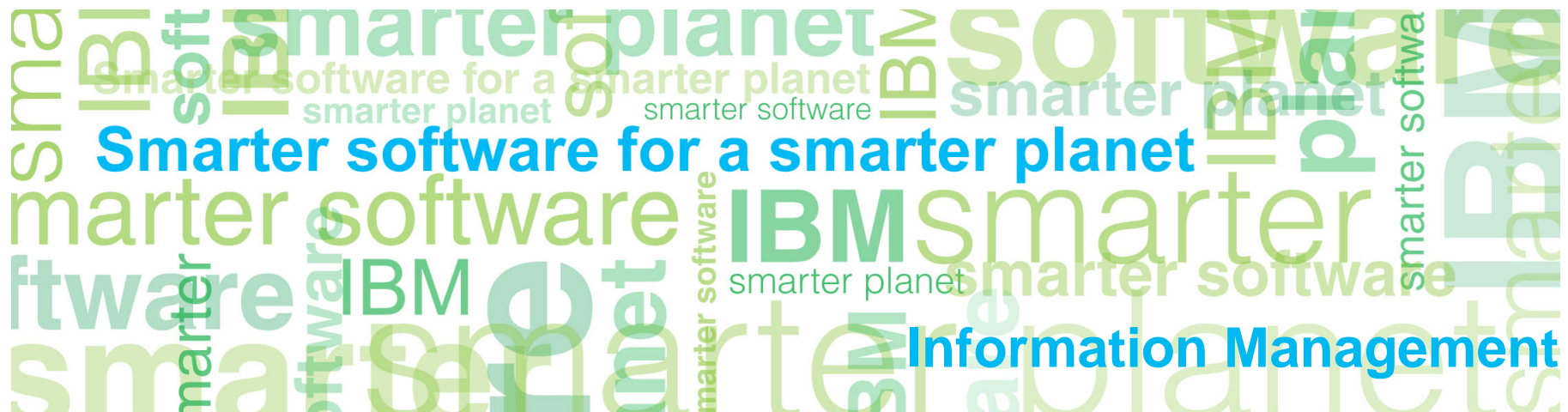
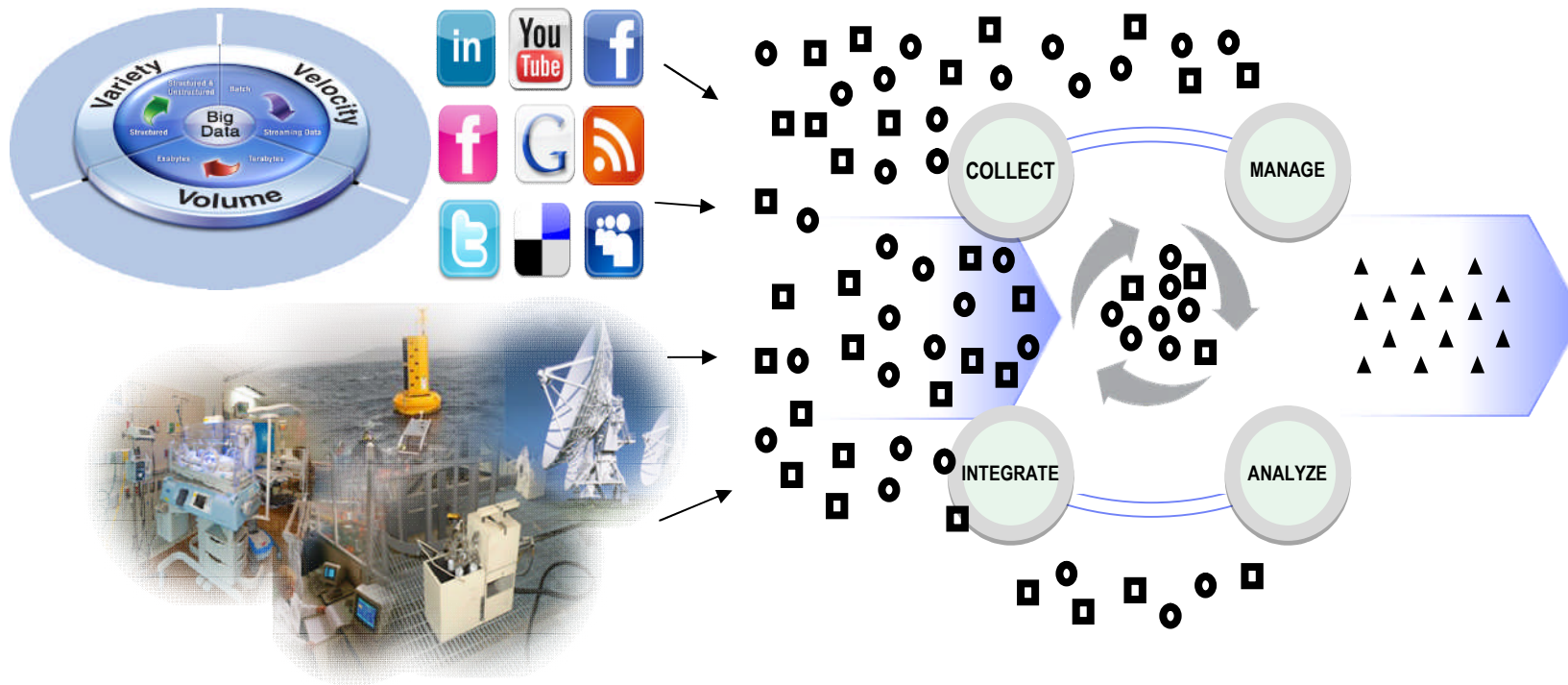


