Digital Insurance powered by Big Data

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High performance. Delivered.

Who we are

Kurt Rosander
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accenture

Industry

	n=1,007
BANK & insurance	301
COMMUNICATION	170
CONSUMER GOODS & SERVICES	120
ENERGY	130
HEALTHCARE PROVIDERS & PAYERS	100
RETAIL	176

Revenue

	n=1,007
$250M–500M	76
$500M–$1B	231
$1B–$5B	335
$5B–$10B	185
GREATER THAN $10B	180

Job Title

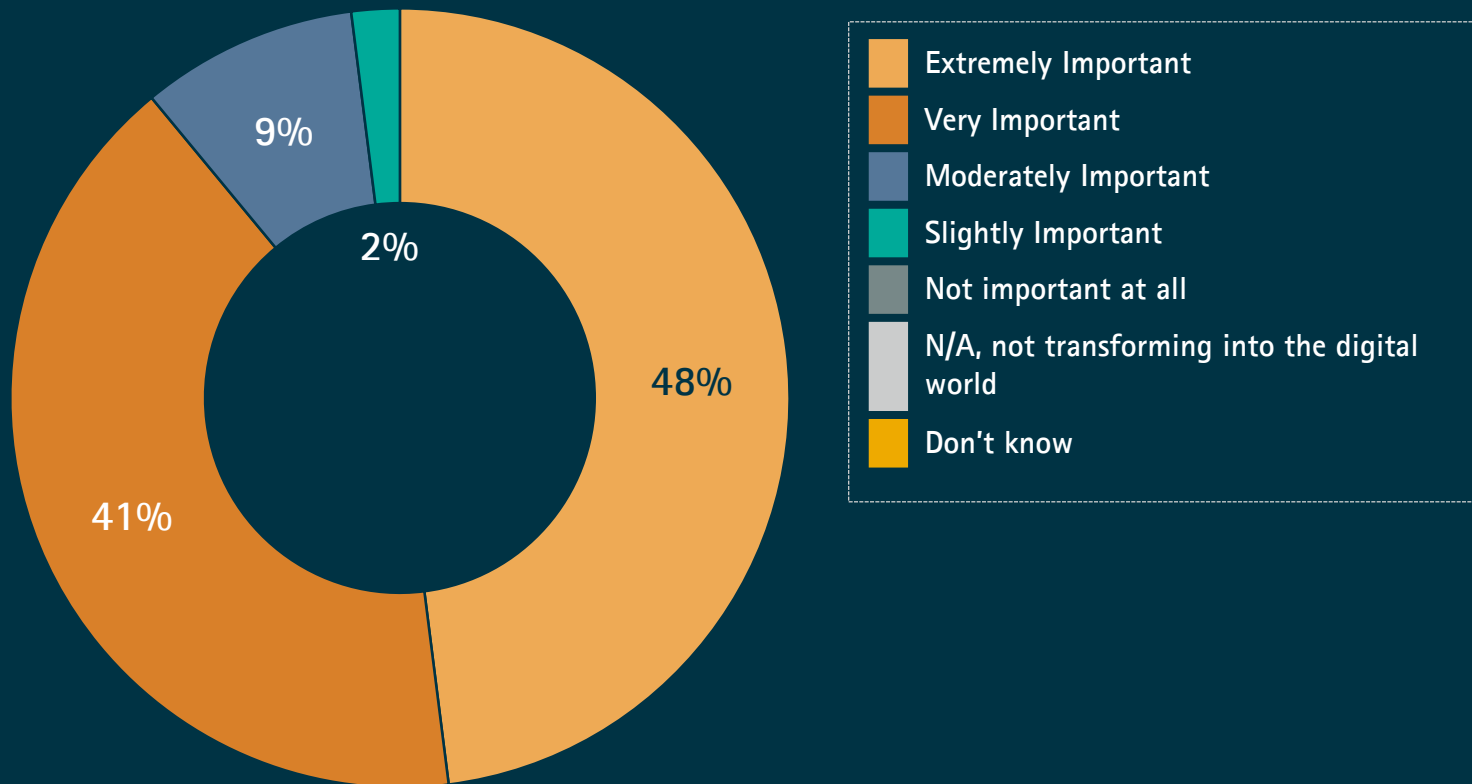|	n=1,007
COO	141
CIO	255
CMO	67
CFO	72
ANALYTICS LEAD	47
CHIEF DATA OFFICER	85
CHIEF ANALYTICS OFFICER	38
DIRECTOR OF ANALYTICS OR EQUIVALENT	65
DATA SCIENTIST	24
TECHNOLOGY DIRECTOR	126
SENIOR VICE PRESIDENT: DATA, ANALYTICS OR TECHNOLOGY	84
OTHER SVP	3

