



**FSC** FOOD  
SAFETY CLOUD  
食品安全云

Food Safety and Nutrition Information Technology Co., Ltd.

Guizhou Academy of Test and Analysis

Kai Chen CTO

[chenkai@fsnip.com](mailto:chenkai@fsnip.com)

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# FOOD SAFETY CLOUD

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01

Welcome

# 01 Welcome

176000km<sup>2</sup>

39million people

49 Minorities

Garden province





# FOOD SAFETY CLOUD

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02

Background

# 02 Background

## Big data industry

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## Health and pharmaceutical industry

The health and pharmaceutical industry, together with the big data industry, will become core sectors in the province, Zhao said, and the province is looking at ways to combine the two industries into a health information industry

**2014.04 FSNIT Co., Ltd in Guiyang Guizhou China**

**2015.06 SHIANT ( sub company ) in California USA**



# FOOD SAFETY CLOUD

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03

Direction

# 03 Direction

**How to collect**

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**How to store**

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**How to use**

## 03 software

Development technique:

JAVA , HTML5 , JQuery , Spring , JPA ,  
Hibernate , AJAX , Restful Web Service ,  
CSS3 , Kendo UI , etc

DB: RDS (MySQL)

Tools: MyEclipse、SVN、BugZilla

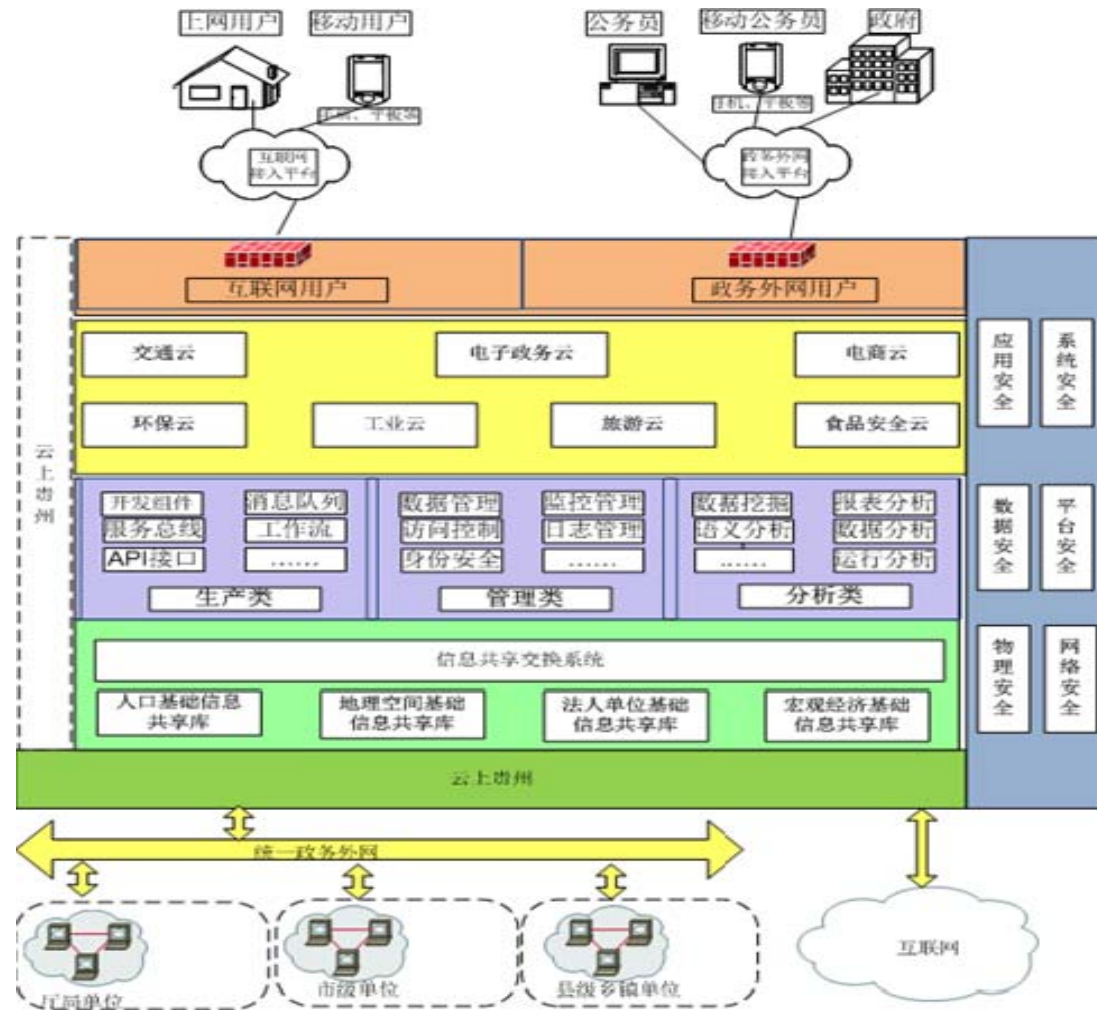


# 03 Hardware

## Guizhou on Cloud

[www.gzdata.com.cn](http://www.gzdata.com.cn)

Elastic Computing  
Elastic Compute Service (ECS)  
Server Load Balancer (SLB)  
Database  
Relational Database Service (RDS)  
Open Storage Service (OSS)  
Security and Management  
Yundun DDos  
Cloud Security Service  
Cloud Monitor System





