

Big Data Analytics

HOW IT CAN BE USED TO DRIVE PROFITS

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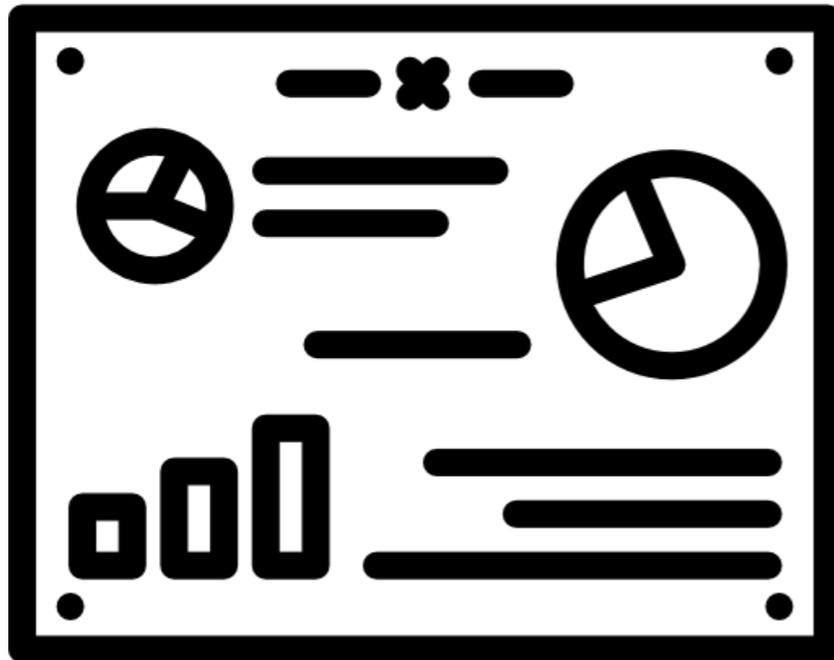
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01

WHAT IS BIG DATA AND HOW IT WORKS

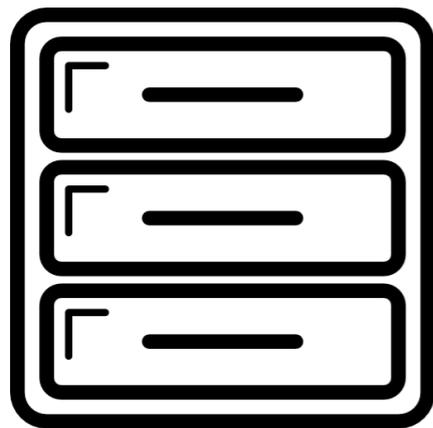


WHAT IS BIG DATA ANALYTICS

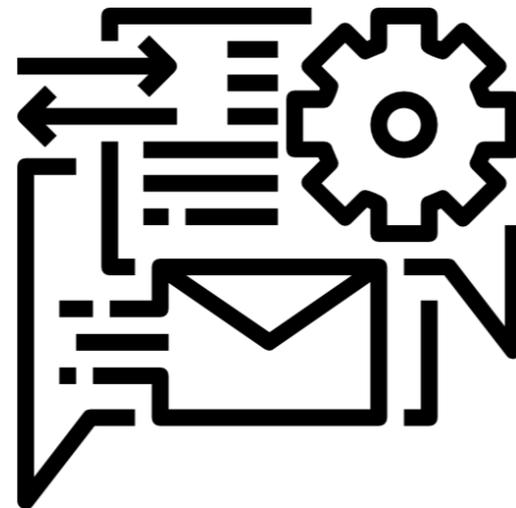


Big data refers to **data** that has high volume, high velocity, and high variety, which requires new technologies and techniques to capture, store, and analyze it. It is also used to enhance decision making, provide insight and discovery, and support and optimize processes.

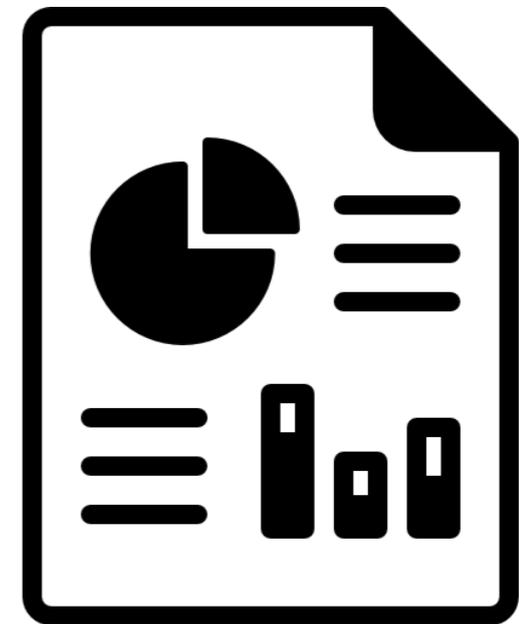
How Big Data Analytics Work



A pile of unstructured data
e.g: flight load inventory,
AWB information detail



Data goes through analysis
via Big Data Analytics software
e.g: GoogleBiqQuery, Cloudera,
Hortonworks, MapR



