



## Company Profile:

Shanghai Metro is the world's largest rapid transit system totaling 676 kilometers and the second largest by the number of stations with 316 stations on 16 lines. The network ranks second in the world by annual ridership with 3.71 rides delivered in 2018. Over 10 million people use the system on an average workday and the company plans to expand its transit system to more than 1,000 kilometers by 2025.

## Company:

Shanghai Metro

## Location:

China

## Website:

[service.shmetro.com/en](http://service.shmetro.com/en)

## BellaDati Deployment:

On-Premise

## Notable Data Sources:

ORACLE® 

 MySQL

## Business Situation

Shanghai Metro is using various heterogeneous systems which generate large amounts of data. With the continuous growth of the company also grows the amount of the systems the company is using. Each system is using its own database. In order to improve the services, monitor the network operations, assets, economic and planning, Shanghai Metro was looking for Big Data platform which will enable consolidation of the data from various structured and unstructured data sources, will be able to on-board IoT devices and collect data from them, provide features for data cleansing and transformation, will be delivered with built-in report, dashboard and machine learning modules with the option to embed the insights directly in the Shanghai Metro internal systems.

## BellaDati Solution

BellaDati has been deployed as the central big data platform. The data from Oracle, Hadoop, MySQL and log files are imported by BellaDati's native connectors. BellaDati IoT collector is used to onboard sensors in the metro gates, metro stations, metro cars, and video cameras. BellaDati Connector SDK has been used to implement custom connectors to the social networks (Weibo, WeChat). All collected data are stored in the BellaDati data warehouse with Big Data features. BellaDati Machine Learning Module is used to predict the utilization of assets, metro lines and travel routes. This information is then used to plan the

asset utilization, maintenance and operational schedule. BellaDati is embedded in the Shanghai Metro internal CRM where the users can see the analytic insights next to the default system workflow elements. Business users also use the analytics module to create ad-hoc reports, see the detailed overview and update existing outputs. Analytic insights are divided into the 4 main areas: General overview (economic performance), Transport planning (asset utilization, maintenance and planning, operation schedule and the current status of network system development), strategic planning (long-term performance) and transport operation and performance (short-term performance trends, e.g. travel speed, line utilization or electric energy consumption).

## Benefits & Results

BellaDati platform provides analytic insights which are easy to understand and easily accessible by the whole user base. Centralized platform for data analytics and reporting increases the data quality and helps the users to focus on their performance targets. Users like the integration of the analytics into the existing system – they can see the current insights on the same screen where they are working. This helps to increase the adoption of the analytics among the user base which results in the high effectiveness of the analytics and enables users to make their decisions faster based on the current insights.