Solutions Big Data IBM



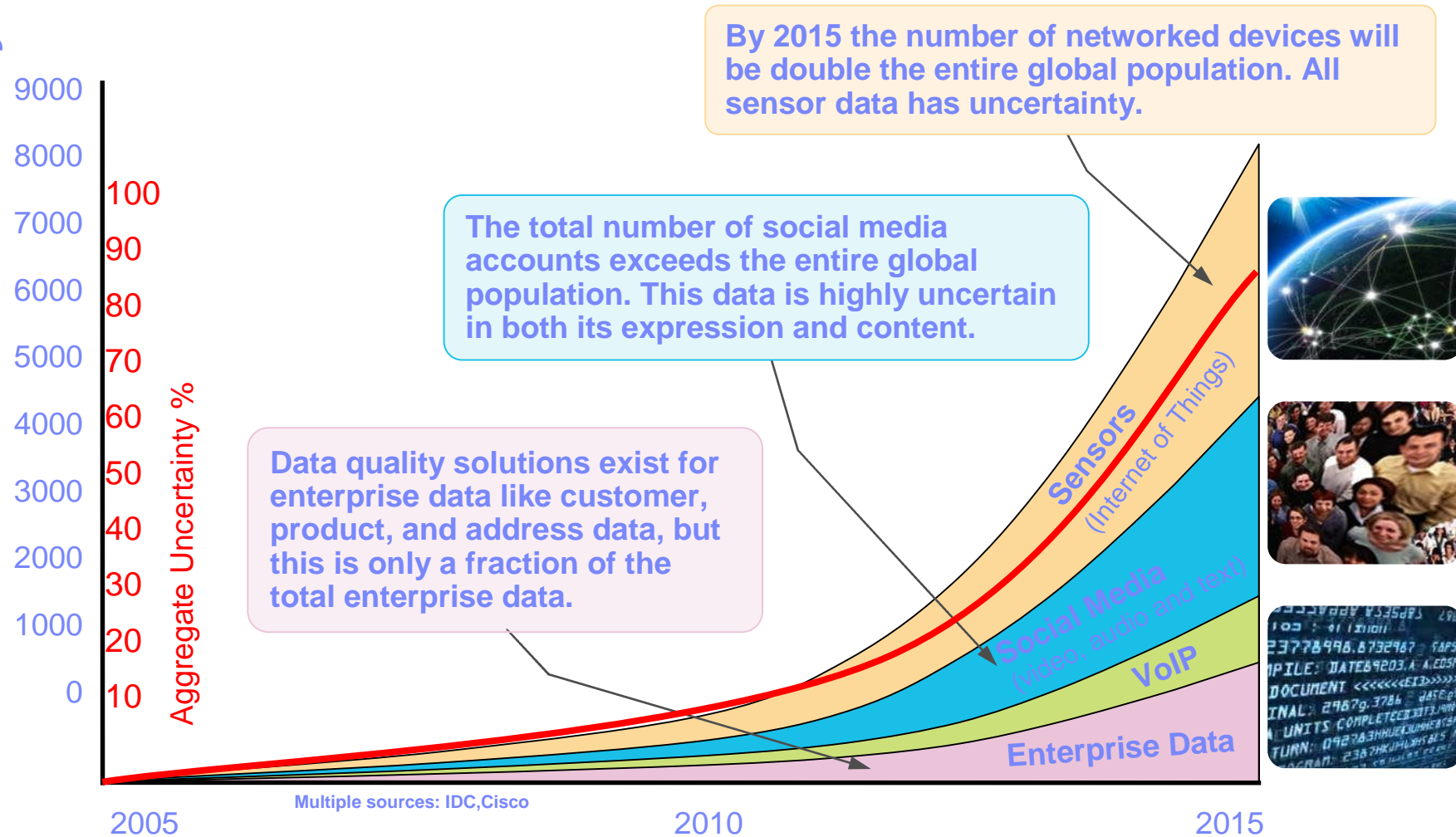
The BIG Data Challenge

- Manage and benefit from massive and growing amounts of data
- Handle uncertainty around format variability and velocity of data
- Handle unstructured data
- Exploit **BIG Data** in a timely and cost effective fashion



By 2015, 80% of all available data will be uncertain

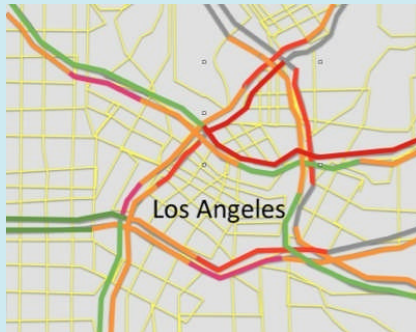
Global Data Volume in Exabytes



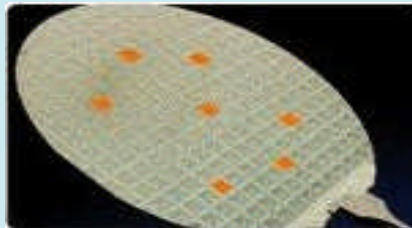
Uncertainty arises from many sources

Process Uncertainty

Processes contain
"randomness"



