

The Advantages & Disadvantages of **BIG DATA**

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Agenda



What is **BIG**?

(a fun comparison)

What is big?

Scale



What is big?

Flow



What is big?

Form



What is big?

Uncertainty



Dog
or
Muffin?

What is **BIG DATA**?

(Probably *THE* biggest challenge)

Extremely large data sets that may be analyzed computationally to reveal patterns, trends, and associations, especially relating to human behavior and interactions. [*dictionary.com*]

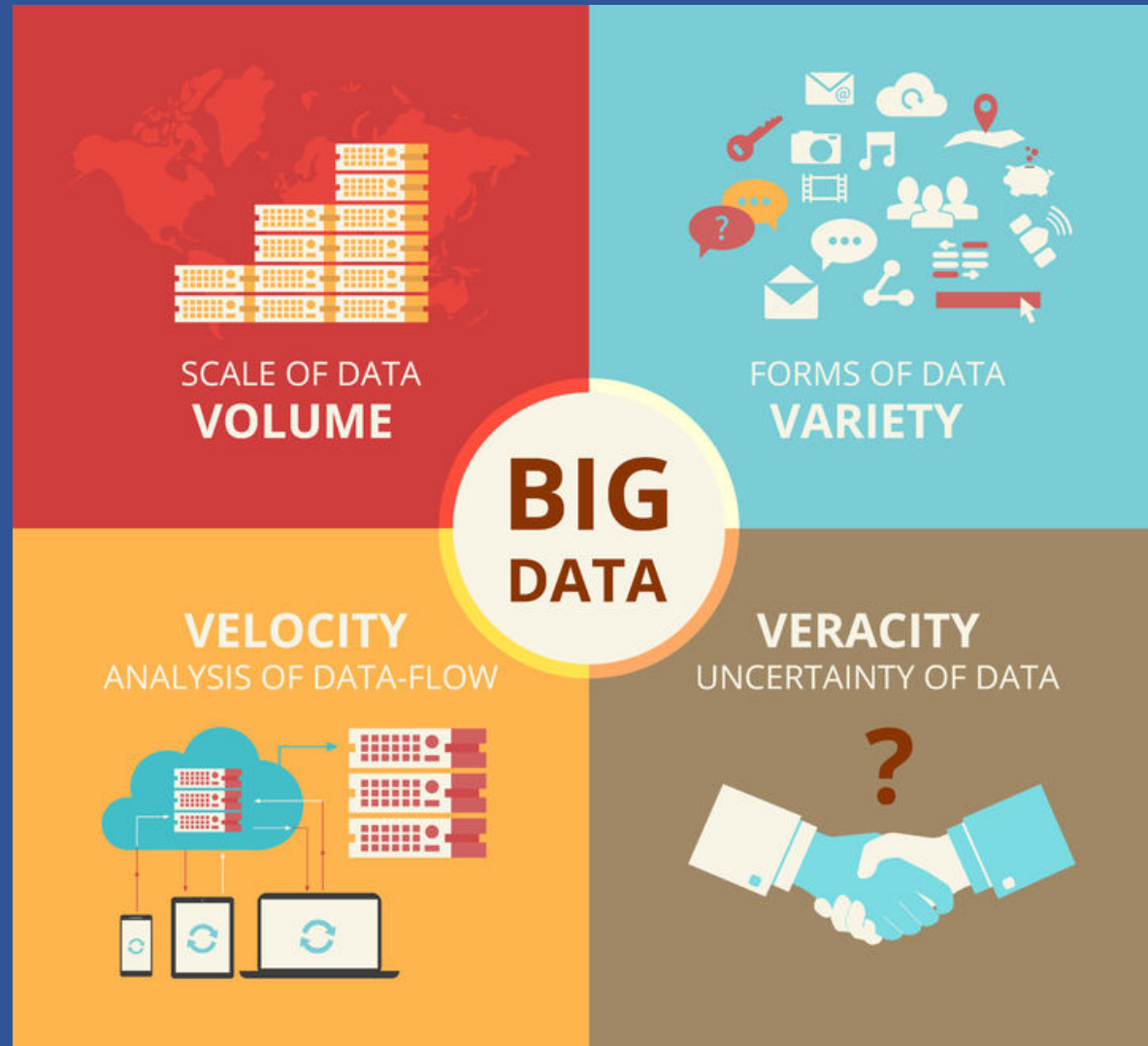
'Big data' is the new science of understanding and predicting human behavior by studying large volumes of unstructured data. Big data is also known as 'predictive analytics'... Big data is a messy new science that changes weekly, and only a few experts understand it all. [*lifewire.com*]

What is **BIG DATA**?