Source: Big Data, April 2014

About 90 % of all companies across industries believe Big Data will revolutionize business operations in the same way the Internet did

…so what with Big Data

- Large amout of data; structured and unstructured

- Data from social networks (Twitter, Facebook)

- Advanced analytics

- Geospatial information

- Telematics

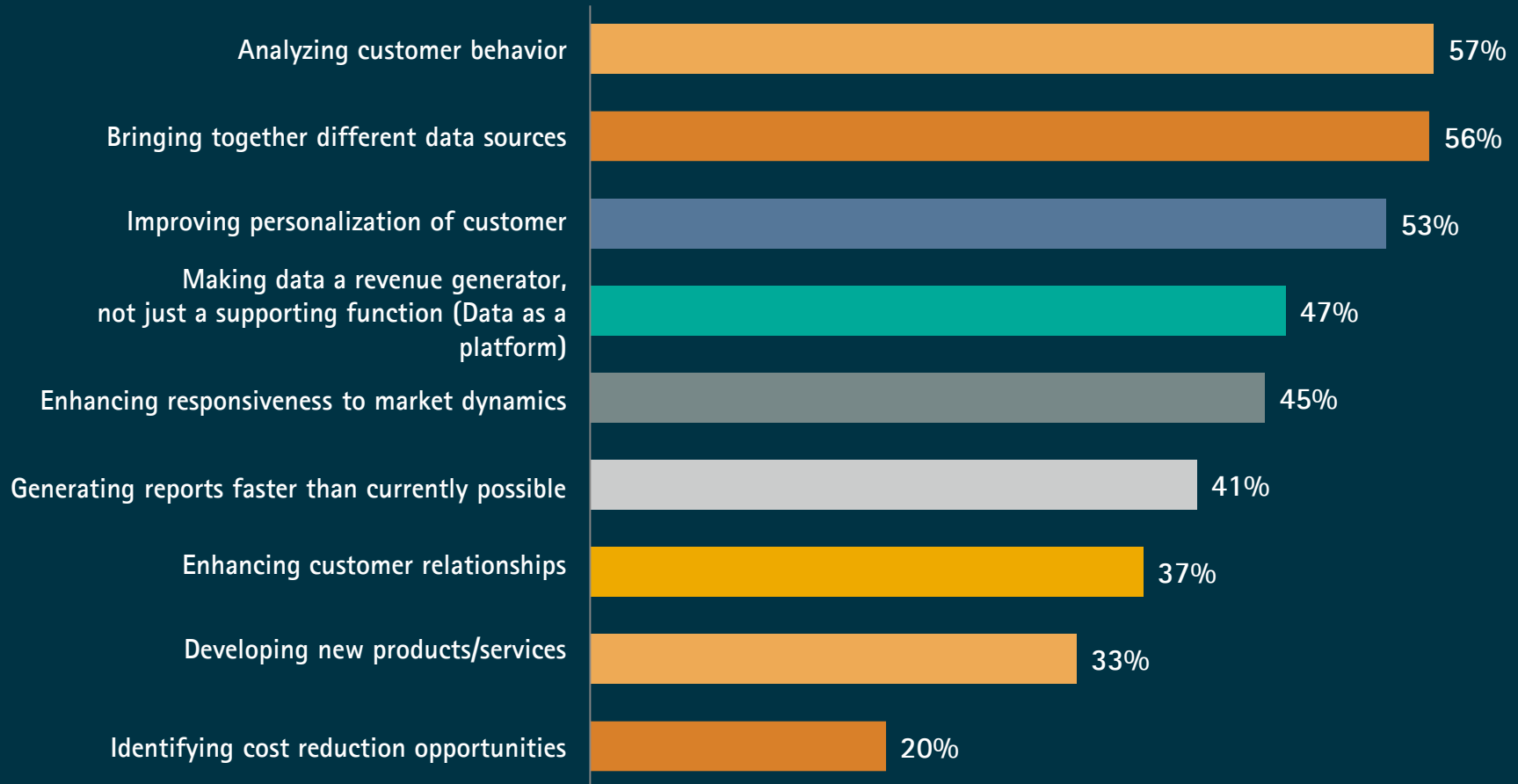- Creating insight with visualization tools

