

bics

## Big Data Platform Speeds Up Signaling Data Analysis for BICS

Infopulse helps a leader in digital communications to build a cost-effective solution to store and analyze massive volumes of data in real-time and harness ML capabilities

Industry: Telecommunications

Location: Belgium

Employees: 500+



## Client Background

BICS is recognized as a world-class voice carrier and the leading provider of mobile data services. The company offers a holistic suite of innovative solutions and services within Voice, Messaging, Roaming, Data & Connectivity, 5G, IoT, Cloud Communications, Capacity Management, and other domains. Headquartered in Brussels, BICS serves 2,500+ enterprise and operator customers across Europe, the Americas, Asia, Africa, and the Middle East.

## Business Challenge

Initially, BICS, [a long-standing client of Infopulse](#), had a classical RDBMS-based Data Warehouse that demonstrated slow data processing and analysis. Given that BICS operated with massive volumes of data, it was decided to migrate the current workload to a new data storage and analytics system.

[The Big Data platform](#) extension project was then launched with the following goals:

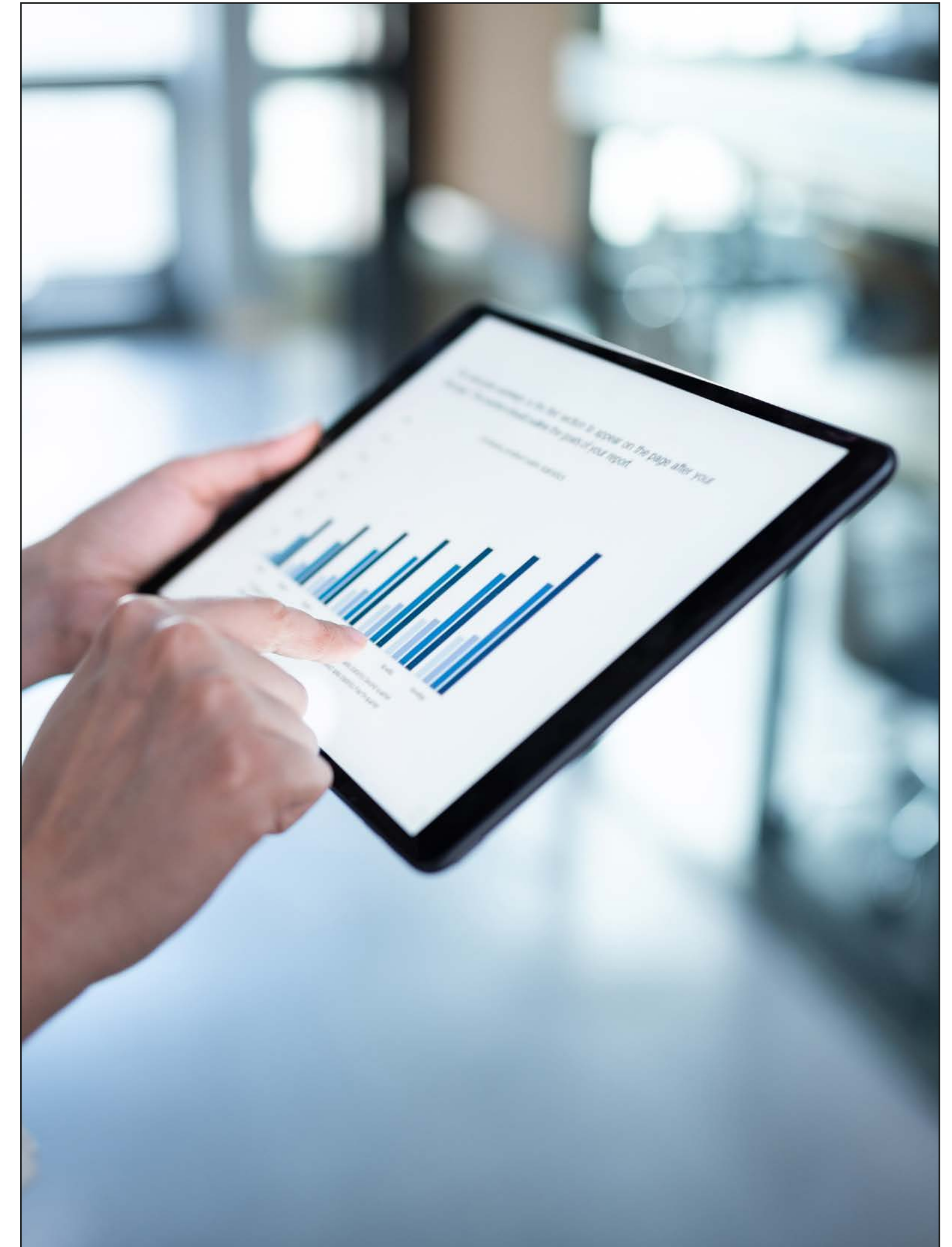
- Migrate data and workloads to a highly scalable and flexible data platform to collect, process, store, and analyze big volumes of data (over 10 terabytes)
- Enable the parallel processing of both signaling data coming from hardware switches/probs and data feeds related to business processes
- Allow analyzing data in the reports in real-time to make decisions based on the latest data
- Optimize network capacity and traffic behavior
- Build a data platform that can meet [Advanced Analytics](#) needs, e.g., ensure customer behavior analysis and predictive modeling, using AI & ML approaches
- Provide 24/7 data platform monitoring to meet its SLA metrics and enhance data accuracy
- Optimize costs for storing and managing massive amounts of data
- Ensure GDPR compliance of the data platform.

