

BitSwan x O2 CZ Case Study

We live in the age of customers who demand an efficient end-to-end journey. Given the sea of possibilities, even the smallest discrepancies in customer journey might end up in losing them. The expertise and progress of customer call centres is, therefore, crucial.

Yet, the progress is a double-edged sword. Ever-increasing technologies keep modernizing, and ever-increasing services keep enhancing complexity. The challenge for customer call centres is to keep up with the pace of adaptation to increasing complexity of rising technologies. Besides, the challenge brings additional complications initially invisible to the eye, yet severely hindering the goal of exceptional customer service. To tackle this successfully, companies need to turn to real-time analysis merged with machine learning. The right and timely analysis of already collected data is required. Simply, an updated approach to data evaluation.

O2 Czech Republic, a market leader in the telecommunications, decided to act on Network Operation Centre pitfalls and chose BitSwan, a real-time data analysis platform, to tackle the challenge of an increasing volume of untapped data.

CHALLENGE

Within their O2 TV platform, O2 encountered the influx of unpredictable calls which were handled insufficiently and resulted in deteriorated customer service. For example, when a customer was calling with service trouble, O2 was not only unable to preventively locate the problem but also unable to effectively diagnose it during the call. Customers were given generic or irrelevant instructions such as "restart your set-top box," therefore, it led to lengthy problem-solving, dwindling capacity to resolve numerous tickets and depleted costs. In addition, individual complaints quickly developed into "wildfires" that a critical number of specialists and managers spent inordinate amounts of time trying to put out. Although O2 possessed the needed data, they were unable to extract them in real-time and provide the quality care of the subscribers' needs. The goal was, therefore, to handle the influx of calling customers, identify and shorten the calls and finally divert the calls appropriately.

SOLUTION

As O2 decided to pioneer the transformation of O2 Network Architecture, a dilemma between the vendor lock and open-source platform solution arose. With a history of remaining stuck due to a vendor lock while competitors progressed, O2 opted for the latter, ensuring a tailored flexibility to react to emerging requirements. This was achieved by employment of open stream-analytic platform BitSwan, stream-processing platform Apache Kafka, search engine Elasticsearch and containerization tool Docker. BitSwan enabled O2 to build an architecture which is open, reactive and working fast. Using the agile Scrum methodology to tackle day-to-day tasks transformed into the O2's ability to learn by themselves and utilize the know-how for any other future challenge. Rather than getting a fish once, O2 taught themselves how to fish.

As a starting point, we established a real-time data processing platform enabling O2 to get the well-structured data for implementing the real-time scenarios. Meaning connecting and analyzing 25 data sources, such as mobile signalling communication, logs from routers or authentication servers.

We created a dashboard for CC agents, allowing them to see all information about the calling customer in real-time and thus, to act accordingly. As we recognized the undesirable service problem and processed 150 000 messages per second, we automatically shortened the problem detection. Consecutively, thanks to the greater insight into the customer's problem in real-time, we improved call quality and shortened call duration. What's more, the overall number of customer service calls was diverted and lowered, thanks to predicted key events and trends due to the machine learning algorithm.

RESULT

After deploying BitSwan, we leveraged the potential to deliver a complete understanding of a customer by analyzing multiple layers of data sources in real-time. Now, O2 is able to diagnose the problem during the customer call and even preventively locate it.

The solution has sufficient capacity and speed of processing extensive amounts of data and is effectively scalable. We successfully tackled the challenge of adaptation to increasing complexity of rising technologies with all correlating complications. In 5 months. By understanding the data, O2 invests only in cases that improve the customer experience while saving company costs. In the end, an effective and capable double-edged sword opposing the challenge.

"For the first time in history, we have a platform where we see every bit of information, what our customers are doing and how they are consuming the content. Revolutionary."

- Jan Hruška, O2 CZ CTO