For most companies, big data is very important to their transformation into digital

How important is big data to your company's transformation into the digital world?

- Extremely Important
- Very Important
- Moderately Important
- Slightly Important
- Not important at all
- N/A, not transforming into the digital world
- Don't know

48% — **41%** — **9%** — **2%**

Immediate impact: Where big data is used today

Organizations use big data for analyzing customer behavior, combining data sources and improving customer personalization.

Reason	Percentage
Analyzing customer behavior	57%
Bringing together different data sources	56%
Improving personalization of customer	53%
Making data a revenue generator, not just a supporting function (Data as a platform)	47%
Enhancing responsiveness to market dynamics	45%
Generating reports faster than currently possible	41%
Enhancing customer relationships	37%
Developing new products/services	33%
Identifying cost reduction opportunities	20%

For which of the following reasons are you using big data?

Big Data is Big, but it's also fast and cheap: $1000/TB if using a cloud solution

38,000+
photos shared

3,100,000
likes on Facebook

4,000,000+
searches on Google

IN

60

SECONDS

277,000+
snapchats received

347,000+
tweets

3,500+
pins

100+ hours
of video uploaded

$275,000+
transactions (USD)

2.4 billion people
connected to the internet interact…

An ecosystem together with Big Data will help insurers increase it's knowledge of their customers dramatically

Everyday Financial Shop

Ecosystem partners

- Furniture
- Electricity and Gas
- Transportation
- Home repairs
- Food
- Fuel
- Hotels
- Telco
- Real estate
- Health services
- Auto

My Consumption
My Housing
My Education
My Transportation
My Savings and Pension
My Protection
My Health
My Auto
My Money
My Communication
My Travel

Customer

FS player providing FS services via API (e.g. financing)

Ecosystem partners providing non financial services to be bundled in FS offering (e.g. real time discounts)

Key enablers

- Omnichannel customer experience
- Integrated distribution platform
- 360° Advanced Analytics
- Product innovation & bundling
- Marketing engine
- Ecosystem management and Digital Managed Services

Social Media

Connected Devices

Insurance Companies can Benefit from Evolving Technology and Big Data

Product Development	Marketing & Sales	Policy Administration	Claims & Benefit Management	Asset management

- Better understanding of market and customer
- New products through improved market research
- Better risk assessment and pricing

- Improved customer segmentation
- Cross-selling
- Churn prevention
- Campaign management

- Dynamic policy based on use
- New ecosystem partners

- Catastophe planning
- FNOL automation
- Claims prevention and mitigation
- Fraud detection