## Solution

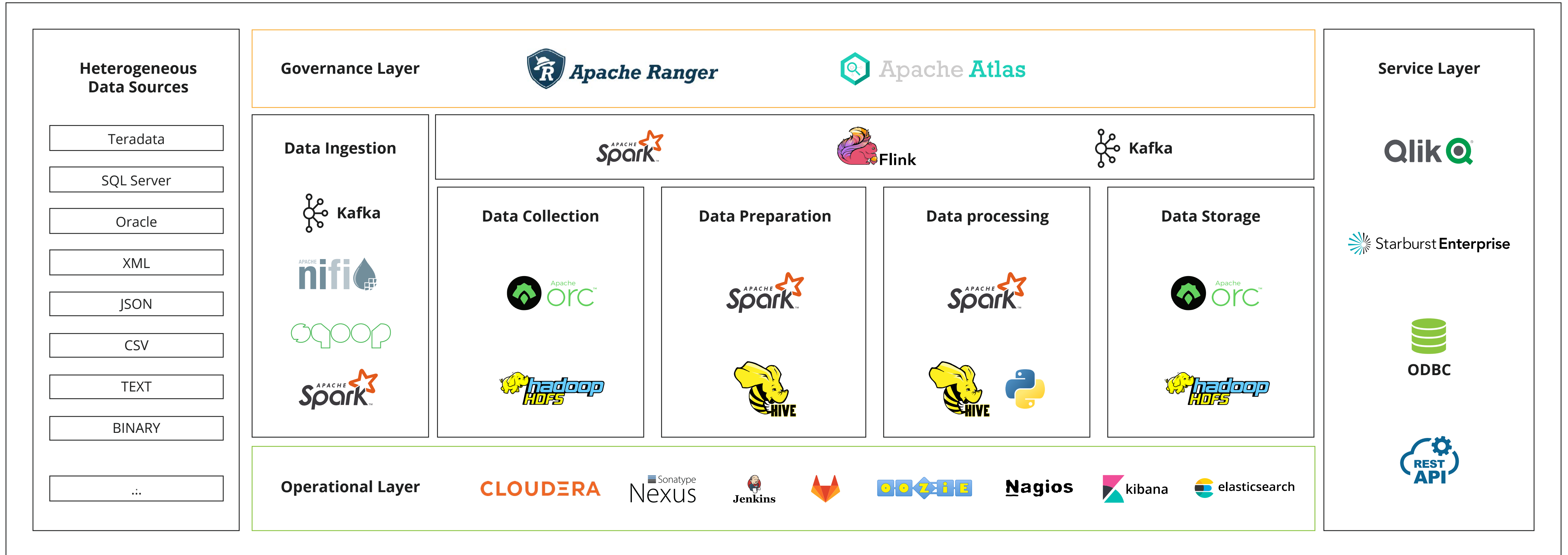
Infopulse contributed to the extension of the Big Data platform and helped BICS to perform a non-disruptive migration of their data from heterogeneous sources into a unified data platform built on the Apache Hadoop framework.

Since the migration, Infopulse is fully in charge of the Big Data platform of BICS, including the following parts:

- Data preparation & processing: developed data preparation and ETL processing using Apache NiFi, Spark, and Hive
- Provided batch and real-time stream data processing
- Ensured parallel data processing with Hadoop to
  - prepare signaling data for further reporting in just 15 minutes
  - provide a platform that enables AI & ML predictions based on the existing data patterns
- Operational layer for the solution monitoring and SLA reinforcing: overview and monitoring of international traffic behavior when accessed from the customer-facing portal
- 24/7 data platform monitoring and support



### BICS Big Data Platform Architecture



As a result, Infopulse helped BICS to build a cost-efficient data platform that complies with GDPR data protection

requirements and provides our client with extensive data reporting capabilities.

## Technologies



Apache Hadoop



Apache Spark



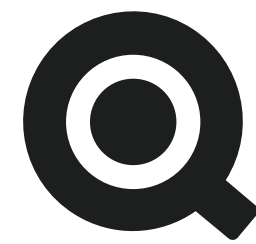
Apache NiFi



Apache Hive



Apache Kafka



Qlik Sense BI tools



Oozie



Elasticsearch

## Business Value

For BICS, the Hadoop-based data platform developed by Infopulse proved its ability to handle big data and convert it into actionable insights at the speed of their business. In fact, the effectiveness of the solution unfolded many other data processing use cases – for IoT, MVNO/MVNE, and billing, which are actively incorporated in the ongoing project.

Here is why BICS big data platform has turned into a powerful data management and advanced analytics solution:

- Optimized storage and analysis of massive volumes of data (up to 2 TB during traffic peaks)
- **Reduced time for data analysis from 30 to 15 minutes regarding 1.5X traffic increase in a 4-year period**
- Data tracking and analysis help optimize costs and margin
- Increased visibility and availability of customer data
- Granular reporting of real-time data allows for smarter decisions
- Proactive troubleshooting of issues due to the monitoring of each process at the governance/operational layers and the ability to raise the alarm when needed
- The data platform enables further data usage in ML-powered data analysis and predictive analytics (e.g., preventing network issues, fraud detection, quality prediction, and advanced analysis) by BICS data scientists.



## About Infopulse

Infopulse, part of the leading Nordic digital services company Tietoevry, is an international vendor of services in the areas of Software R&D, Application Management, Cloud & IT Operations, and Cybersecurity to SMEs and Fortune 100 companies across the globe. Founded in 1991, the company has a team of over 2,300 professionals and is represented in 7 countries across Europe and the Americas.

Infopulse is trusted by many established brands, such as Allianz Bank, BICS, Bosch, British American Tobacco, Credit Agricole, Delta Wilmar, ING Bank, Microsoft, Offshore Norge, OLX Group, OTP Bank, SAP, UkrSibbank BNP Paribas Group, Vodafone, Zeppelin Group, and others.

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