

Case STUDY ON BIG dATA IN CANADA AND ITS IMPACT ON CANADIAN BUSINESSES

[1043 – Big Data Fundamentals]



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* The business that has been used in the case study is on a company named ***‘The Source’***.
* All the work done in this case study is done by me and the resources of the information (if taken from the internet) is cited from where that information is taken to the best of my knowledge.

***Case - Study***

1. A brief description/introduction to what is Big Data.

As its name suggests, Big Data is the data which is big. Here, the big data does not mean that it is just big in size, but its huge amount of information, which is generated at a high speed and covers a vast range, that is obtained from various sources. The data might be clean or dirty, useful or useless, relevant or irrelevant, structured or unstructured depending on the source, is called Big Data. However, Big data is considered beneficial, as many important insights and some important information can be obtained by the cleaning and processing of the big data, which might help companies/institutions/businesses to make data-driven decisions to generate revenue or to be profitable in terms of earnings.

1. Big Data market globally and in Canada in the past and its predictions.

Big Data is a huge market globally and spending and investing is in hundreds and thousands of billion dollars globally with almost $125 billion spent on big data analytics and its services world-wide during 2016 to 2018.[1] it is predicted to go beyond $400 billion till 2030.[2] In this huge market, Canada does not play a big role, as almost $1.1 billion were spend by Canadian businesses on the big data and services related to it in the year 2016 only on the SOFTWARE SIDE and it was expected to spend almost $1.8 billion in 2020.[1] Accounting with hardware, infrastructure and services, this number would be far more, but is not as much that makes an impact on the market on the global scale.

Out of all these spending on big data majority of the vendors of big data are in the capital of Canada (Ontario), with the share of more than half of the total. Moreover, British Columbia (19%) and Quebec (14%) combinedly makes a third part of the total market in the field of Big Data.[1]

1. The use of Big Data in the various sectors of Canada and how these sectors are evolving with the help of the Government.

Many Canadian sectors have started using big data not just Information and Technology sectors, but also Healthcare, Finance, Manufacturing, Oil and Gas sectors are using Big Data in their businesses to make Data-Driven decisions. These are just a glimpse but there are more such areas/sectors which are using big data.[1]

* IT sector: The information and technology sector help companies increase their profit and sales by cleaning and analysing the big data.[1]
* Healthcare sector: Data is used to reduce the errors, to improve the healthcare system, and to save time and money of patients.[3]
* Finance sector: Many financial institutions use big data to enhance the services they provide such that both the customers and those institutions are benefitted.[1]
* Manufacturing, Oil and Gas sectors: All these sectors use the big data in order to reduce the waste and use minimum resources to get maximum output.[1]

Along with these private businesses and Provincial Government, Federal Government is also making efforts to evolve with this trend as Federal Government is reviewing many laws in order to make a suitable environment for the above sectors to use the full potential of the Big Data.[3]

Moreover, the federal government also made public a “Digital Charter” as to improve the structure of data and its usage.[3]

1. A single Canadian business which is used for the case study that used Big Data to overcome a problem.

Big Data is nowadays accepted in mostly all the businesses worldwide, not just in Canada. It helps many businesses to grow to its full potential by letting businesses to make data driven decisions. There are many such companies which were not using big data in earlier, which saw a significant change in the revenue after using big data. This case study highlights ones such business which accepted the use of big data. The company which this case study highlights is **THE SOURCE**.

**The Source** is the subsidiary of The Bell Canada and is the largest retailer of the technology and electronics products from the top brands with more than 400 hundred locations across whole Canada with the headquarter in Barrie, Ontario, Canada.[4]

1. The reason behind The Source using Big Data in their business.

The need for which the Source needed to use the big data was to increase the efficiency of their services and improve the experience of the customers. With the increasing prices of the utilities, costs of the services were also increasing resulting in customers shifting to other retail stores. This made the company to apply a solution by which the waste of resources is reduced, and the company could monitor the energy uses so that they can provided services accordingly in order to increase the savings.

Hence, The Source moved towards the Big Data to eliminate these issues.[4]

1. The pilot project of using Big Data to solve the energy wastage in the stores of The Source.

The Bell provided a solution to this problem, it was a comprehensive cloud-based suite of software, hardware and services which was specifically designed for the retails, and it was an Energy Management Solution (EMS) giving control to a single point to monitor and manage the Lighting, Heat, Ventilation, and Air Conditioning systems.[4]

For the initial phase, this system was run at two locations only and it was an experiment to check the success of the applying this solution.[4]

This trial system worked in 3 steps:[4]

* In the first step, IoT sensors were installed all over the Heating, Ventilation, Air Conditioning to measure usage and consumptions. Along with this, latest thermostats were also installed.
* In the next step, the data from the HVAC was collected on the cloud-based management platform to examine the data. All the transfer of the data was done on the LTE network of Bell.
* Finally, the collected data was examined and by advanced technology.

The benefits of this system in the pilot program were immediately visible. All the readings of HVAC were visible from both the stores and can be monitored and managed on the cloud itself. If there was any issue, it triggered an alarm at the store and because of this, maintenance was possible before any system in the HVAC fails or shut down. Moreover, from the data, the centralized location, from where the data is monitored and managed, they can make future planning decisions, which gave them an upper hand while saving on energy expenditure.[4]

1. The next steps after the Pilot Project.

All of this resulted into 18% Return on Investment within three months of starting the pilot project and that too by not shutting down a single store for a second.[5]

As a result of this successful trial, The Source launched this program in more than 50 stores in different locations in Canada. This Energy Management Solutions will be of great help to The Source and will result in more revenue from the savings and reductions of the wastage.[5]

1. Glossary.

* Dirty Data – This means that the information is in the raw form and is not structured in the way that the business need. After erasing unnecessary information and wrong information, the data is said to be cleaned.
* Structured Data – Any form of information that can be fitted into the rows and columns of a table is structured data.
* Unstructured Data – Any information that can not be fitted into rows and columns is unstructured data. This data can be images, videos, any information, or anything.
* Data driven decisions – Any decisions a company makes based on the data collected and doing analytics on the data is called a data driven decision.
* Pilot Project – An experimental application of any approach or an idea at a small sample and in controlled surroundings is called a Pilot Project.
* EMS – Energy Management Solutions.
* IoT – Internet of Things. Any technological item that can collect data and transfers that data anywhere is an IoT. Examples of IoT are fridge, thermostats, smart watches, etc.
* HVAC – Heating Ventilation Air conditioning.
* Cloud-based Management – A management that is done over the cloud(internet).
* ROI – Return on Investment. The money or profit that we get back from something in which we have invested anything is called Return on Investment.

1. REFERENCES:
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