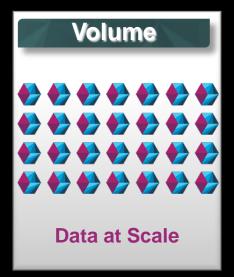


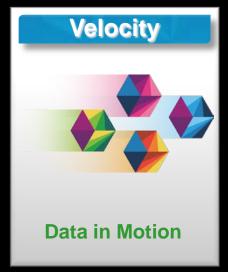


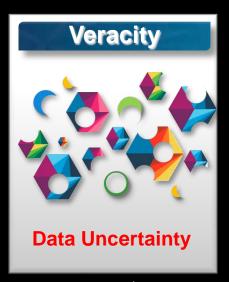


## Big Data Is All Data









25 Zettabytes worth of data will exist by 2020

80% of the world's data is unstructured

1 Trillion devices connected to the internet in 2017

1 in 3 business leaders don't trust the information they use to make decisions





## Three Key Imperatives for Big Data & Analytics Success

Build a culture that infuses analytics everywhere

Imagine It.

Invest in a big data & analytics platform

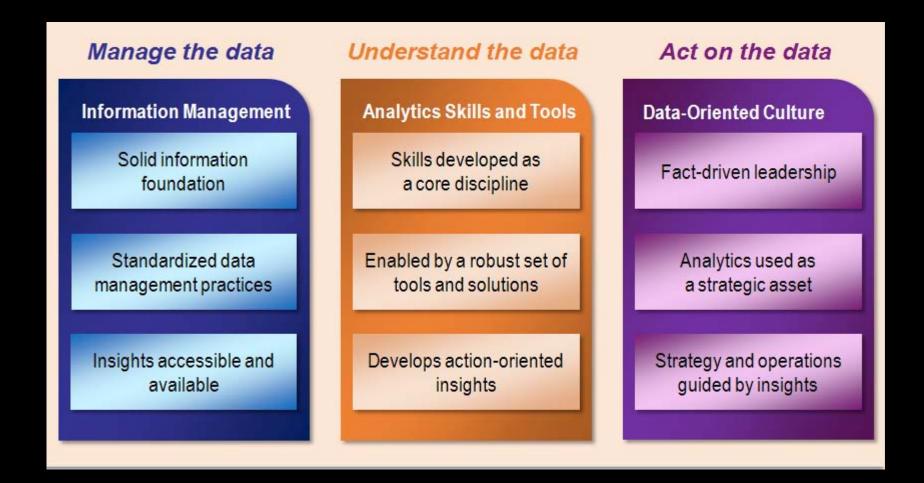
Realize It.

Be proactive about privacy, security and governance

Trust It.



## Realize It. Three Competencies Are Needed To Drive Sustainable Competitive Advantage

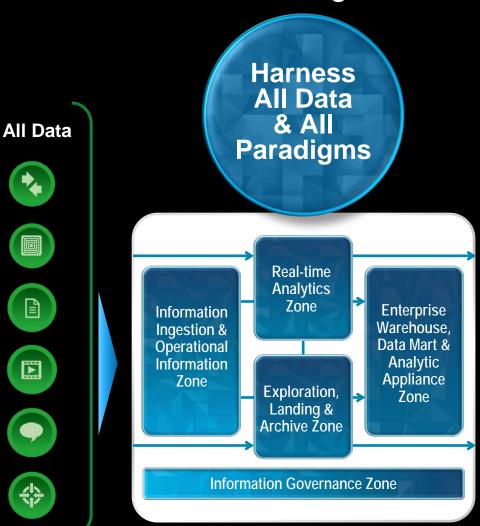


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## Realize It.

## Use All Data & Paradigms





### Realize It.

## Use All Data & Paradigms To Be More Right More Often

Harness Be **All Data** More Right, & All **All Data More Often Paradigms** What did I learn, what's best? Cognitive Real-time **Analytics** What action should I take? Zone **Enterprise** Information **Decision Management** Warehouse, **Ingestion &** Data Mart & Operational What could happen? **Analytic** Information **Appliance Predictive Analytics & Modeling** Zone Exploration, Zone Landing & Why did it happen? Archive Zone Reporting, Analysis, Content Analytics **Information Governance Zone** What is happening?

New/ **Enhanced Applications** 









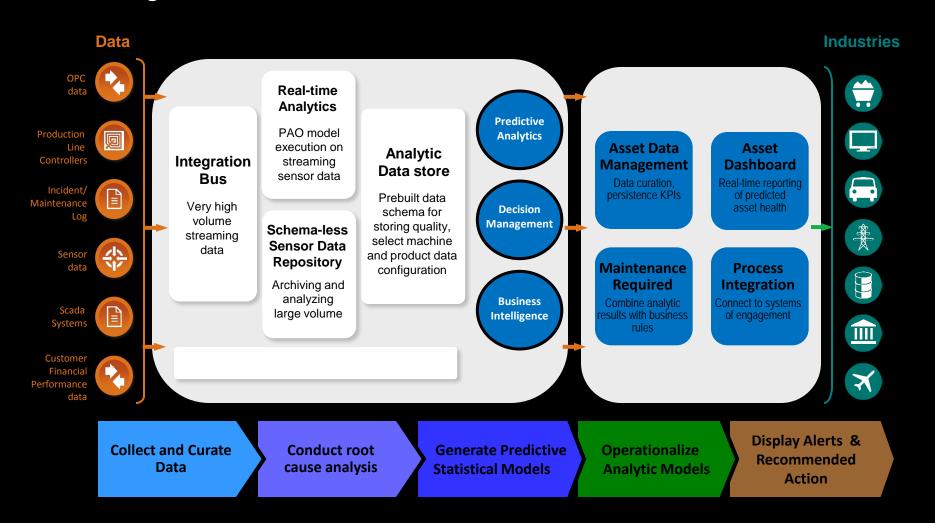




**Exploration & Discovery** 



## Conceptual Architecture: Predictive Maintenance & Quality Built using IBM Watson Foundations





## Big Data and Analytics Infrastructure Matters...

- Flash storage speeds the flow of data at 50% lower cost
- 43% faster analytics with 99.99% uptime
- Optimized for analytic workloads