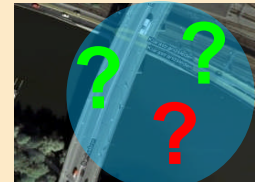
Uncertain travel times



Semiconductor yield

Data Uncertainty

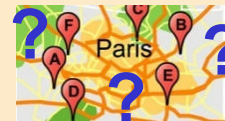
Data input is uncertain



GPS Uncertainty



Testimony



{Paris Airport}

Ambiguity



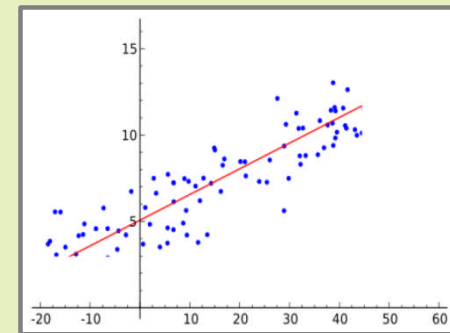
Contaminated?
Rumors

{John Smith, Dallas}
{John Smith, Kansas}

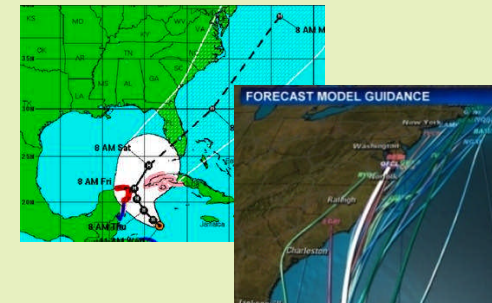
Conflicting Data

Model Uncertainty

All modeling is approximate

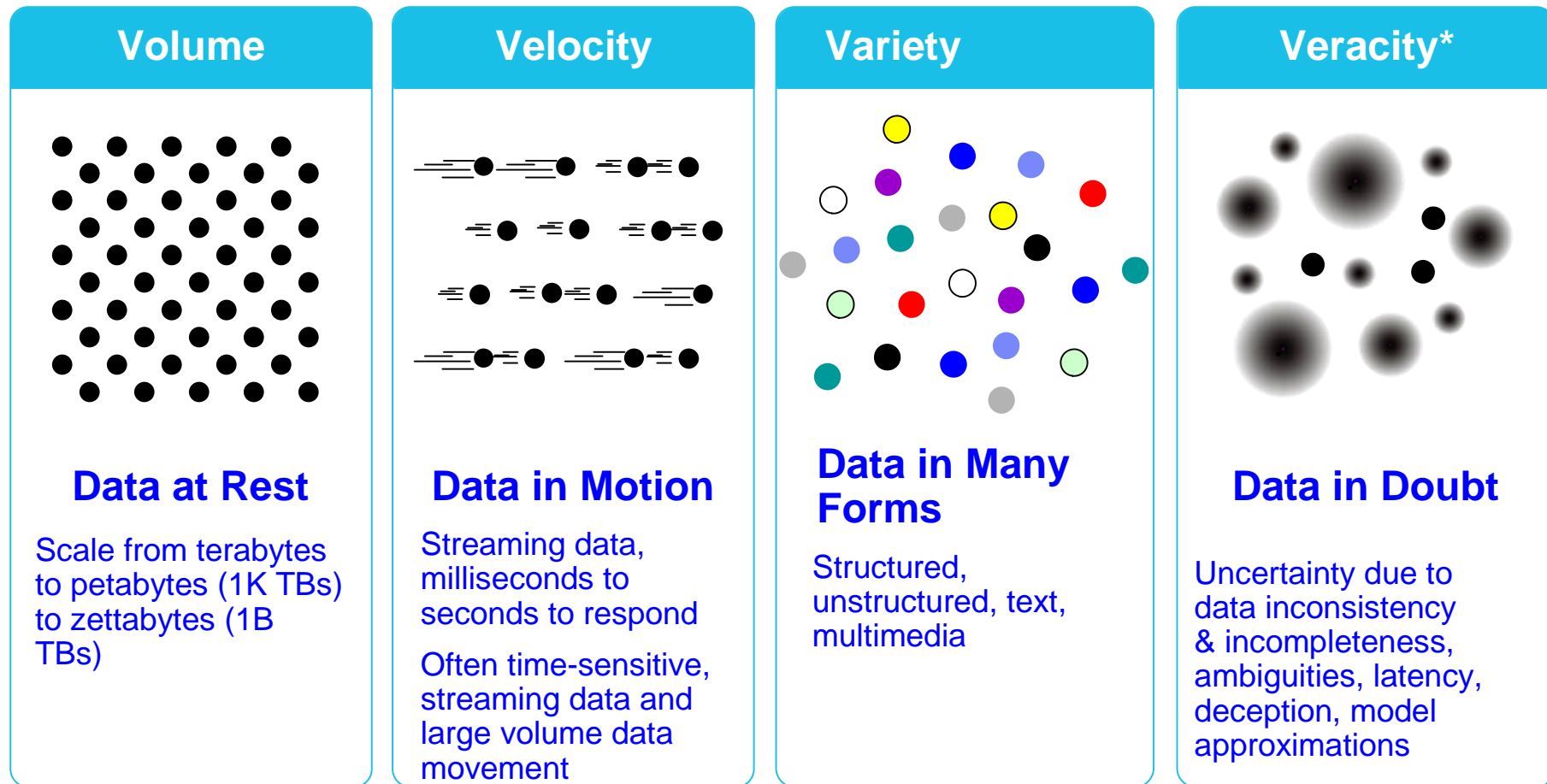


Fitting a curve to data



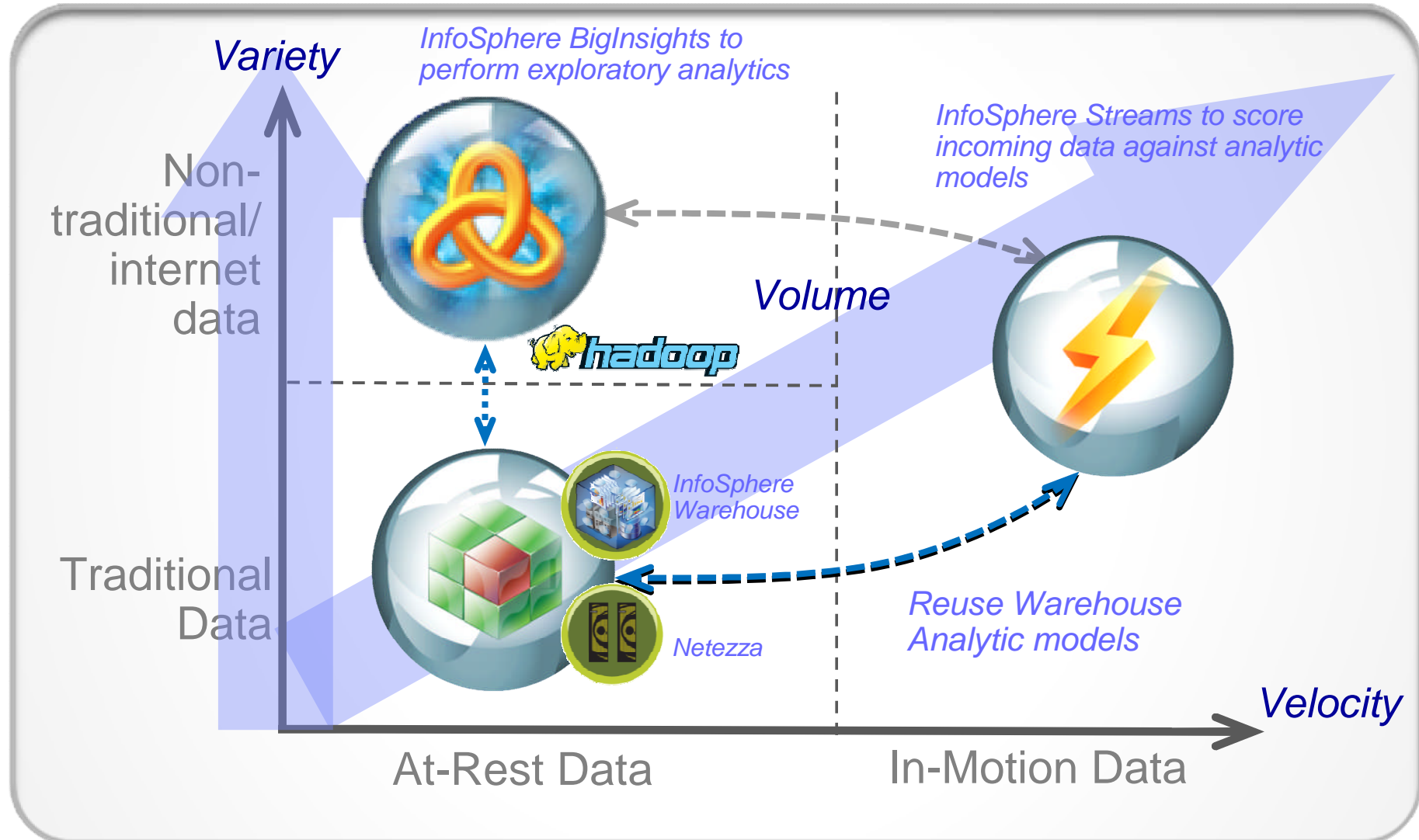
Forecasting a hurricane
(www.noaa.gov)

The fourth dimension of Big Data: Veracity – handling data in doubt



* Truthfulness, accuracy or precision, correctness

Big Data Technologies



Marketeer's objectives

Platform Capability

1 Single view of customer



Consolidation



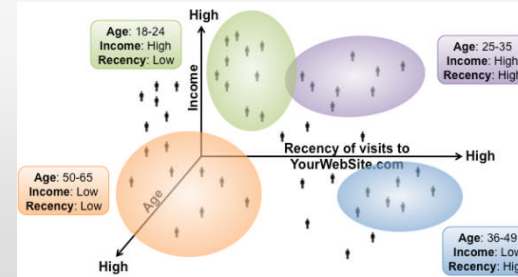
