BIG DATA ANALYSIS

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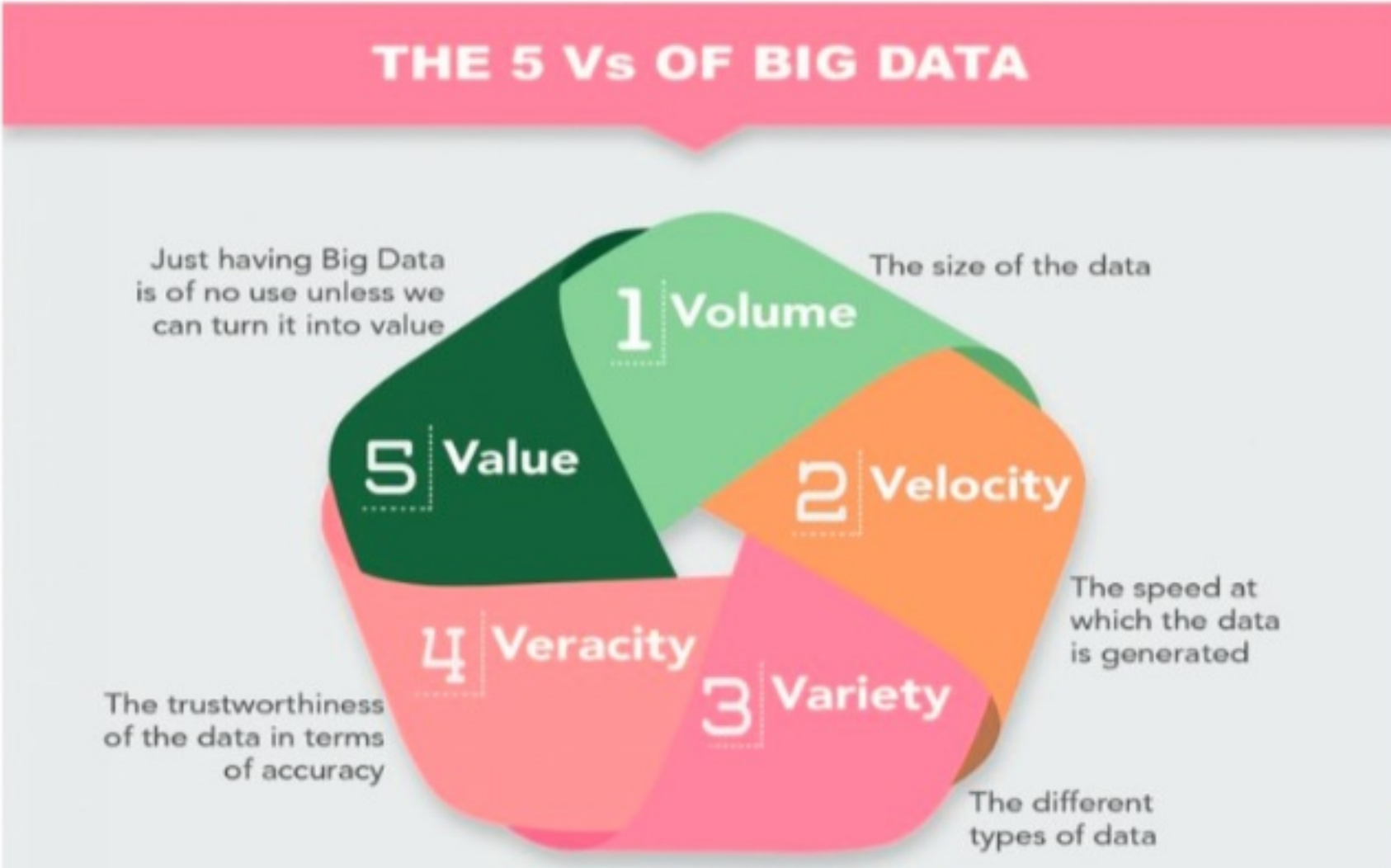
INTRODUCTION:

- The Term "Big data" is relatively new, but the concept is not new to Nursing. Nurses have used big data to improve patient care since the down of our profession. Florence Nightingale applied analytics to big data by using diagram of the causes of mortality in the Army in the East" (1854-1855) changed our understanding of the impact of sanitation in hospitals she did it with note cards! Imagine what we can accomplish now using computers.
- The New Trend has transformed the whole scenario in a bigger way and that is – Big data.