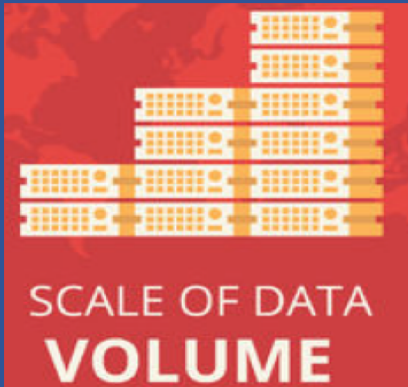
Big data is an evolving term that describes any voluminous amount of structure, semistructured, and unstructured data that has the potential to be mined for information. [*techtargget.com*]

Big data is a term used to refer to the study and applications of data sets that are so big and complex that traditional data-processing application software are inadequate to deal with them. [*wikipedia.com*]

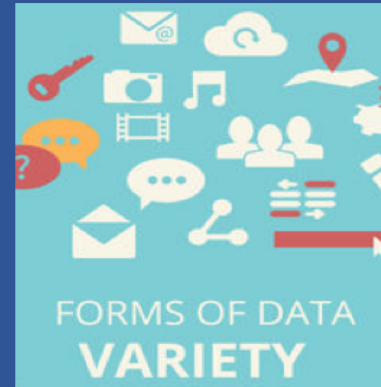
What is Big data?



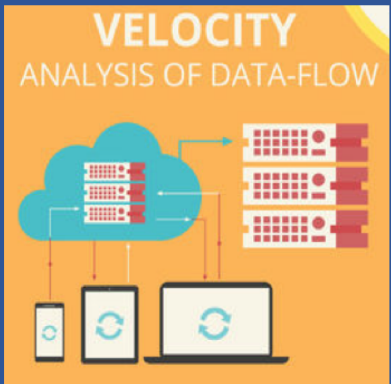
Big Data – 4 V's



- The amount of data generated every second.
- Now we are talking zettabytes and brontobytes of data.



- The different types of data.
- Data can be structure, however more than 80% of the world's data is unstructured.



- The speed at which new data is generated.
- The ability to access data anywhere, at any time.



- The trustworthiness of the data.
- The control over quality and accuracy.

What is **BIG DATA**...*not*?

(Big Data Myths...probably another challenge)

What Big Data not is (*Big Data Myths*)

Everybody
is doing it

Research still shows that the number of companies effectively putting true Big Data technology to work is small.

Its all
about size

Velocity, variety, and veracity are equally important factors.

It predicts
the future

Data doesn't tell us anything that is certain.

Its only an
issue for
IT

Data is not analyzed by it. Its natural home is in the right hands at the right time..

Its
Expensive

Technology and resource costs shouldn't knock you out of the game.

Data
needs to
be clean

Clean data is ideal, but not a necessity for most Big Data applications.

You need
to wait to
make it
perfect

Besides it never being perfect, waiting will just make the data old.

Machine
algorithms
will replace
humans

The "perfect" data scientist doesn't exist.

Advantages & Disadvantages of **BIG DATA**

Disadvantages



Resources

Finding the right resources knowledgeable in the Big Data technology



Security

Risks associated with data privacy and cyber attacks.



Cost

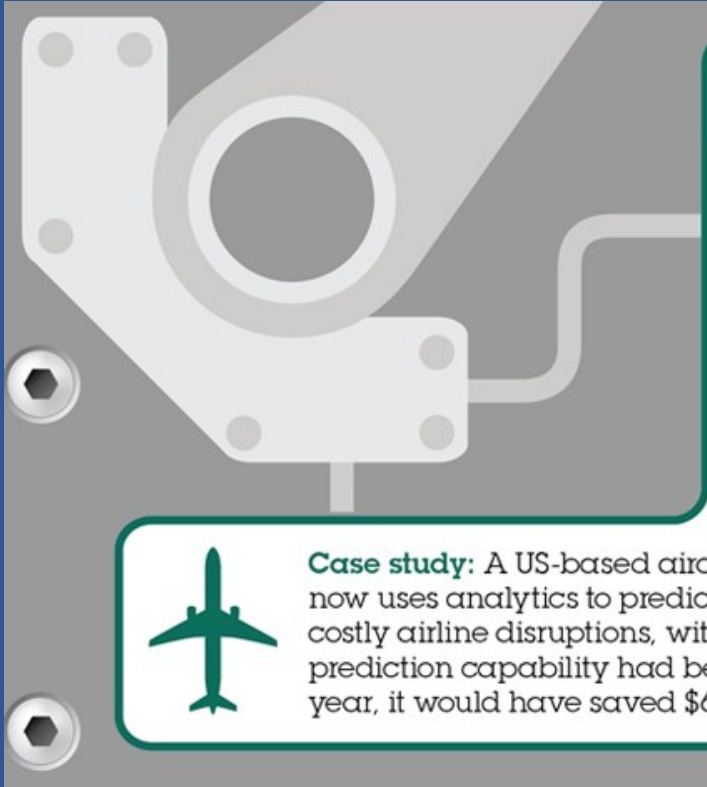
Costs associated with early/first adapters, dirty data, et.



Analytics &
Tools

Find the right tools, for the right analytics (*fit for purpose*)

Advantages



The fifth "V"?

Big data = the ability to achieve greater **Value** through insights from superior analytics



Case study: A US-based aircraft engine manufacturer now uses analytics to predict engine events that lead to costly airline disruptions, with 97% accuracy. If this prediction capability had been available in the previous year, it would have saved \$63 million.