Clickstream
Transactions
Events
CRM
Support calls

All in one place

2 Increased Targeting Precision



Segmentation



Clustering
Scoring
Feature Selection
Associations

3 Improved Relevance



Matching

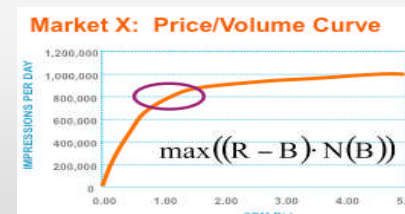


Personalized message
Matching algorithms
Matrix computations
Single Value Decomp.

4 Higher campaign profitability



Optimization



Forecasting
Predictive algorithms
Decision trees
Linear Regression

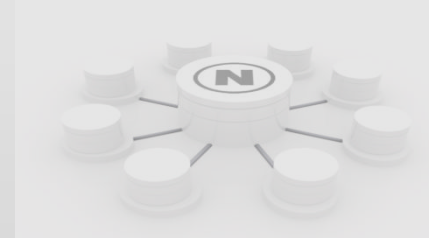
Marketeer's objectives

Platform Capability

1 Single view of customer



Consolidation



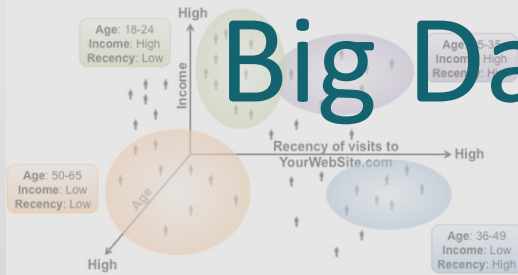
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Big Data

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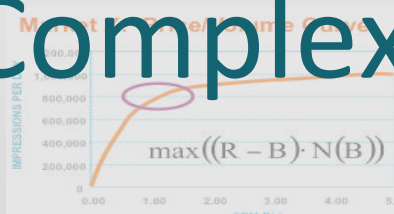


Personalized message
Matching algorithms
Matrix computations
Single Value Decomp.

