The importance of Data Management in the Digital age

By Nerson Tjelos

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- Bill Gates Or the Database?

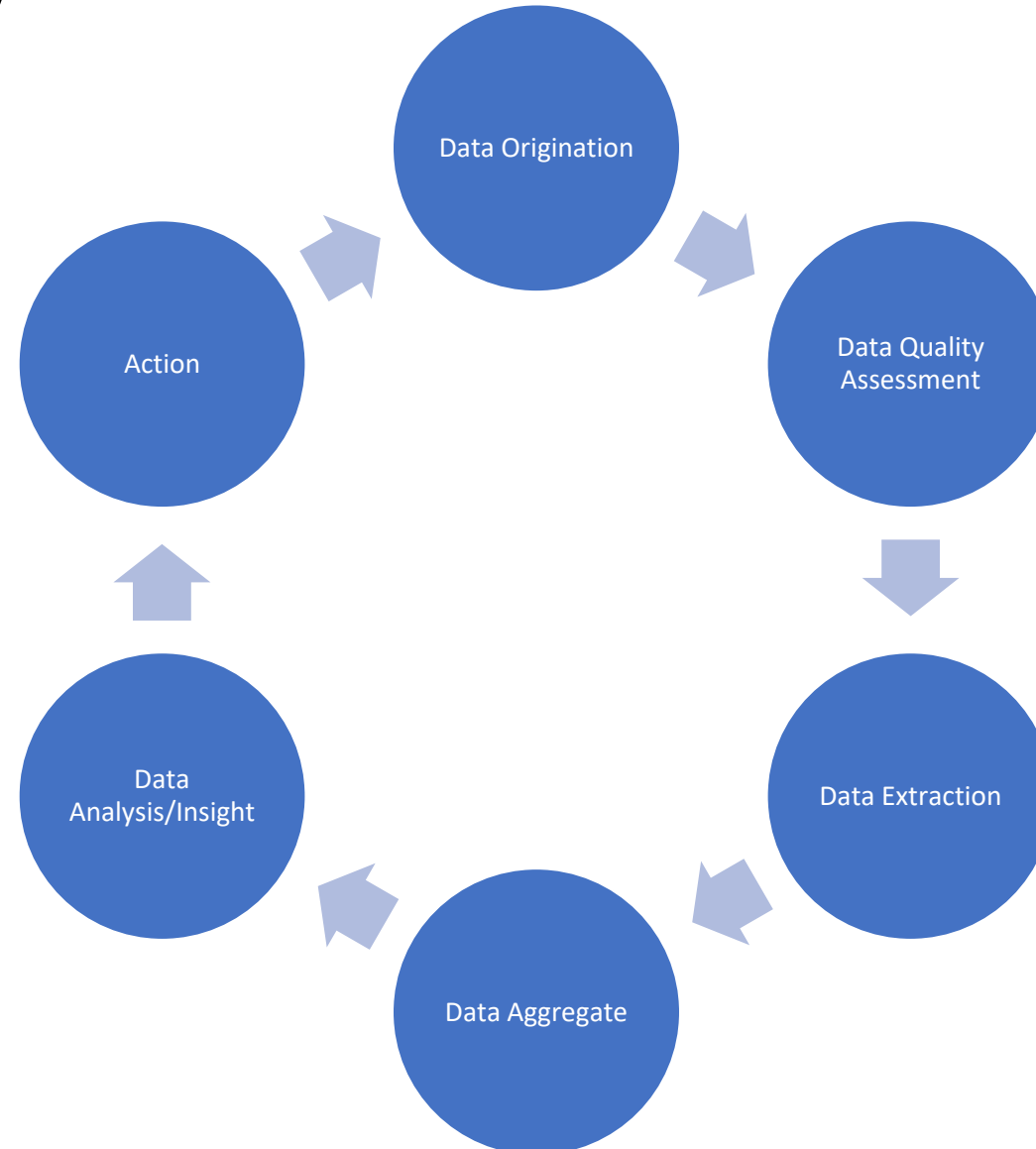- Whatever is happening today should have been picked up 5-10 years ago. Agree?

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Data Management?

- Development and execution of processes, architecture, policies, practices and procedures – to manage an institution's information:
  - Compliance regulations, amount of data generated vs storage space, valuable resource for business – efficiency, growth etc.

  Stats from the US (National Archives & Records Administration in Washington):

  - 93% of companies that lost their data center for 10 days or more due to a disaster filed for bankruptcy within one year of the disaster.
  - 50% of businesses that found themselves without data management for this same time period filed for bankruptcy immediately.

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The Journey

Data Origination → Data Quality Assessment → Data Extraction → Data Aggregate → Data Analysis/Insight → Action → Data Origination

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Data Origination

- The points of origin for Data have increase as a result of digitalization:
  - Websites – How many people visit your site, what do they do when they are on your site, what is drawing them to your site.
  - Weather Centres – Its very easy to know that a cyclone, heatwave, drought, rain, mist is coming with the advances in weather collection equipment.
  - Smart Watches – You can now identify irregular heart rythms, heart rates.
  - Mobile Phones/Tablets/Phablets – Now the ordinary person can carry multiple internet enabled devices collecting all types of information
  - Mobile Apps – What are peoples' interests and what draws them to the apps
  - Television Apps – NBC launched a TV app, that means they can know more about what programs/channels are people watching or interested in. Yesterday we witnessed the defeat of the Manchesters on the phone while setting up our stand
  - Social Media – we all know what facebook and google do with the data they collect from us.

Data Quality Assessment

- So understanding that the points of origin have grown exponentially, its is vital to understand the quality of this data, prepare it, de-duplicate the data (wash it).

- Data Quality assessment is vital in ensuring that the data can be used to provide accurate and actionable intelligence.

- This involves assessment of the data identifying challenges from source/point of origin with recommendations on how to improve the point of origin.

Data Extraction

- While data may reside/originate from a variety of devices extraction is the next big question.

- Using tools such as Pentaho, Elastic, Talend, Data Stage, Jasper etc. Business can extract data from these numerous sources to converge in a single database.

Data Aggregation

- Consolidating the data into a structured data storage/warehouse is the next step in the cycle.

- Making the data accessible for users to draw insights and understanding from the data.

- Creation a single source of the truth for the business.

- If anyone needs data they must go to that one place.

Data Analysis

- Visualizing the data is the next step

- Getting new perspectives on the data and quickly getting understanding of the pain points just by a graph.

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Action

- The next step is action,

- What action do you take based on the numbers?

- Do we plan for alternative sources of water since the rains will be low?

- To whom should we target our promotions? The low end customer or the high end customer?

- When is the best time to plant a crop?

- What do Namibian viewers like to watch on TV, should we buy more such programs to keep them entertained?

- What are people saying about my brand on social media, should I employ a PR company to rebrand and regain trust?

So why data management important?

- Predicting churn of customers on specific behaviors.

- As BI Dynamics we have helped a number of companies to identify churn and predict if subscribers are about to churn to the competition.

- For one client we were able to free IT from the need to prepare reports for other more value adding tasks.

- We helped a certain customer identify and retain their high value customers and increased their revenue by 12%.

- We enabled a customer to initiate a cleanup exercise in which 25% of the duplicate data were found.

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In summary:

- You can easily collect data but…managing, organizing, and utilizing that data can make or the bottom line.

- Data is not today' oil because oil non renewable. Data is the soil. Treat it well and you will feed nations!

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Thank you!