- Trade pattern analysis
- Price per share prediction
- Social media monotoring

9
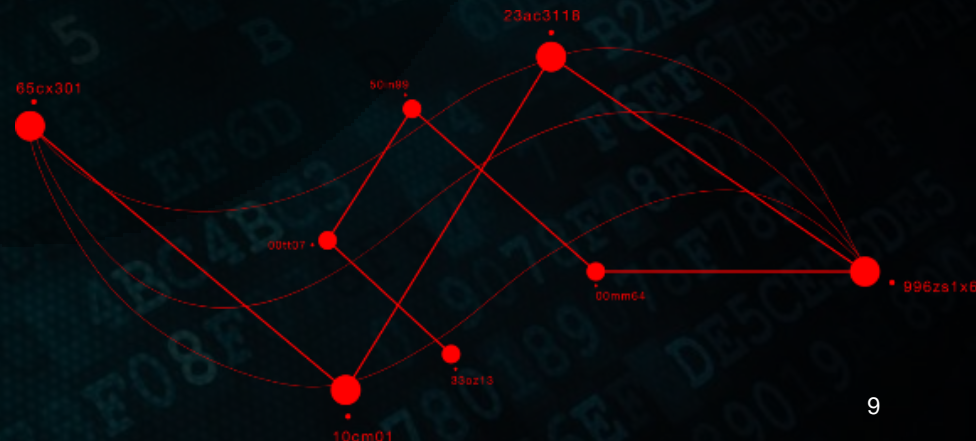
Connected car is part of an eco-system were possibilities are endless

Driver Behavior Monitoring
Warn driver when entering unsafe speed limit or unsafe driving behavior (e.g., falling asleep)

Increase Awareness
Warn driver when entering accident-prone/dangerous zone (e.g. icing condition)