4 Higher campaign profitability



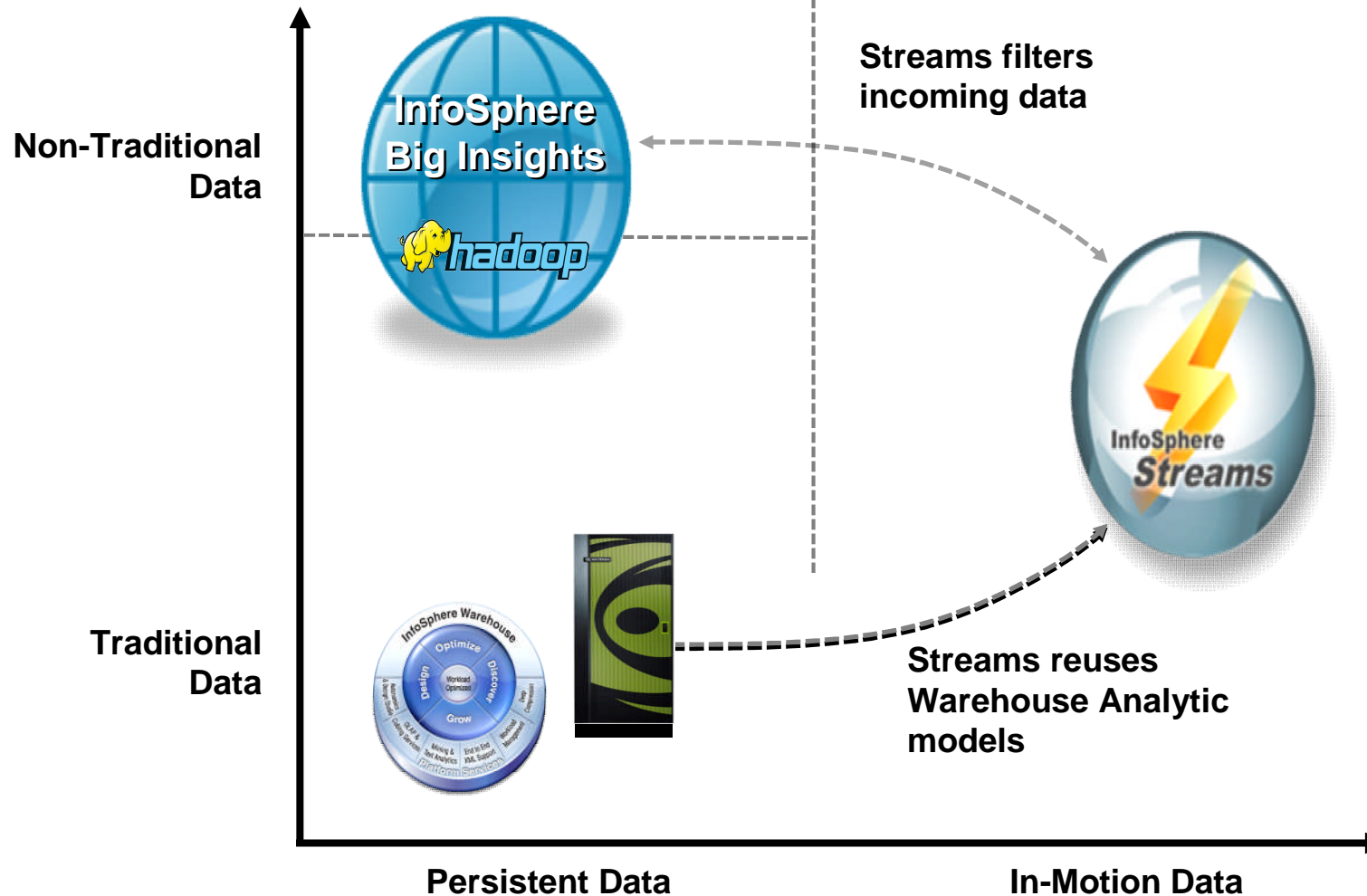
Optimization



Complex Analytics

Forecasting
Predictive algorithms
Decision trees
Linear Regression

IBM Offers a Comprehensive Set of Solutions for BIG Data



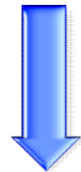
Un nouveau mode d'exploration des données