Pattern, thread and trend
are derived and used to
forecast supply and demand,
to assess risk and
to optimize resources

02

CURRENT STATUS OF AIR CARGO INDUSTRY IN THE USE OF BIG DATA ANALYTICS



Current Status of Air Cargo Industry in the Use of Big Data Analytics

Statistically speaking, data worldwide is now growing over 40% per year. Hence, **all industries are moving**. Most industries have been leveraging the power of big data to increase their pace of innovation and efficiency.

Evidently, **air cargo industry has acknowledged the notion of big data assistance** in identifying valuable future opportunities and in retaining existing customer network. It can also help supporting data sharing across the supply chain partners, with the cloud based systems that could help reducing paper work with the smart data sharing.

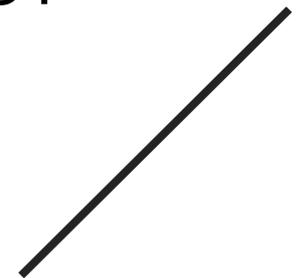
Most of the big air cargo players have already started embarking on the use of big data analytics. As a whole, big data is now being widely used in the air cargo supply chain.

The **need to start investing in an automated 'algorithmic marketing' system is skyrocketing** amongst the rest of the air cargo players or these particular players have to face losing out to potential rivals and disruptors, as things are getting more transparent to the customers these days via big data analytics.

03

HOW AIR CARGO INDUSTRY USE BIG DATA ANALYTICS

- DRIVE PROFIT
- INCREASE CUSTOMER SATISFACTION
- INCREASE OPERATIONAL EFFICIENCY



How Big Data Analytics - Drive Profits

By using Predictive Analytics

- Links historical and real-time data with statistical algorithms to predict the likelihood of future outcomes or alternative scenarios
- Provides the capability to move from reaction to prediction
- Builds supply chain optimization with ability to forecast demand and revenue, allocate resources and minimize risk and uncertainty

Example: Most logistic companies have a business strategy for cargo demand and capacity. Analytics can maximize revenue and minimize transportation costs by predicting customer demand while satisfying any capacity limitations. The analytic model would incorporate various predictors such as, shipper's booking pattern, seasonal influence, show up behavior and available cargo capacity on a daily, weekly or monthly basis. The analytic results would be continuously updated with actual results. Accordingly, a business strategy would be able to adopt changes by adjusting flight schedules or prices charged during different demand periods. All of which would help maximizing revenue and driving profits.

How Big Data Analytics

– Increase Customer Satisfaction

By using Descriptive Analytics

- Establishes the parameters to systematically collect, map and analyze relevant data
- Looks at past performance and data to identify patterns and correlations to uncover the reasons behind each shipper's or agent's loyalty
- Develops the narrative to enable the company to ask the right questions and frame the problem clearly

Example: Descriptive analytics can help identify customer base by creating a comprehensive customer profile based on relevant data including key demographics on industry, size, location, shipping history and booking patterns and etc. A specific marketing campaign can then be developed based on customer segmentation with the ability to predict customer behavior and sales. Ultimately, a customer lifetime value can be determined based on longer projections of the amount of future business which would provide a broader view of customer base and help to build stronger customer relationships resulting in potential up-sell opportunities.

How Big Data Analytics

– Increase Operational Efficiency

By using Prescriptive Analytics

- Provides a recommendation on what actions to take to achieve a business goal by developing a model linking actions to a goal
- Anticipates not only what will happen but also why it will happen
- Prescriptive analytics suggests several decision options and shows the impact of each decision option.
- Considered to be the next step following predictive analytics

Example: An air cargo company needs to implement procedures to ensure the proper temperature controls for transporting pharmaceutical and perishable products globally which is a difficult and complex process. Data mining can explore large data sets using correlation analysis to uncover insights into those factors that contribute to failure in controlling temperature. Such factors may include length of travel in time or distance, number of transfer locations, delays due to weather or missed flights, small versus large shipments, etc. Analytics can generate a model that estimates the probability of a success for adjustments made in each correlation factor either separately or in combination resulting in minimizing the risk of failure and resulting loss revenue.

04

LIMITATIONS OF BIG DATA ANALYTICS ADOPTION



LIMITATIONS TO ADOPT BIG DATA ANALYTICS USAGE



01 Non-scalable existing database and adoption to new data analytics system

02 Steep learning curve for existing staffs and new talent acquisition

03 Low user acceptance and adaptability to process change

04 Cost, time and resources impact

THANK YOU.