Accident Inspection
Leverage GPS services to allow insurers to dispatch "assessors" to the accident scene
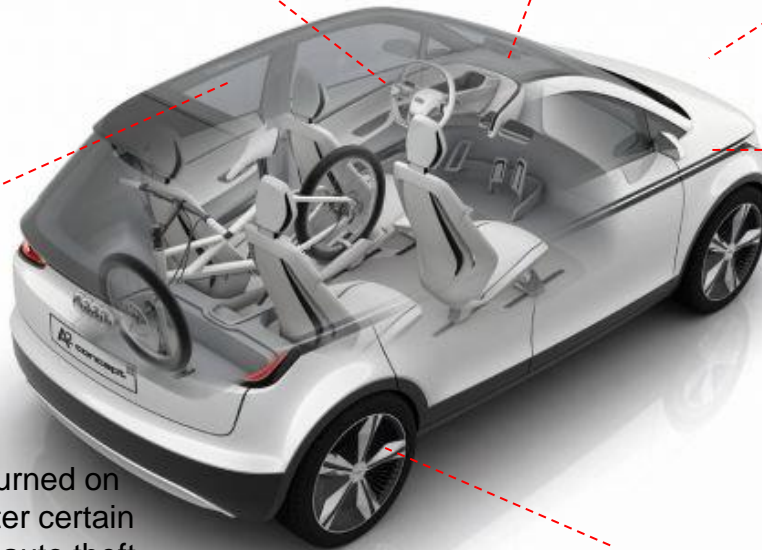
Predictive Maintenance
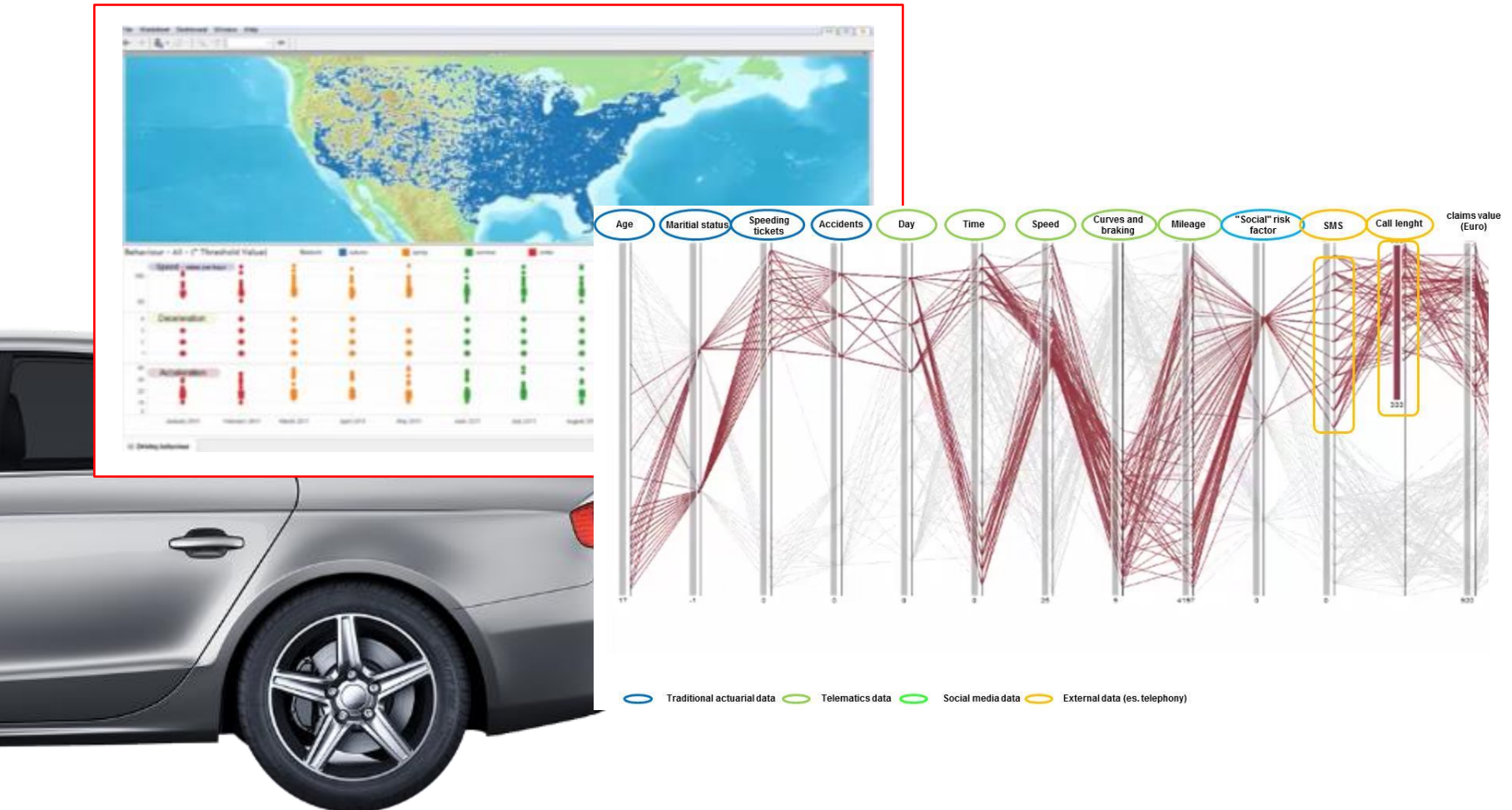Ensure key components of the car (e.g., engines, tires) are in good condition

Auto Security
Ensure security feature is turned on after a certain period (or after certain hours) and advise driver of auto theft in the nearby neighborhood

Big Data is revolutionizing Underwriting, Risk Scoring and Cap Market predictions as it exposes all the causal and correlation patterns

Age | Maritial status | Speeding tickets | Accidents | Day | Time | Speed | Curves and braking | Mileage | "Social" risk factor | SMS | Call lenght | claims value (Euro)

Traditional actuarial data | Telematics data | Social media data | External data (es. telephony)

Utilizing a new set of devices brings new value adding propositions for insurers

Automated Inspection
As part of regular preventive maintenance of the house or after certain events (e.g., storm)

Continuous Monitoring
- Overall health of the house such as air and water quality, temperature, structural condition are continuously monitored
- Risky areas of the house such as basement, laundry area, kitchen are monitored closely for potential problems

Home Security
Reminds homeowner when doors/windows are not locked by certain time and provides update on any recent security/safety-related information in the neighborhood

Predictive Maintenance
Ensure key appliances (e.g., furnace, water heater, sump pump) are in good condition and maintained properly especially given the upcoming weather condition. If necessary, a repair/maintenance person will be called for further inspection/repair.