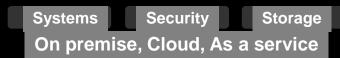
Provide new levels of visibility into customers and operations



Accelerate insights in real time at the point of impact



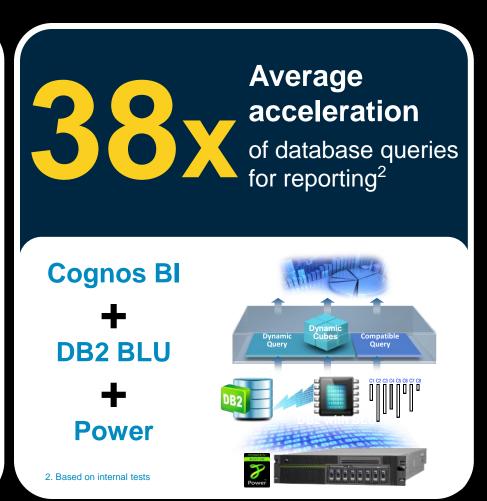
Deliver insights to the people and processes that need them





### ...And the Results are Game-Changing

**IBM InfoSphere BigInsights** delivers performance gains<sup>1</sup> InfoSphere BigInsights for Hadoop **Open Source Hadoop** 1. Audited STAC® Report Securities Technology Analysis Center





## IBM Transforming Industries and Professions with Data

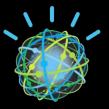
**Delivering** the insight to act with speed and conviction with IBM Big Data & Analytics

#### **IBM Watson Foundations**



**Delivering** the cognitive experience to the masses with

**IBM Watson** 



"Watson is the richest, most fully developed, commercially available smart advisor platform that we know of."

#### **IBM Watson's Modular Architecture**





## IBM Leverage Cloud and SaaS



### **Developers**

Composable Data
Services\* on BlueMix\*:

- BLU Acceleration\*
- MapReduce\*
- SQL Database\*
- NoSQL Database~
- Mobile Data\*

### **Business** Users

Watson Analytics\*

SPSS Data Collection

BLU Acceleration for Cloud\*

Social Media Analytics

Sales Performance Management

- Cognos Territory Mgmt
- Cognos Quota Mgmt
- Cognos Incentive Compensation

Algo Risk Services

- Managed Data Services
  - Pension Monitoring
  - Risk Content
  - Risk Reports

Performance Management

- Concert
- Cognos TM1
- Cognos Disclosure Management

SPSS Analytical Decision Management

<sup>\*</sup> Upcoming Beta – Feb 2014



## Big Data Requires A Broad Set of Skills

#### Decision Making Executive and Management

Apply information to solve business issues

#### Visualization Expertise

Interpret data sets, determine correlations and present in meaningful ways

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## **Industry Vertical Domain Expertise**

Develop hypothesis, identify relevant business issues, ask the right questions



#### **Tool Developers**

Mask complexity and analytics to lower skills boundaries

#### **Data Experts**

Data architecture, management, governance, policy

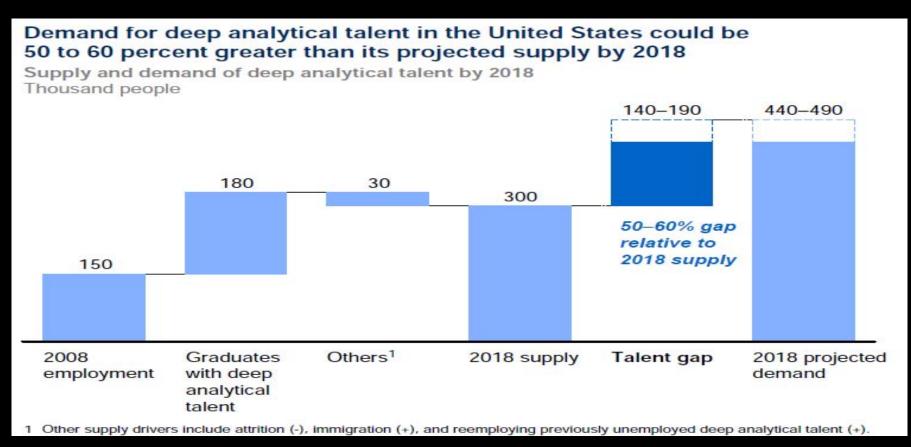
# Math and Operations Research Expertise

Develop analytic algorithms



#### And These Skills Will Guarantee Jobs!

The United States alone faces a shortage of 140,000 to 190,000 people with analytical and managerial expertise and 1.5 million managers and analysts with the skills to understand and make decisions based on the study of big data."\*



Sources: US Bureau of Labor Services; US Census; Dun & Bradstreet; company interviews; McKinsey Global Institute analysis





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