

Case Study – NomNom Chocolate

1. It's a good thing that Liam recognized the potential of data management. There is a lot of organization even nowadays that does not recognize data as a benefit for their organization. This is mostly true for small companies which stays with an archaic organization mindset. Look at all the big companies of the world: Facebook, Microsoft, Apple, they all know how to use their data. They have so much data that they even sell it. Data is valuable and can really help a business grow. Even governments structures use data to help their decisions. Even if you are a small company compare to them, you can collect data, company always have data in one way or another. This awareness about the fact that his company need a data managing strategy is a step forward.

Data management is turning data into information that you convert in wisdom thanks to knowledge. This is a cycle that always lead to the same goal for companies, creating value. The first step is always to think about where to find data. In this case it will not be hard because NomNomChocolate is selling online and in store. Online store are really important in term of data collecting.

They are so much benefits that the company can earn using data processes. First, they will have an available streamlined database that regroup all types of data that can have NomNomChocolate. It will be much easier to control it and cost less time than if it were several different databases. They will be able to reach new customers, to know more about their actual customers and promote the relation they have with them. In fact, they can have a better allocation of their resources because their targeting will be better and they won't waste any more money on prospects that are not really interested. That will help them a lot making the good decisions, but the setup of the process have to be accurate or it will be a total mess. The quality of the database is imperative. It has to be up to date, accurate, relevant and timely, otherwise it will be completely false and bring them to make bad choice. As well, creating database need knowledge and time. Obviously they will have to contact competent workers, they usually do not really know how much time it will take. Also the company cannot know the success degree of the process but it's like marketing, you spend money that you grow afterwards. NomNomChocolate also have to be aware of the security problem related to this type of process. The data service provider that they will hire, will have access to all they customers' information, they have to keep that data secure otherwise he can have legal issues. Data regulation are also evolving a lot so the company has to be on point with those regulations.

2. Data management systems are software. They will help the company with data structuration. There is four kind of databases: Relational database, Flat database, Object-Oriented database and hierarchal database. They will prefer one or another depending on their needs and their existing data. Usually, relational databases are the most popular because there is a link between the different databases. Every time there is a transaction or even an interaction, data is created but NomNomChocolate need to capture this data. They need to capture that data by implementing an effective data system. I will suggest the company to use relational database system because those type of system are not restraining and make a link between the different types of databases. Relational database systems are widespread and there's a lot of companies with relevant software like Oracle, IBM and Microsoft. Most company also use Client Relationship Management (CRM). Using this system will help them to streamline and automate the process of interacting with their client. It improve the relationship with the clients, turns customer data into value and optimize

marketing strategies. This system is a real perk for all businesses. In fact, every company need a storage solution for their databases. They are different options depending on costs and the volume of the data. Databases can be stored in Flash memory thumb drives or external hard drives which is cheap but insecure and restraining. The most popular storage is the cloud, it's more secure, you can protect it and restore it. Clouds could be restraining in term of space so companies can also use Network-attached storage (NAS) which is a computer data storage connected to a professional network.

Before storing the data, NomNomChocolate need to collect it. They can extract it from their internal records: sales invoices, orders, accounts, customer service and their marketing activities for example. Data is everywhere they just need to filter it to collect only what they need and what could bring them answers. They need to make that data speak and give advices. For example, sales records will tell them which product is the more profitable, which product is a dead weight that he need to stop. The company online shop is also key in this process. They really need to collect information from their website. The data on a website will mostly tell who the customers are, what is the conversion rate on the website, what are the popular products and more. This complementary data is also important. There is a lot of plugins and apps that helps with collecting data. If the company is doing online advertisement, I will suggest them to use the Facebook Pixel. I went on NomNomChocolate website and I saw that they did not have it. It is basically a plugin that captures customer information and all the movement people are doing on the website from clicking to adding to the cart. This is reliable and this is a good information source. A really helpful information source is also the loyalty card. The company could make it as a "Trojan horse" to their customers: not too long to fill, pretty discreet but reliable. This can give them so much information directly from his customers.

3. We are in a constant changing world. While we are discussing, innovations are growing more and more. I am talking about computerised innovation. Nowadays, the main innovation is probably Artificial intelligence which is raising and becoming really useful to companies. Artificial intelligence efficiency provide new insights from existing data. AI automate a wide range of processes involving reasoning, knowledge and planning. For the moment AI process automation technology and replace manual handling of repetitive tasks. We say that AI will never replace humans. Indeed, AI is created by humans, they are algorithms and they do what they are programmed for. Society think that AI cannot do what they are not programmed for. However, the next step is machine learning and process automation technology. The systems will be able to acquire self-learning capabilities by using observations. Those future models will be intelligent and will evolve by earning more knowledge about the data that they have. The first example of this machine learning trend is Watson the AI program created by IBM. It was created for business purpose. This system is the winner of the American TV Show Jeopardy. That was in 2011, back 7 years ago and he beat human being genius. Imagine the improvements that could have be done in 7 years. That is pretty scary. With that kind of technology able to handle data by itself we can imagine that data agency are done and those systems will replace it. We are talking about fully autonomous databases. I think the right move for NomNomChocolate management team is to get that kind of high tech database systems as soon as they are release. Those systems will be able automating all the administrative tasks: provisioning databases, patching them, updating them, backing them up, and tuning them. As well the security will be much easier, the system will be able to encrypt the databases. The management team will essentially become data administrators and they're no longer focused on maintenance but on driving the data management strategy. This automation lends to more productivity of the staff, they can do

the same tasks in a much shorter time, so the company will decrease overall costs.