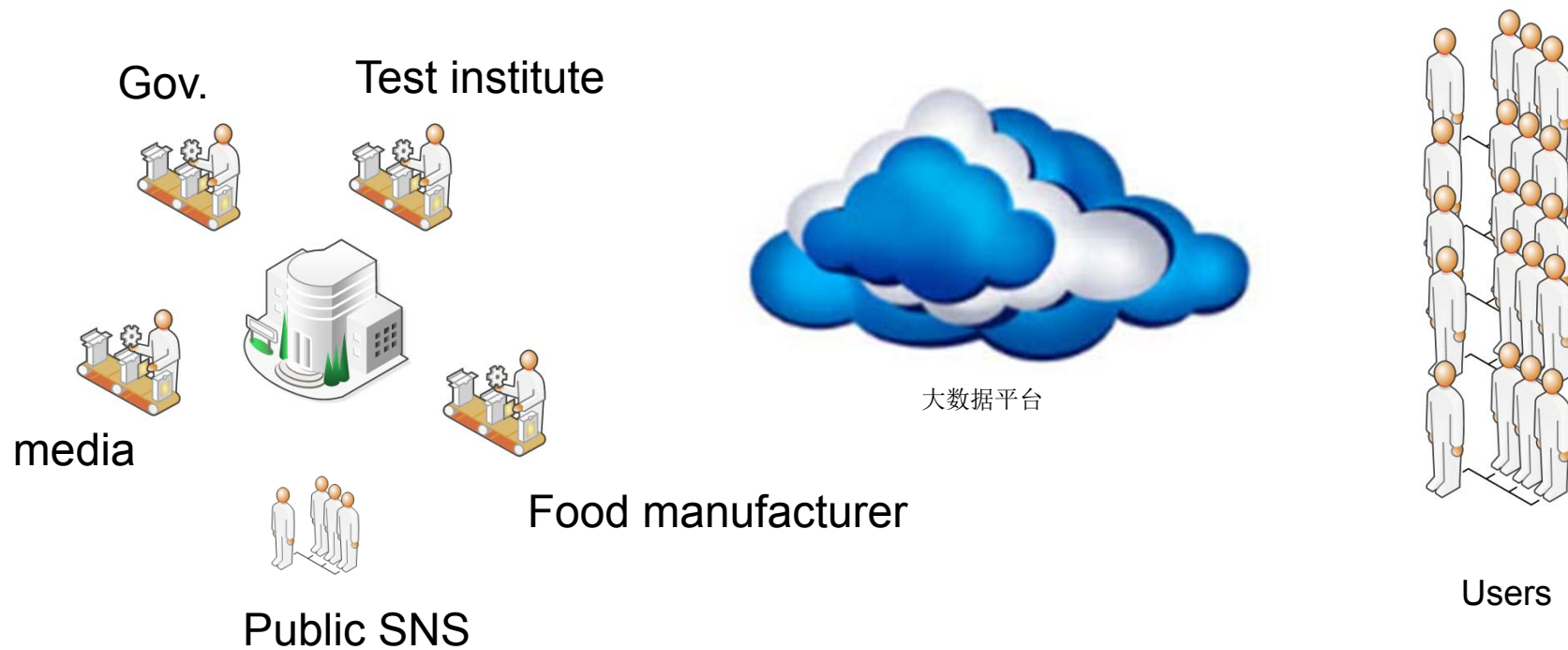
# FOOD SAFETY CLOUD

