bigstep®

CASE STUDY

CitySprint
We deliver

Bigstep Provides Real-Time and Predictive Fleet-Data Analysis

CitySprint We deliver

+25% collection efficiency

A Geospatial and Time-Series Analysis of the CitySprint Fleet

Bigstep assisted CitySprint in the implementation of a high-performance, flexible environment tailor-made for analyzing real-time and historical fleet data.

The insights provided by the implemented predictive analytics have resulted in significant improvements in operational excellence, with collection efficiency increasing by 25% and with an overall improvement in effectiveness that is keeping CitySprint way ahead of the competition, as the market-leading delivery network in the United Kingdom.

About CitySprint

CitySprint is the UK's leading same-day distribution network. Technology is at the heart of CitySprint's business strategy. Whether it is their GPS-enabled fleet or the MyCourier app, they invest in market-leading technology so that they can offer complete transparency, reliability and leading customer service.

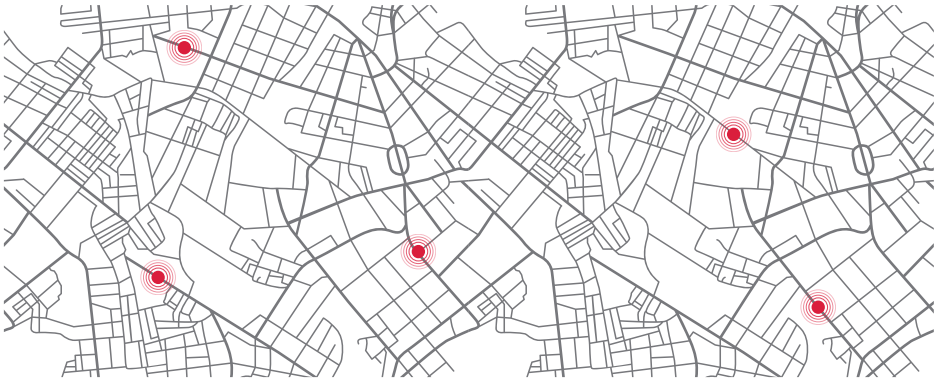
The focus on continuous improvement enables CitySprint to enhance existing delivery solutions, as well as discover new ones, and ultimately offer the best, most convenient service for their customers' business needs.

As technology advances, so do we.

CitySprint

CitySprint Technology at a Glance:

- Market-leading online-booking and reporting platform
- GPS-enabled fleet and advanced fleet-mapping software
- Real-time job tracking and map location of couriers
- Time-stamped job audits and electronic proof of delivery
- Email and SMS status notifications



We deliver... your best work, valuable data, award-winning designs, life-saving organs, wonderful presents and everything else in between.

CitySprint

The Challenge

CitySprint is an excellent example of what a data-driven business actually looks like in the second decade of the 21st century. They are truly careful with the data they are collecting and extremely keen on finding new ways of leveraging it effectively. For the Bigstep team, helping CitySprint enrich their already-impressive technology assets was a challenging, yet very rewarding project.

After a detailed business analysis of CitySprint operations, Bigstep's big data experts and solution architects set out to:

- Take CitySprint's geospatial and time-series data and make it more easily manageable and accessible by business users
- Discover new business insights that can be used to optimize operations
- Run real-time analysis on more than 22 million records
- Test if Spark and Hadoop are suitable data analysis tools for CitySprint
- Design a flexible, versatile environment for analyzing fleet data
- Implement a big data environment with sufficient performance to enable data exploration on the full dataset

Bigstep **DataLab**

Solution Outline | Bigstep DataLab

Banking on state-of-the-art technologies such as Apache Spark and Jupyter, Bigstep DataLab is an enterprise-ready data research service that enables domain experts, BI professionals and data-science groups collaborate in helping organizations make data-driven decisions. The data laboratory can easily handle large quantities of data, it can perform complex machine-learning tasks, and it can be quickly stopped or repurposed.
Bigstep DataLab was designed and built to help users conduct data research at scale without the need to involve IT, but within an environment IT can fully control.

CitySprint is using the DataLab to increase national coverage and is constantly exploring ways to leverage their massive amount of data.

CitySprint can now better predict collections and drop-offs, in turn being able to better handle resources.

The solution enables:

- Real-time fleet tracking and geospatial analysis
- Real-time route optimization
- Cargo load planning and optimization
- Prediction of parcel pickup locations
- Expansion area analysis
- Ad-hoc data research and analysis

We're here to help. Call us at **+44 (0) 207 510 9298** or email us at **sales@bigstep.com**

In short, here is how CitySprint benefits from using Bigstep DataLab to manage, explore, and leverage data:

- The ability to perform predictive analytics, real-time data analysis and machine learning using the data science capabilities of Spark
- Map plotting on ARGIS – Heat mapping, zoom in/out, real-time updating
- High performance environment due to Bigstep Metal Cloud and in-memory processing capabilities of Spark
- Support for large data sets due to high-performance disk-based data access in Hadoop File System (HDFS)
- The ability to import data from any existing Enterprise Data Warehouse
- The ability to connect to almost any existing BI and visualisation tool: QlikView, Tableau, MicroStrategy

> *Bigstep helped us design and implement a high-performance, versatile environment uniquely suited for analyzing our real-time and historical fleet data. Our ability to make sharper predictions and perform operational optimizations has since tremendously improved. Beyond the excellent flexibility, architectural scalability and data security, what we enjoy about doing big data on Bigstep DataLab is the fact that it delivers consistent results. It works wonders.*
>
> **Eduard Lazar,**
> Sr. Solutions Consultant at LastMileLink Technologies, a CitySprint Innovation Lab

Solution Summary

The Bigstep team abstracted away all the complexity typically involved in setting up and running a complex infrastructure and application stack, through seamless end-to-end automation. Bigstep offers a single point of contact for support, billing and a one-of-a-kind self-service portal for managing technology stacks.
To wrap up, here are the main pointers behind the effectiveness of Bigstep DataLab and the main reasons why this solution is so well-suited for CitySprint:

- Scalable – can be used to increase the data set to any required size while maintaining responsiveness to seconds
- Business-centric – supports day to day decision making from the executive team to the controllers in the field – as it can take in data streams and integrate real-time analysis
- Secure – physically isolated; data is encrypted in transit and at rest
- Cost effective – high consolidation ratios for applications and management services, using Mesos and Docker
- High performance – in-memory computation and bare-metal environment

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