World-leader Discovery disrupts Life/Health insurance through Big Data and Retail Brand Communities

Discovery promotes healthy lifestyles and returns 16% claims reduction through free fitness clubs and healthy food coupons
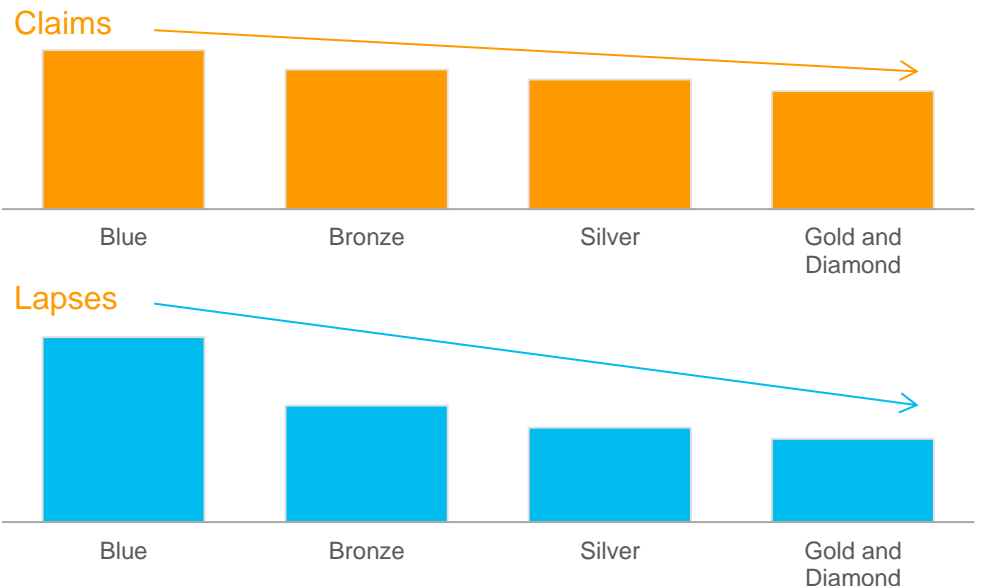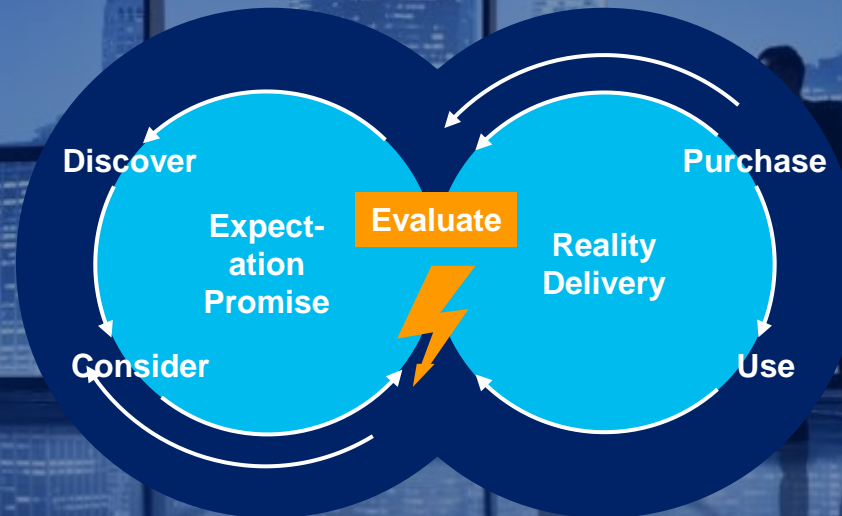
A loyal person is someone who has not left yet
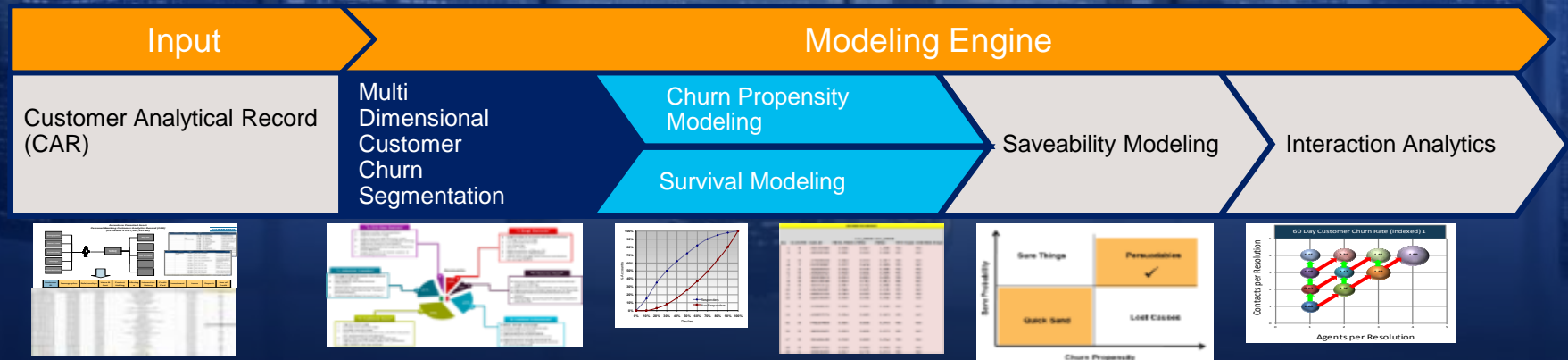Predict when and why they leave and turn into a competitive advantage