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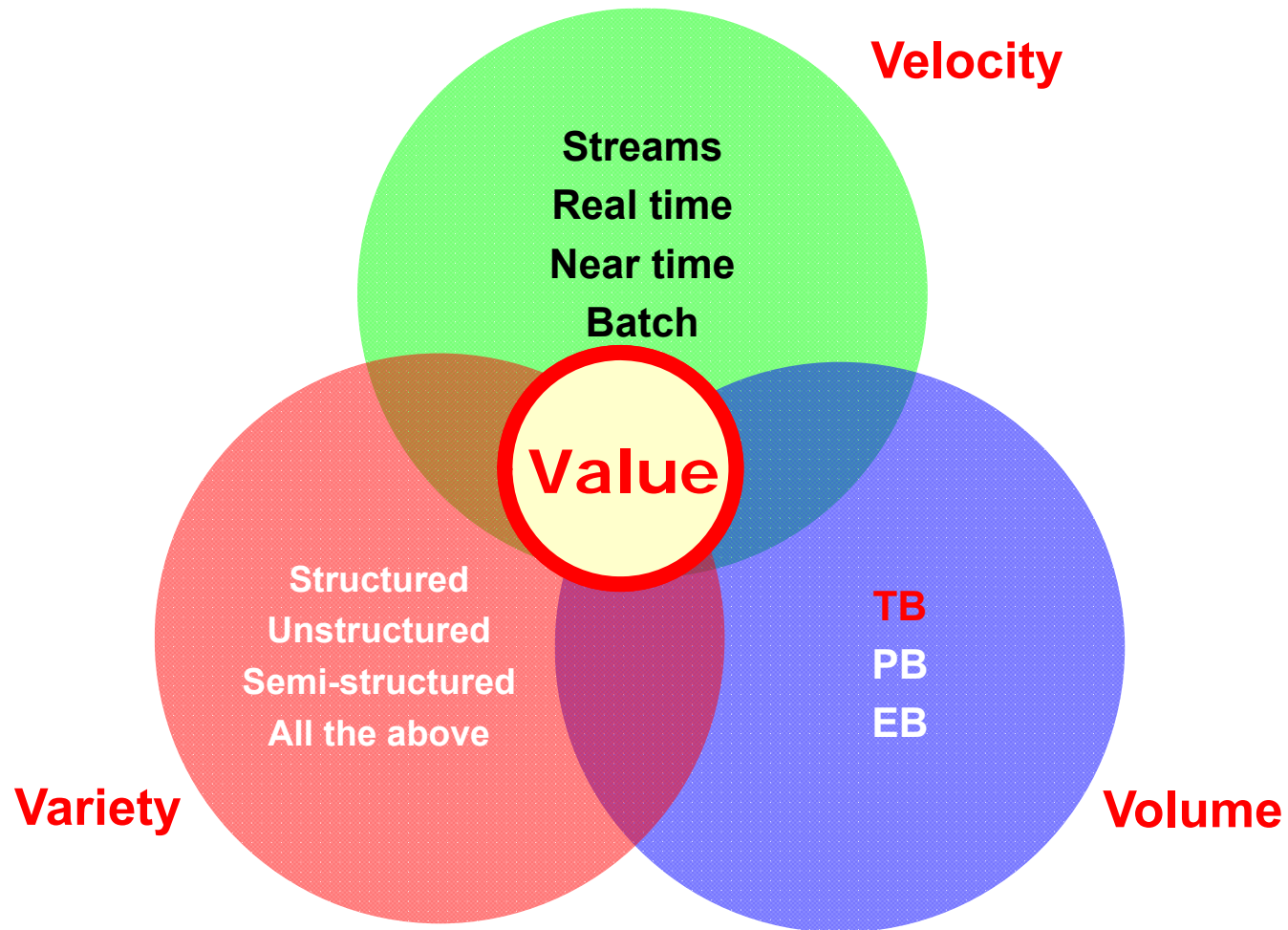
04

