BUSINESS CASE

Big Data Analytics & Business Intelligence Observatory

LASTMINUTE.COM GROUP: BIG DATA ANALYTICS AS A CORNERSTONE OF THE CORPORATE MISSION

2017 Research
Business Case

Lastminute.com group: Big Data Analytics as a cornerstone of the corporate mission

SECTOR

Online Travel

COMPANY

Founded in 2006, lastminute.com group is a leading European online travel and leisure retailer. The company's websites and mobile applications are available in 40 countries worldwide

REQUIREMENT

Realize the mission of becoming the leading company in the travel industry through innovation and the use of Big Data Analytics

THE SOLUTION IMPLEMENTED

The project brought about a transformation in lastminute.com's technical architecture, with the integration of an internal analytic engine in a Cloud environment. On an organizational level, the company created a Data Science team within the Marketing Technology department

THE BENEFITS

— Increased revenue from marketing campaigns
— Improved efficiency
— Technical ability to remain at the forefront of innovation
— Creation of a Data Science centre of excellence

THE COMPANY

lastminute.com group is a leading European company in the online tourism sector. The company is headquartered in Chiasso, Switzerland and is quoted on the Zurich stock exchange. The group operates via a portfolio of well-known brands including Volagratis.com, an Italian website that compares prices for traditional and low cost airlines in addition to a wide range of integrated services, such as hotel accommodation, holiday packages, cruises, car hire and other products and services related to travel and leisure. Other brands in the group include lastminute.com, bravofly.com, rumbo.es and the meta-search site Jetcost. The multinational group's websites and mobile applications operate in 40 countries, with Great Britain, France, Italy and Spain being the most consolidated markets.

THE REQUIREMENT

In recent years the group has defined a very precise corporate mission: to become the most relevant and inspiring travel company, committed to enriching the lives of travellers. One of the activities that they believe offers the most potential to help achieve this objective is the use of innovative Big Data applications.

THE SOLUTION IMPLEMENTED

To grasp the opportunity, the company created a team dedicated to Data Science, staffed by a group of employee experts in IT, mathematics and statistics. As in many companies, Marketing is the leader of many strategic business initiatives, hence became the driver of the main Big Data Analytics project requirements. To implement this, the Data Science team was created within the Marketing Technology department, a brand-new function directly reporting to the CIO. The company is aware, however, of the benefits that Big Data can bring to other lines of business and it plans to broaden the area of application for analytic approaches to increasingly cross-functional problems outside Marketing. To implement Big Data projects, the company needed to transform its technical architecture. They undertook this transformation with the support of Quantyca, a company that offers consulting services in the area of Data Management, Big Bata and data streaming. The project, referred to as Data M.A.G. (Marketing Analytics in Google), resulted in the implementation of an internal data lake, implemented on Google Cloud as the computational infrastructure. The creation of a unique repository for all raw data was chosen in order to correlate different types of data coming from the company's various business processes. The IaaS (Infrastructure-as-a Service) cloud offered clear cost advantages for lastminute.

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com, reducing the investment in storage, and making it possible to minimize data transfer from internal and external online systems. Vertica, a columnar database with very high analytic performance, was chosen as the Big Data Analytics engine. Vertica lowered query response times, thus improving decision making and the ability to deliver real-time and streaming Analytics. Vertica also stands out for its ability to easily integrate with lastminute.com's existing BI ecosystem as well as for its efficient horizontal scalability, enabling an increase in data volumes and analytic workloads across the whole group. After testing other analytic as-a-service solutions, i.e. technologies for which companies do not use virtual machines, but pays based on the analytic workload used, lastminute.com group decided to deploy Vertica as the overall Analytics platform for the group. The decision was made because Vertica was already in place with good maturity for a portion of the company BI and because it offered the most efficient pricing model for the expansion plan: the pricing was not tied directly to usage time, number of users or to the complexity of queries processed but simply to data volumes. This allows the lastminute.com group to more easily forecast costs up-front, a clear advantage for managing the company's financial resources. Overall, the choice of technology is therefore based on a hybrid approach which, on the one hand allows the company to profit from the advantages of

Cloud infrastructure (Iaas) and Google's virtual management tools, while on the other hand allows scalability and internal control mechanisms for the company's ever-changing analytic strategy and needs with Vertica. Having gradually consolidated all the previous legacy BI platforms onto Vertica, lastminute.com group is now completing the integrated analytic environment, adding a data lake to the corporate data warehouse to store anonymized, unstructured data related to online customer activity. This integrated analytical solution allows the company to correlate data from traditional BI processes with data from marketing campaigns, analytical CRM and machine learning analyses from the Data Scientists to enhance their Customer Analytics with advanced predictive models. Quantyca is currently finalizing the migration of data into the data lake: the anonymized data collected will be used to study customer behaviour across all lastminute.com channels, and analyze all steps in the customer journey, from preliminary online searches right through to final payment. The channels providing this information to the data lake include the company travel meta-search engine (Jetcost.com), the Online Travel Agency (volagratis.com or lastminute.com) or more generally, all digital touch points. For example, search engines or social networks, in which digital marketing platforms come in contact with the user. The user's privacy is guaranteed because the collected data are

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anonymized. As mentioned above, the most important Big Data initiatives that the company is pursuing are all linked to the specific area of Marketing Analytics.

FUTURE DEVELOPMENTS

One development objective is to optimize online marketing budget. Using attribution algorithms, the company can identify particular events for which marketing campaign investment generates greater return, and thus allocate available resources more efficiently. Another example is the automation of Search Engine Marketing (SEM) activities, including all marketing activities performed on search engines that allow a company to generate traffic for its own site via the search engines. Automating this process means that human intervention in keyword bidding management is significantly minimized: the moment a company decides to purchase online visibility, the costs should be modulated to take into account the relevance of search keywords. The important keywords for lastminute.com group are in the tens of millions, so it is easy to see how an automated big data engine can hugely increase the efficiency of this activity.

THE BENEFITS

The Vertica implementation has already proven to positively impact the ROI of marketing campaigns, and therefore company revenue. In addition, the algorithms for attribution and bidding automation will allow the company to optimize marketing costs on the whole, leading to increased profits. In conclusion, lastminute.com group has put in place the technological foundation for continued Big Data Analytics which, in synergy with Cloud platforms, can remain at the forefront of innovation. In line with this objective, it has changed its own organizational structure, creating a team dedicated to Data Science that will increasingly support the entire group.

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