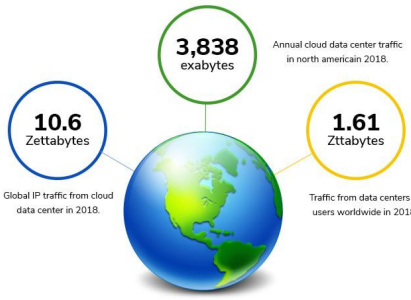

## What is Big Data?

"Big data" refers to data sets that are too large or too complex for traditional data processing applications.

- By 2020, there will be around 40 trillion gigabytes of data (40 zettabytes).
- Vision of $1 trillion manufacturing economy in the near future and to enhance global competitiveness.
- Industry 4.0




## Use Cases

Production optimization

Quality assurance

Maintaining Supply Risk

After sale

Product Design

## Essential Elements of Using Big Data Successfully

Understanding Goals/Visions- Companies need to understand the current state of business, including the gaps correctly to be able to prepare for the future.

IT and Business Alignment- Companies need to work on a use case that can lead to meet the objectives of both, business and IT.

Key Performance Indicators- KPIs are unique to each use case, phase, and step of an assignment.

Data Security - Securing access to data, regardless of data management platforms, tools, and data transmission methods used is critical.

## Manufacturing Big Data Challenges

Product quality/defect tracking

Manufacturing process defect tracking

Collecting supplier performance data to inform contract negotiations

Supply planning

Supplier component/parts defect tracking

Forecasting of manufac-turing output

Enabling mass-customizations in manufacturing

Increasing energy efficiency

Simulations and testing of new manufacturing processes

## Areas of Greatest Benefits for Manufacturing / Operations

- Enhanced Product accuracy, quality, and production.
- Seamless integration of IT in manufacturing and operational systems.
- Forecasts of product requirements and production.
- Continuous improvement across framework.
- Advanced manufacturing analytics.
- Enhanced visibility in quality levels.
- Accuracy in predicting supplier performance.
- Machine-level traceability .
- Compliance measurement.
- Strategic services to achieve customers' goals.
- Monitor products and provide preventative maintenance recommendations.

## Big Data Analytics Solutions

Manufacturing Quality

Connected Factory

Warranty Cost Reduction

Supply Chain Optimizations

Hidden Brains
Discover Possibilities