Big data

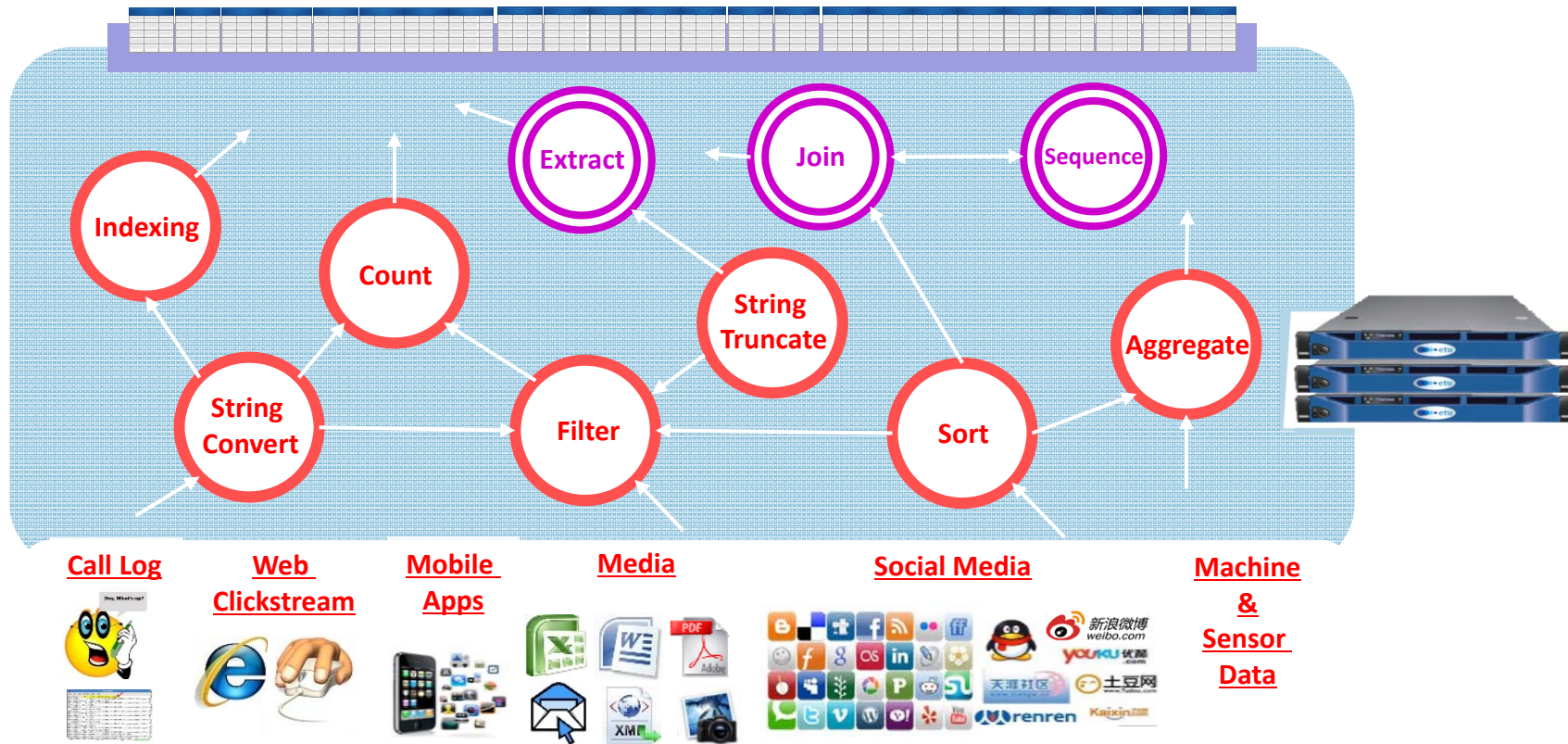
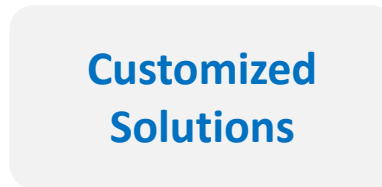
# 04 Business characters



# 04 4V



# 04 Direction



## 04 What is Hadoop?

- › An open source platform for writing and running distributed applications
- › Both distributed storage & computation
- › Excels in batch processing of unstructured data and large volumes
- › Runs on large clusters of commodity hardware
- › Full Eco system around it