Traditional Approach

Structured & Repeatable Analysis

Business Users

Determine what question to ask



IT

Structures the data to answer that question



Monthly sales reports
Profitability analysis
Customer surveys

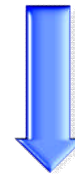
Big Data Approach

Iterative & Exploratory Analysis



IT

Delivers a platform to enable creative discovery

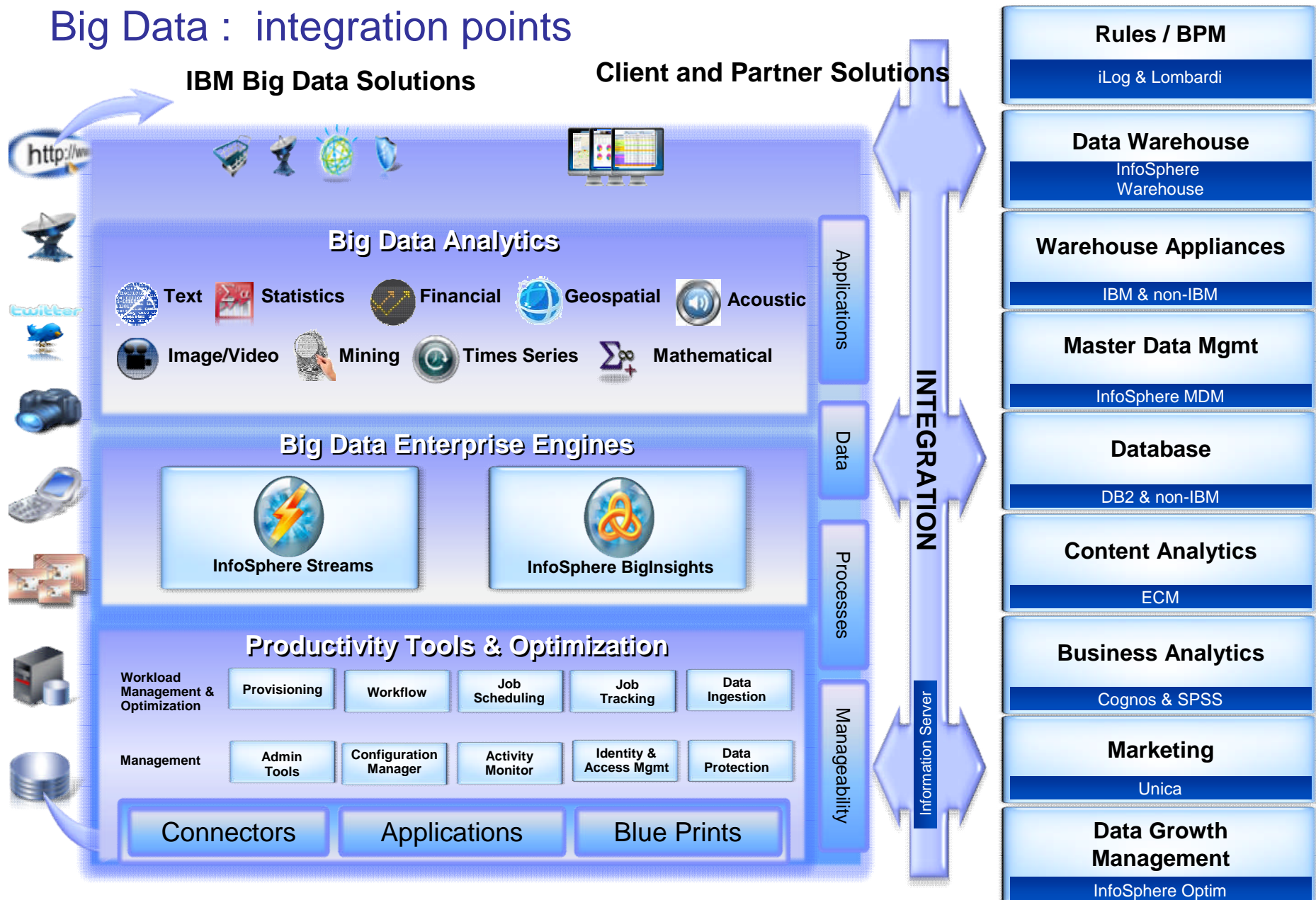


Business

Explores what questions could be asked

Brand sentiment
Product strategy
Maximum asset utilization

Big Data : integration points



Typical IBM Big Data Solution Use Cases





Big Data Use Case Customer Experience (Call Center)

Business Value Hypotheses - Summary

Analyze Customer Survey Data to
Advocates vs. Antagonist

Analyze Customer Complaint Data to
Understand Key Customer Issues

Understand Impact of Social Networks
on Customer Behavior & Influence

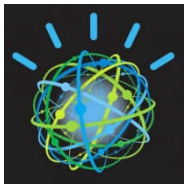
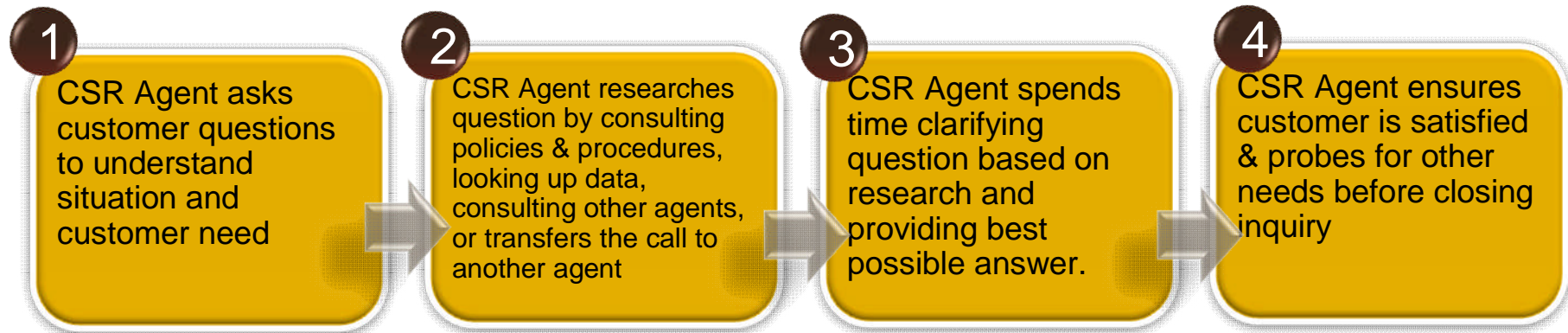
Analyze Agent-to-Agent Internal
Memos

Analyze Customer Interaction
Notes (i.e. emails, etc.)