NomNomChocolate will get rapid insights from their data and therefore bring innovation, new products much faster to the market and leapfrog the competition.

Big Data is also a really discussed topic. Big Data is the term for the 2.5 quintillion bytes of data that we produce a day. NomNomChocolate might think that it has nothing to do with them, but they are wrong. To process big data they don't need huge computers, they can actually process it on clouds. Big Data can actually give them complementary data that they can't get from their actual data sources. The challenge for NomNomChocolate with big data is how to extract valuable information from this huge volume of data.

4. According to The Economist Newspaper "the world's most valuable resource is no longer oil, but data." (Economist, 2017) That could be true because there is so much value that you can earn from data. Why do you think Facebook bought WhatsApp in 2014 for \$19 Billions? Because WhatsApp is a massive load of data. Itself WhatsApp generate no real revenue because it's free but the data inside the application apparently worth 19\$ Billions. Everything that have a high value has to be protected. The real question is which part of our data has to be governed and be compliant and what are other data sources that don't require that. We saw with the audition of the founder of Facebook Marc Zuckerberg at the European parliament that data protection becomes a real priority. Government are finally waking up. That's why general data protection regulation (GDPR) was introduced to specify how customer data should be used and protected. GDPR was officially adopted by the European parliament in April 2016. It was implemented in May 2018. It applies to everyone involved in the processing of data about individuals in the context of selling goods and services to citizens in the EU regardless of whether the organisation is located within the EU. The UK government says it will bring the EU regulation into British law regardless of how the Brexit deal pans out. GDPR major requirements includes seven areas: consent, breach notification, right to access, right to be forgotten, data portability, privacy by design, data protection officers. Organisation can be fined up to 4% of annual global turnover for non-compliance. All companies like NomNomChocolate has now to be very careful with the data of their customers otherwise they are exposing them to huge financial penalty. This is also a chance for those companies, especially for the big ones, to regain customers trust. At the end, GDPR are poses more restrictions on what organisations can do with data to extract commercial benefits. Companies will no longer do what they want without the customer agreement and the observation of the regulation body. Collecting data will now become fairer, it will be less intrusive. That regulation brings every company to clarify their stock of data and make it GDPR compliant. The key in this process is the collaboration between the different departments of the company. GDPR affect every branch of the company, so the company has to be prepared and protected.

As a conclusion, the digitalization of the world is impacting company concerns. Data has now a real impact on companies' turnover. We've make so much improvements within a few years that we are now creating fully automated systems that think by their self and that can observe and learn. Small companies as NomNomChocolate are also concerned by this data tsunami. We showed that the company could earn so much benefits using a good data process management. However, they also got to be very careful with the use of this data, the storage and the protection of the customers' data.

Bibliographie

Best, J., n.d. *IBM Watson: The inside story of how the Jeopardy-winning supercomputer was born, and what it wants to do next*. [Online]

Available at: <https://www.techrepublic.com/article/ibm-watson-the-inside-story-of-how-the-jeopardy-winning-supercomputer-was-born-and-what-it-wants-to-do-next/>

channel, O. y., 2017. *Oracle Autonomous Database: The Role of the DBA*. [Online]

Available at: <https://www.youtube.com/watch?v=FDgm4MAMckM>

Corpdata, 2017. *The impact of GDPR on UK Business*. [Online]

Available at: <https://www.youtube.com/watch?v=AxgMrOxg1FU>

Economist, T., 2017. *The world's most valuable resource is no longer oil, but data*. [Online]

Available at: <https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>

local.gov.uk, n.d. *General Data Protection Regulation (GDPR)*. [Online]

Available at: <https://www.local.gov.uk/our-support/general-data-protection-regulation-gdpr>

News, C. 4., 2018. *GDPR explained: How the new data protection act could change your life*. [Online]

Available at: <https://www.youtube.com/watch?v=acijNEErF-c>

Olson, P., 2014. *Facebook Closes \$19 Billion WhatsApp Deal*. [Online]

Available at: <https://www.forbes.com/sites/parmyolson/2014/10/06/facebook-closes-19-billion-whatsapp-deal/#7487c86b5c66>

Oracle, n.d. *What Is Autonomous Database?*. [Online]

Available at: <https://www.oracle.com/uk/database/autonomous-database.html>

Panwar, A., 2017. *Types of Database Management Systems*. [Online]

Available at: <https://www.c-sharpcorner.com/UploadFile/65fc13/types-of-database-management-systems/>

SAS, n.d. *Big Data What it is and why it matters*. [Online]

Available at: https://www.sas.com/en_us/insights/big-data/what-is-big-data.html

studios, F.-e., 2013. *What is Big Data and how does it work?*. [Online]

Available at: <https://www.youtube.com/watch?v=TzxmjbL-i4Y>

technopedia, n.d. *Big Data*. [Online]

Available at: <https://www.techopedia.com/definition/27745/big-data>

techopedia, n.d. *Database Management System (DBMS)*. [Online]

Available at: <https://www.techopedia.com/definition/24361/database-management-systems-dbms>

techterms, 2017. *RDBMS*. [Online]

Available at: <https://techterms.com/definition/rdbms>