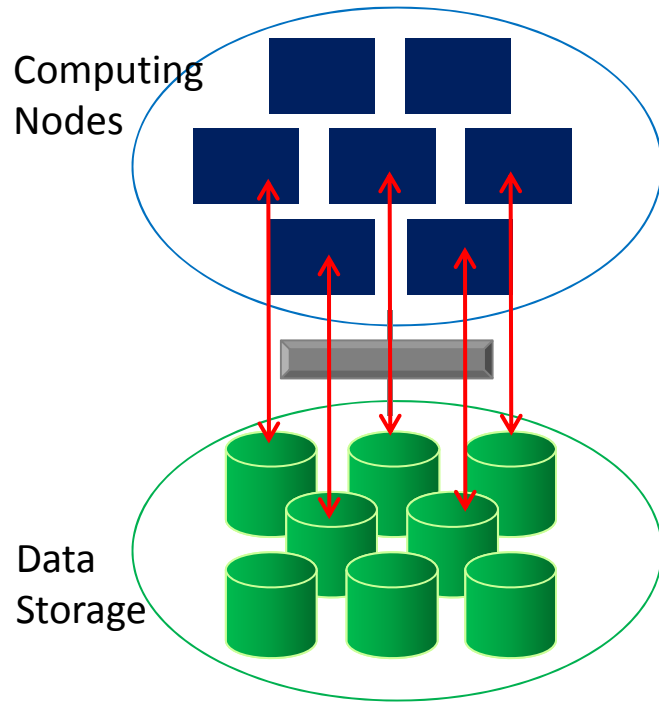
## 04 Hadoop Takeaways

- › Designed to handle petabyte sized databases w/ large parallelism.
- › Brings “computes to data” to enable parallelism with minimal network traffic.
- › Enables flexible scale-out of database while minimizing scaling bottlenecks
- › Designed for high reliability in the presence of 1000's of hardware components.
- › Map-Reduce is not a panacea for all data processing, but many data mining applications fit this framework making Hadoop very useful and relevant.