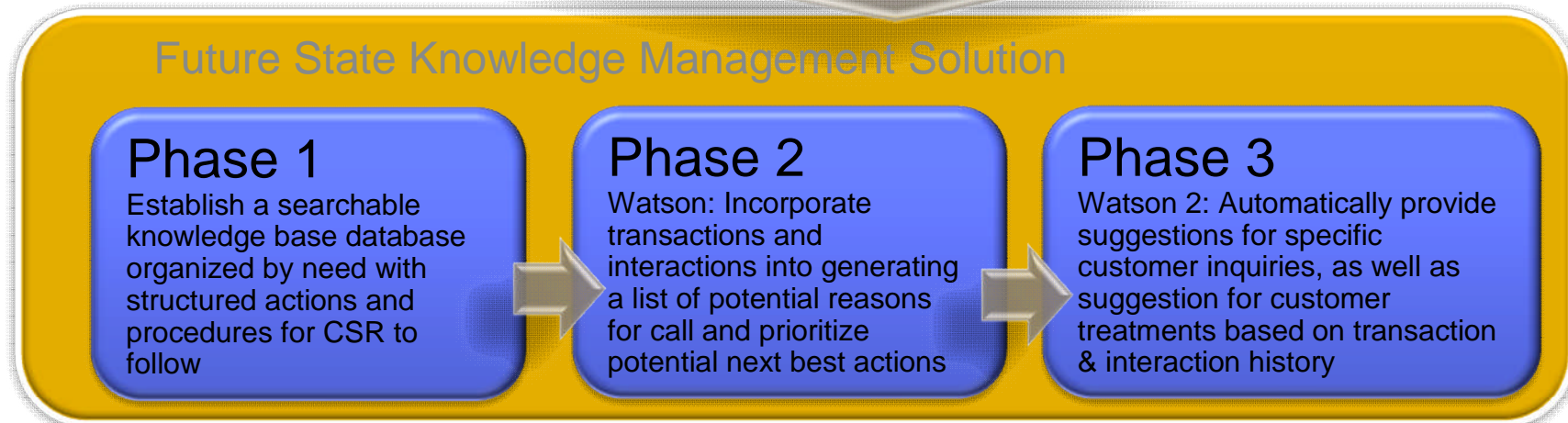
Analyze Policy & Procedures

- Cost Efficiencies
- Performance
- Revenue Lift
- Regulatory Compliance

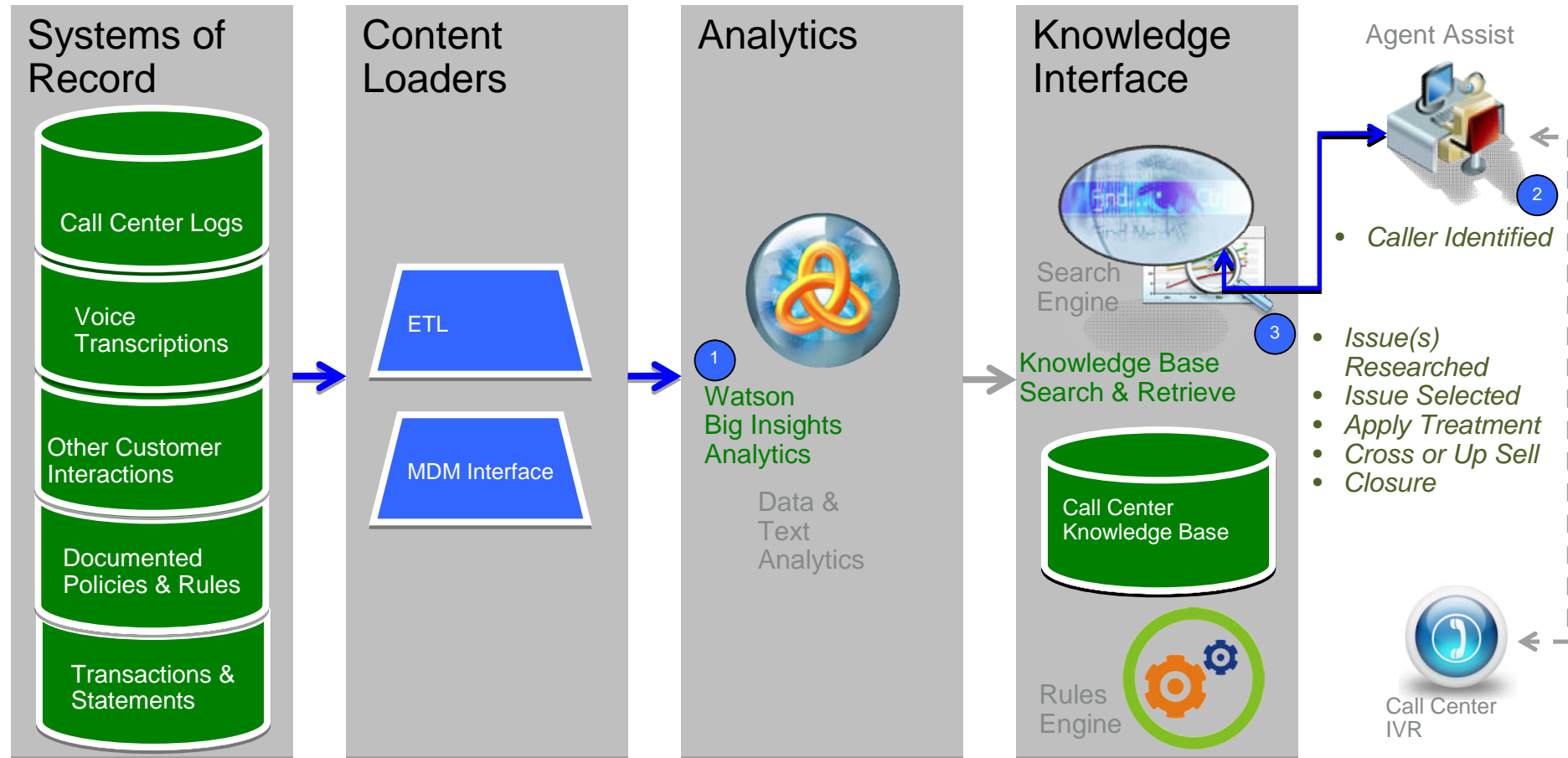
Addressing the Customer Experience Issues



