of software and hardware manufacturers.
- Increase in system performance and functionality also in terms of online processing capabilities.
- Meeting high demands of data security.
- Increasing the effectiveness of sales of the company's products by generating events online.
- Active adaptation of business and marketing strategy to consumer preferences.

The project in numbers.