# 04 Traditional Data Center vs. Hadoop

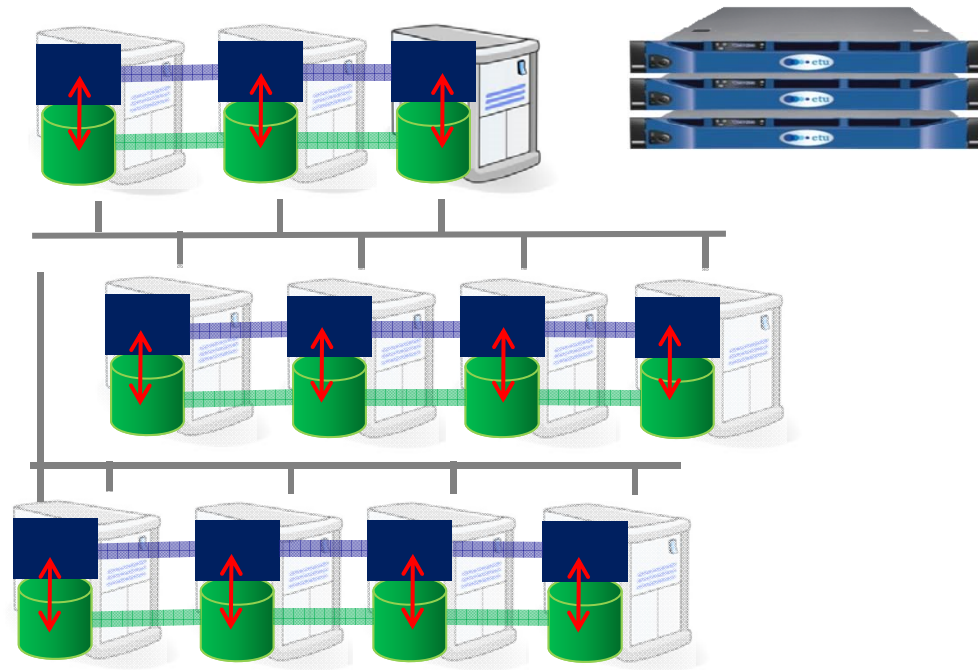
## Traditional Parallel Computing



## Traditional Distributed Storage



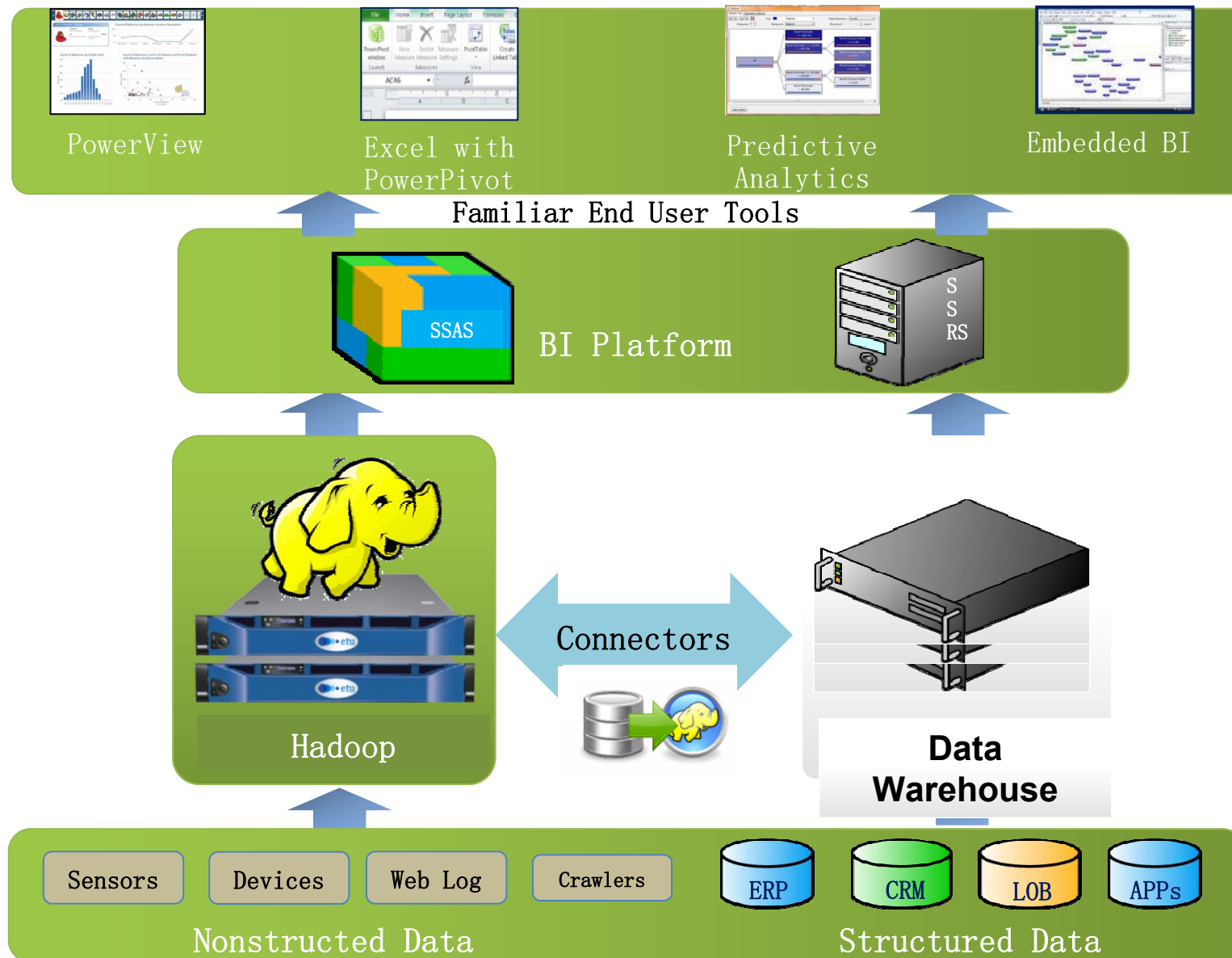
## Parallel Computing + Distributed Storage



- Both distributed storage & computation
- Computation close to data -> higher efficiency