Search Highly Organized Knowledge, Better Predict Customer Needs & Drive Differentiated Experience

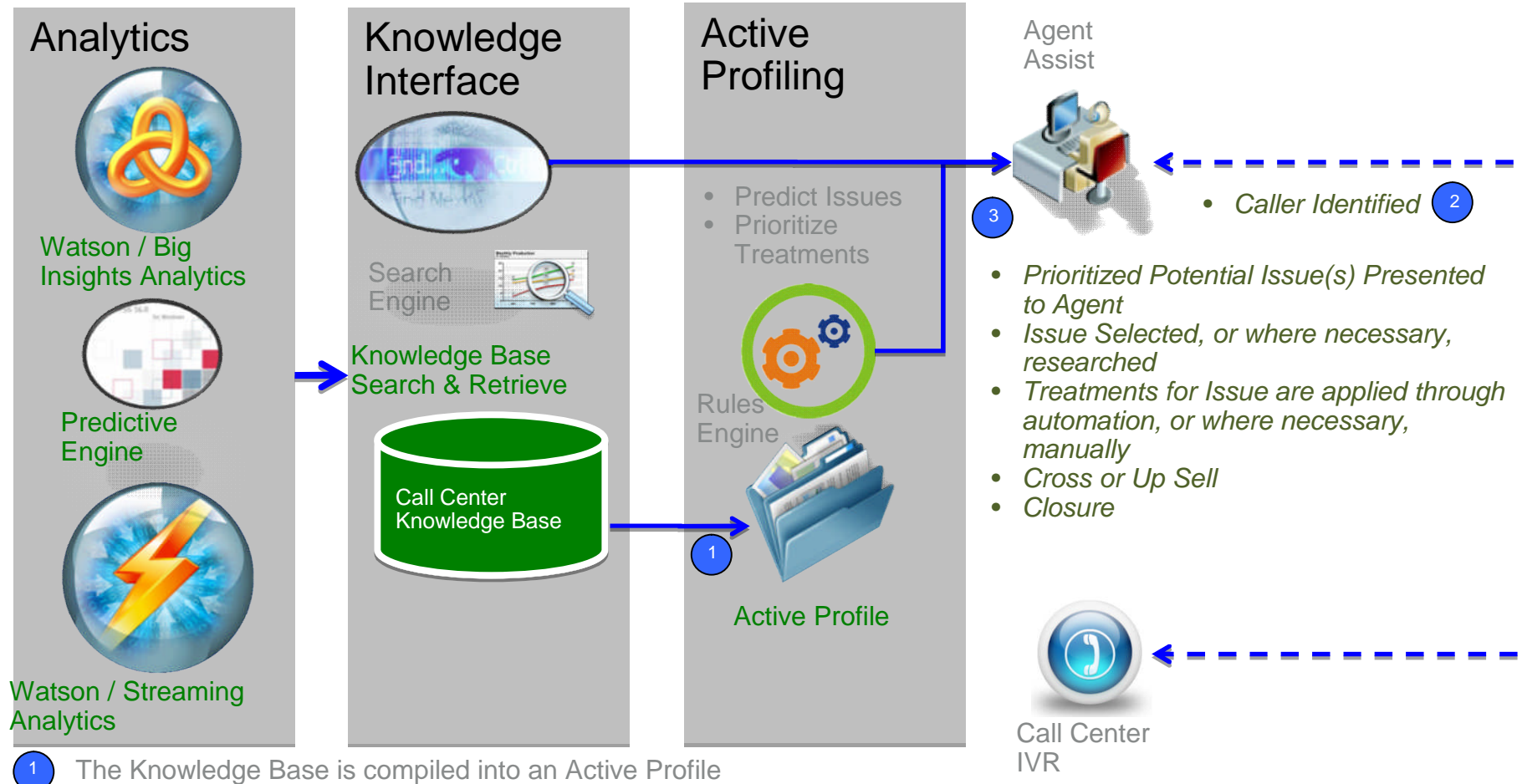


Phase 1: Establish Knowledge Base



- 1 Account / Product specifications, Customer Transactions and Interactions, Policies and Procedures are loaded into Big Insights and relevant information context linkages are established in an indexed Knowledge Base (KB). The KB has natural language capabilities to link issues with treatments.
- 2 A customer transfers from IVR to an Agent, and gets identified
- 3 A customized UI helps the agent access the Content search engine to research the customer's issue, locate appropriate treatment and apply it.

Phase 2: Automate Issue Detection & Treatment



- 1 The Knowledge Base is compiled into an Active Profile
- 2 Customer transfers out of IVR to the call center and gets identified
- 3 Agent is provided with prioritized potential issues by the Rules Engine, together with treatments. Where needed the agent can research the Knowledge Base. Treatment application is automated where possible, reducing manual time required