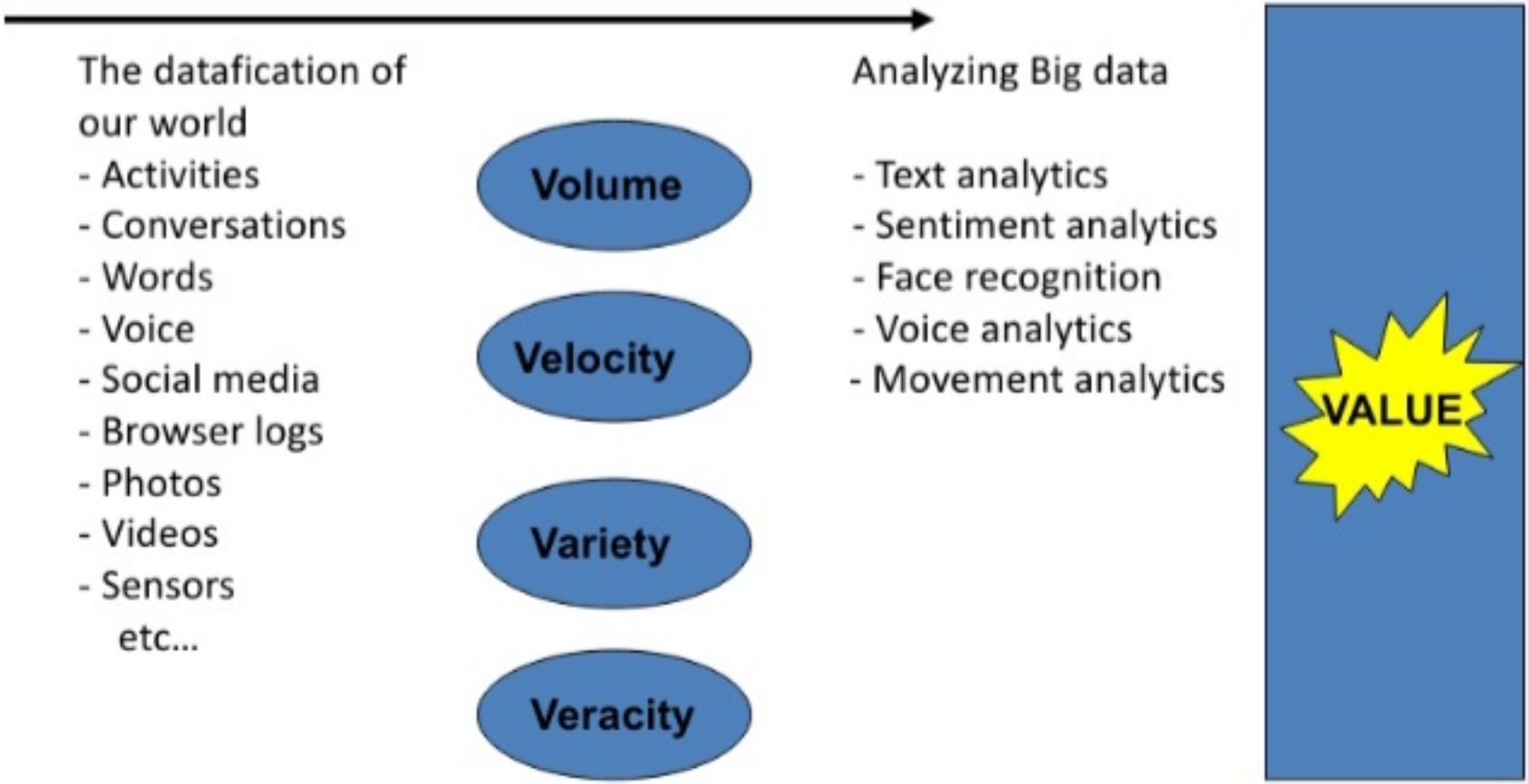
What is Big data:

- "Big data" is similar to "small data" but bigger in size (Terabytes (10^{12} bytes) to Zetabytes (10^{21} bytes)
- Big data is data that exceeds the processing capacity of conventional data base systems. The data is too big, moves too fast does not fit to the structure of traditional data base architectures. (Edd dumbol – 2016)
- Large data set collected through multiple computers and the analyzed in such a way that association, trends and patterns of human behaviour are revealed.
- It's also known as "Predictive analytics"

Characteristics of Big Data – 5.Vs

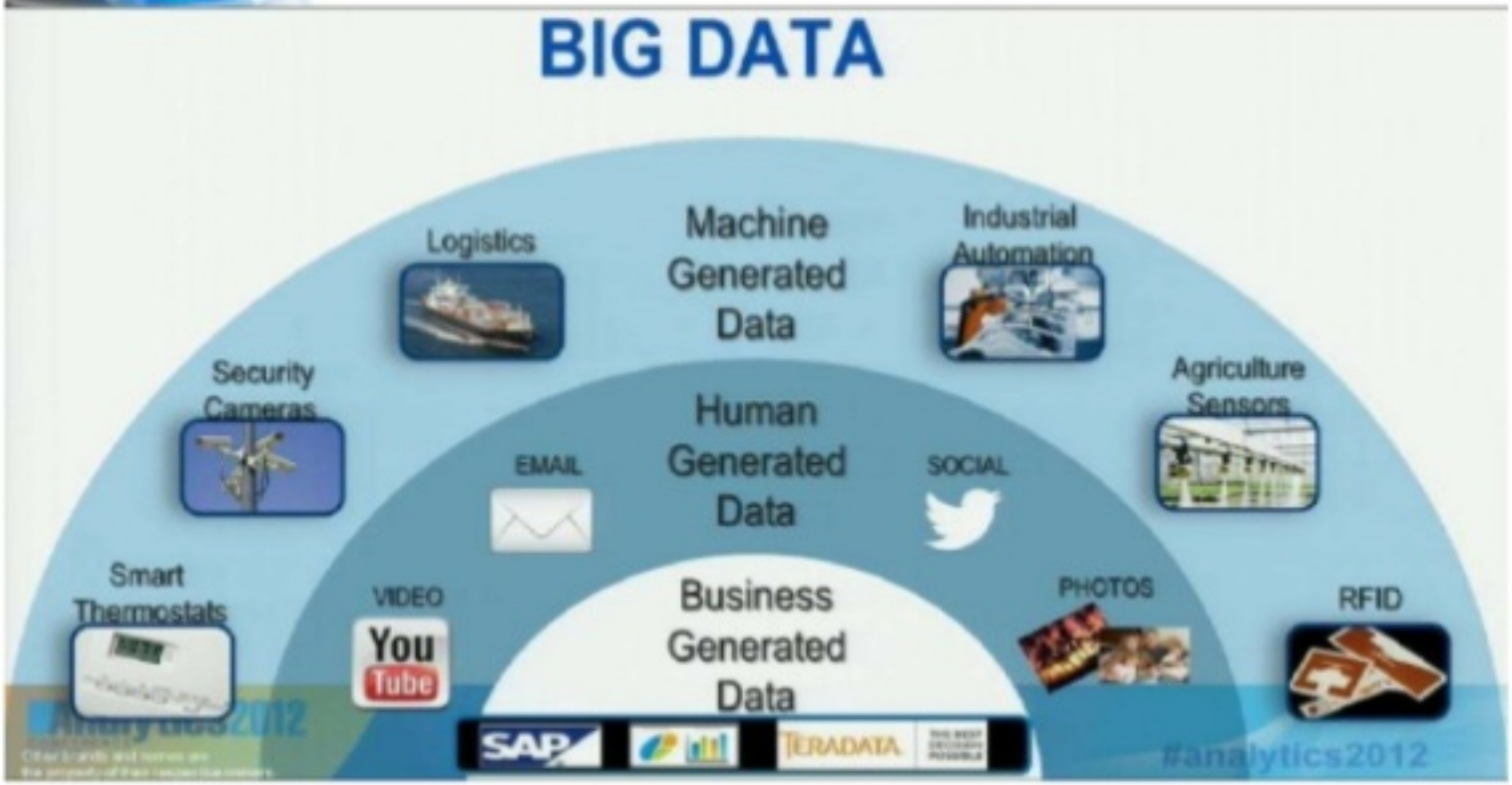


Turning Big data into value:



"Big data is not big if you know how to us it"

Big Data sources



Digital interactions between patients and health systems lead to a high amount of available data

Source: IMS Institute for Healthcare Informatics *Closing the Healthcare Gap* (December 2015)

Why is Big data such a Big deal?

1. The data is massive
2. The data is messy and unstructured
3. Data has become a commodity, that can be sold and bought.
4. The possibilities of big data are endless.

Needs of Big Data:

	Description
Right living	Informed lifestyle choices that promote well being and the active engagement of consumers in their own care
Right Care	Evidence-based care that is proven to deliver needed outcomes for each patient while ensuring safety.
Right Provider	Care provider (eg.nurse, physician) and setting that is most appropriate to deliver prescribed clinical impact.
Right Value	Sustainable approaches that continuously enhance healthcare value by reducing cost at the same or better quality.
Right innovation	Innovation to advance the frontiers of medicine and boost R&D productivity in discovery, development, and safety.

Big data is going to impact education in a big way. It's inevitable, It has already begun.

Big data Applications in Education:

Higher Education Analytics:

- Big data enables the maximization of student learning. The tracking of student performance, extracurricular interactions and social behaviour results in the creation of a profile which is mapped with student profiles from the institution network to suggest the most relevant major.

Student Engagement:

- Data mining can help universities to get a holistic perspective about the students, which allows institutions to create immersive learning experiences for all students.


IS BIG DATA
THE RIGHT MOVE ?
edureka!

Big data Analytics:

- Examining large amount of data which help for faster, better decision making.
- Appropriate information
- Identification of hidden patterns, unknown correlations.
- Competitive advantage & Education needs an enduring technology partner.
- Better business decisions, strategic and operational
- Effective marketing, customer satisfaction, and increased revenue.

Academic Vs Learning Analytics:

Academic Analytics	Learning Analytics
A process for provider higher education institutions with the data necessary to support operational and financial decision making	The use of analytic techniques to help target instructional, curricular and support resources to support the achievement of specific learning goals.
Focused on the business of the institution	Focused on the student and their learning behaviours.
Management / Executives are the primary audience `	Learners and instructors are the primary audience

Documentation Guidelines that Promote Big Data Use

1. Use and document according to evidence-based practice standards.
2. Document consistently, using a standard terminology.
3. Limit the use of free text.
4. Avoid using “within defined limits”.
5. Support research sponsored by organization.
6. Learn about nursing informatics.

Learning Analytics:

Predictive Analytics

* Predictive future outcomes and behaviour.

Analyzing Trends

* Identify historical trends and correlations.

Reporting data

* Summarize historical data.

Challenges:

- *Technical:* Handling big data, inter operability of data systems, asking the right questions.
- *Institutional:* Requires a culture of data driven decision making and transparency in models that analyze data.
- *Privacy and Ethics:* Maintain student and teacher privacy while allowing data aggregation to drive powerful models.

Conclusion:

- The promise of massive data assets lies not merely in their size, but in the way they are used. Adequately utilized big data can be a practically inexhaustible source of knowledge to fuel a learning health care system.


THANK YOU