# 04 Hadoop in Enterprise



# 04 Data Science

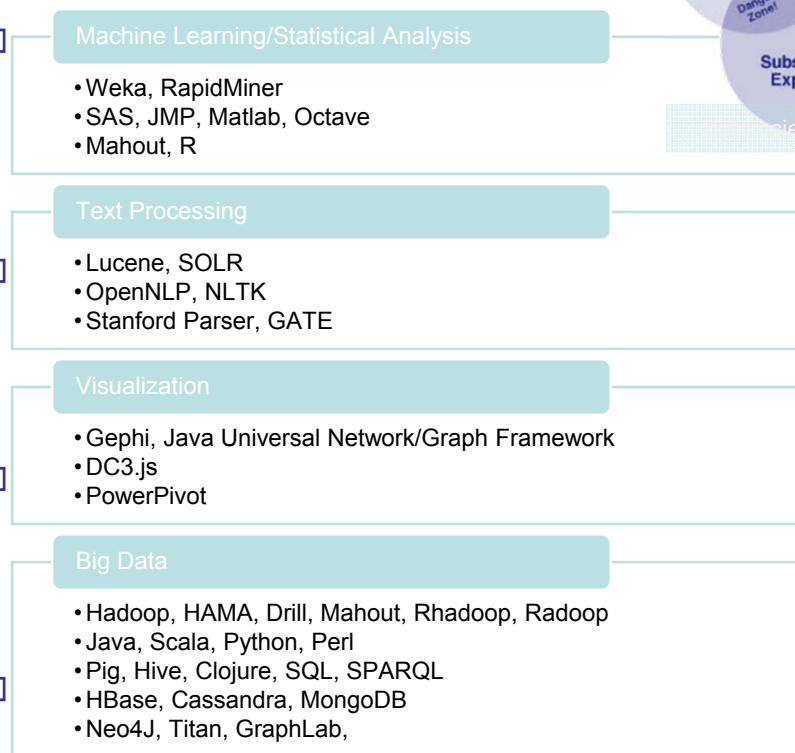
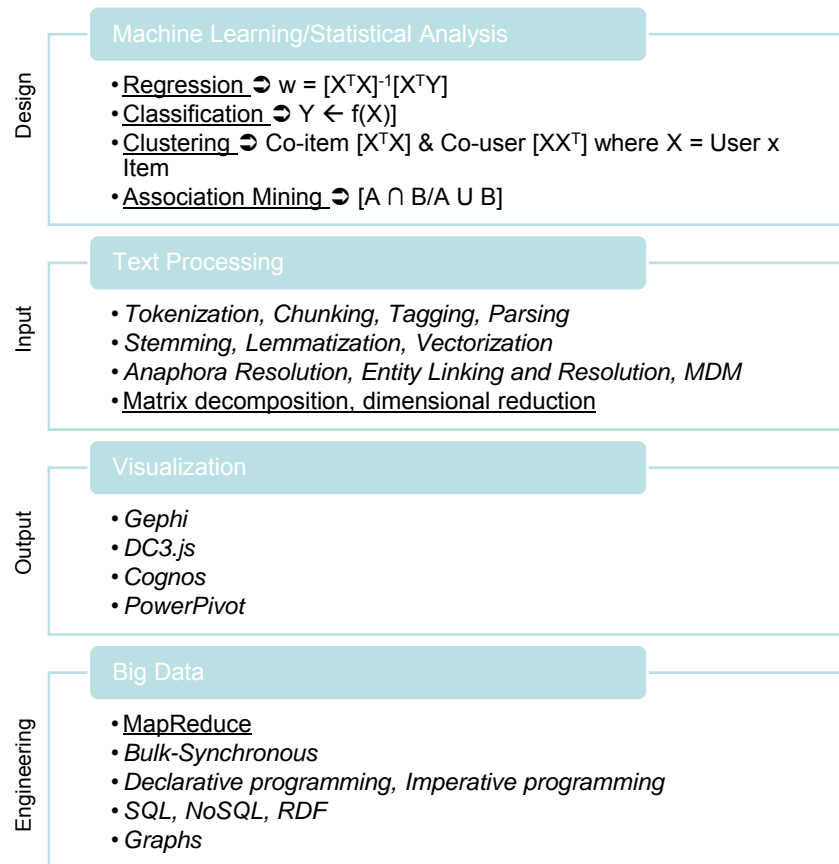
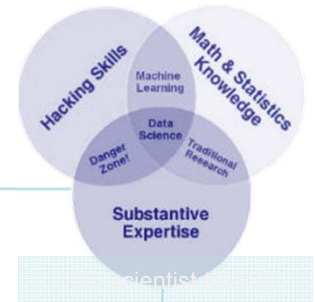


Role	Function	Good at...
Applied scientist	<ul style="list-style-type: none"><li>Find signal in data</li><li>Build/tune models</li><li>Choose algorithm</li></ul>	<ul style="list-style-type: none"><li>Statistics, Machine learning</li><li>Text processing, NLP</li><li>R, Matlab, SAS, SQL</li><li>Scripting</li><li>Visualization / telling the story</li></ul>
Data Engineer	<ul style="list-style-type: none"><li>Design and Implement production-grade data pipelines</li><li>Follow good software engineering practices</li></ul>	<ul style="list-style-type: none"><li>Design / implementation of data architecture</li><li>Create “production quality” code</li><li>Hadoop, PIG/HIVE, Map-Reduce, ops/admin</li><li>Java, Python, Perl, SQL, C++,</li><li>NoSQL (Hbase, Cassandra, Mongo)</li></ul>