Expectation Loop Churn Drivers

- Brand Perceptions
- Needs
- Social Influence
- Life stage

Reality Loop
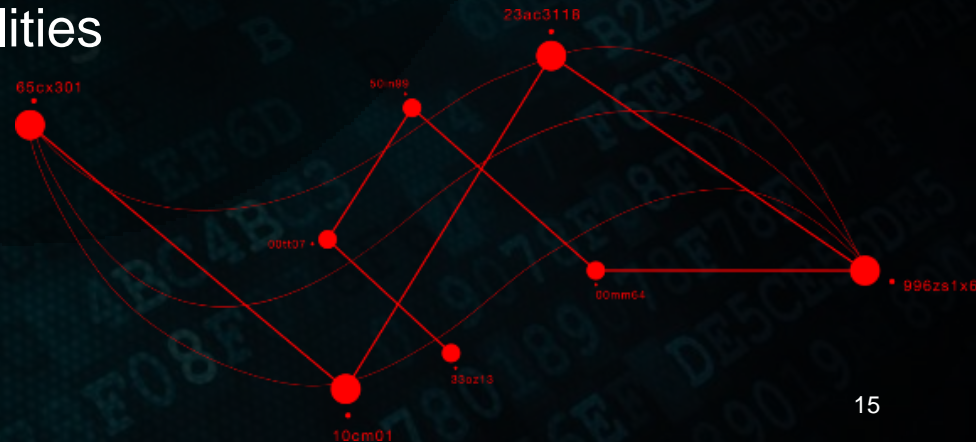
- Churn Drivers
- Usage
- Interactions
- Convenience
- Communication