# 04 Data Scientist

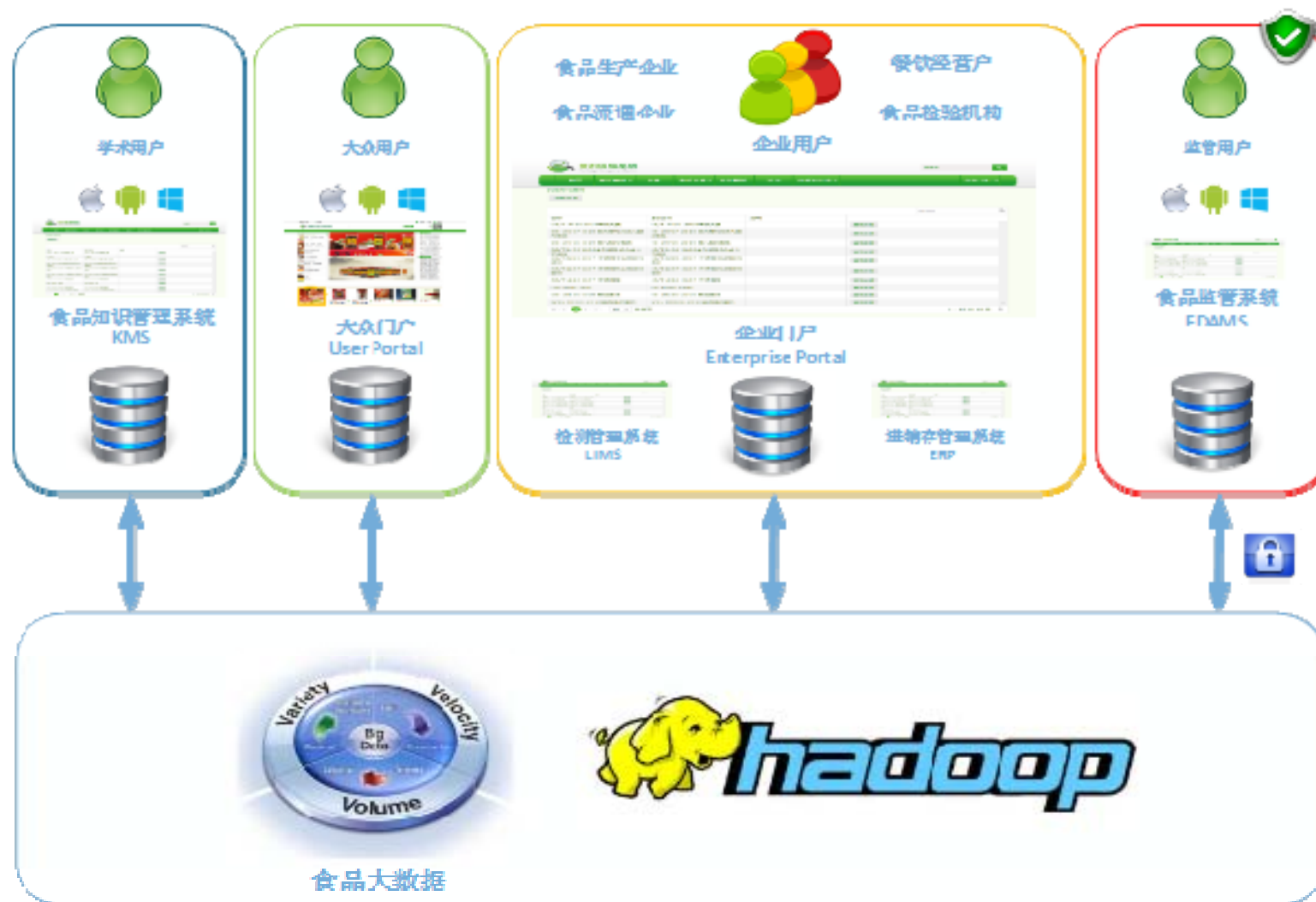
## Key Skills

## Tools



A data scientist must be patient, persistent and open to value discovery. Analytical, Quantitative, and Investigative

# 04 Food Safety Big Data Architecture



The background of the slide is a solid green color with a subtle, low-poly geometric pattern. The pattern consists of various shades of green forming a series of interconnected triangles and polygons, creating a textured, crystalline effect.

**Thanks!**