Discover

Purchase

Expect-ation Promise

Evaluate

Reality Delivery

Consider

Use

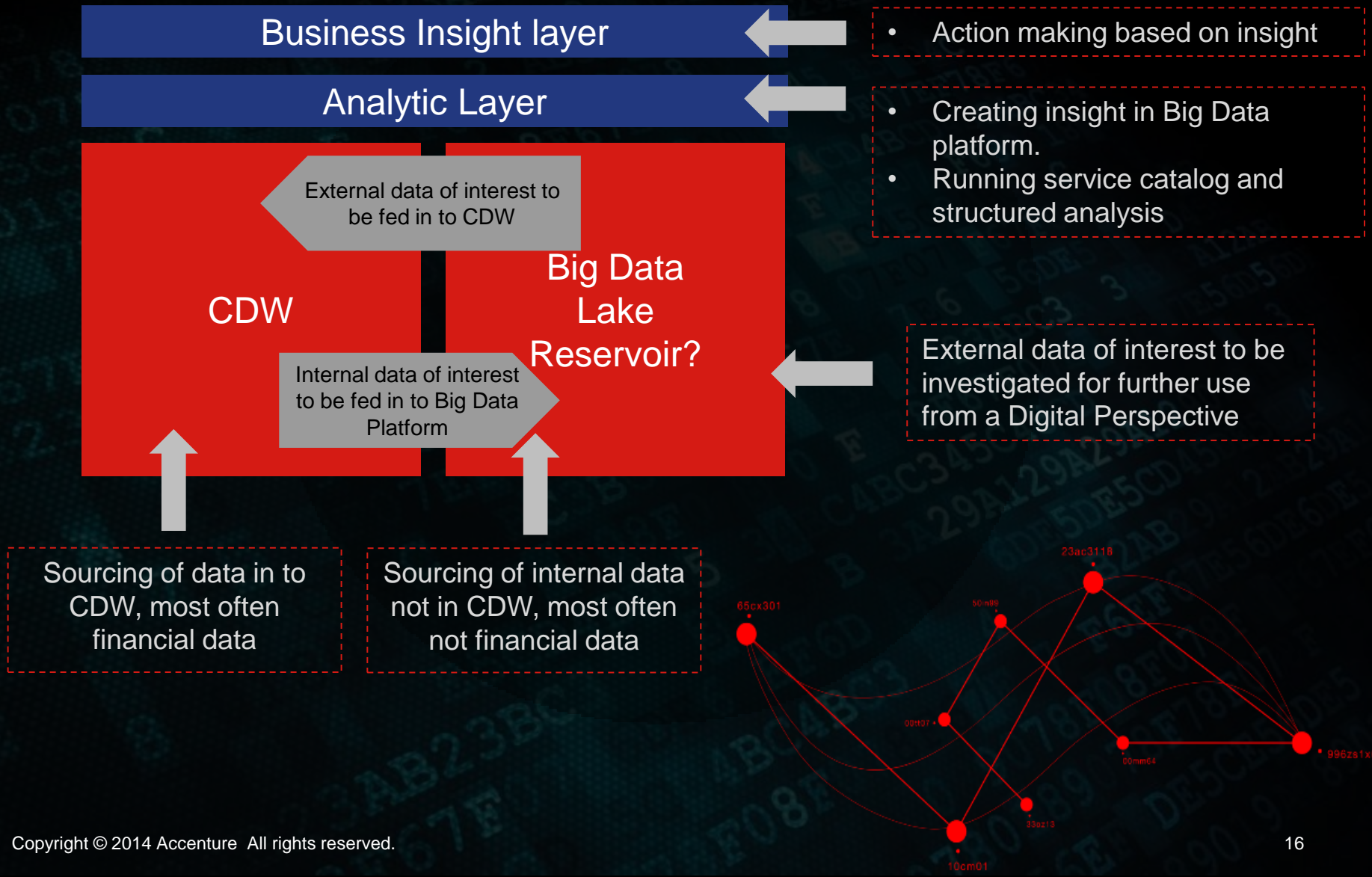| Input	Modeling Engine			
Customer Analytical Record (CAR)	Multi Dimensional Customer Churn Segmentation	Churn Propensity Modeling / Survival Modeling	Saveability Modeling	Interaction Analytics

Getting started with Big Data

Start small, scale fast – test and learn – be agile

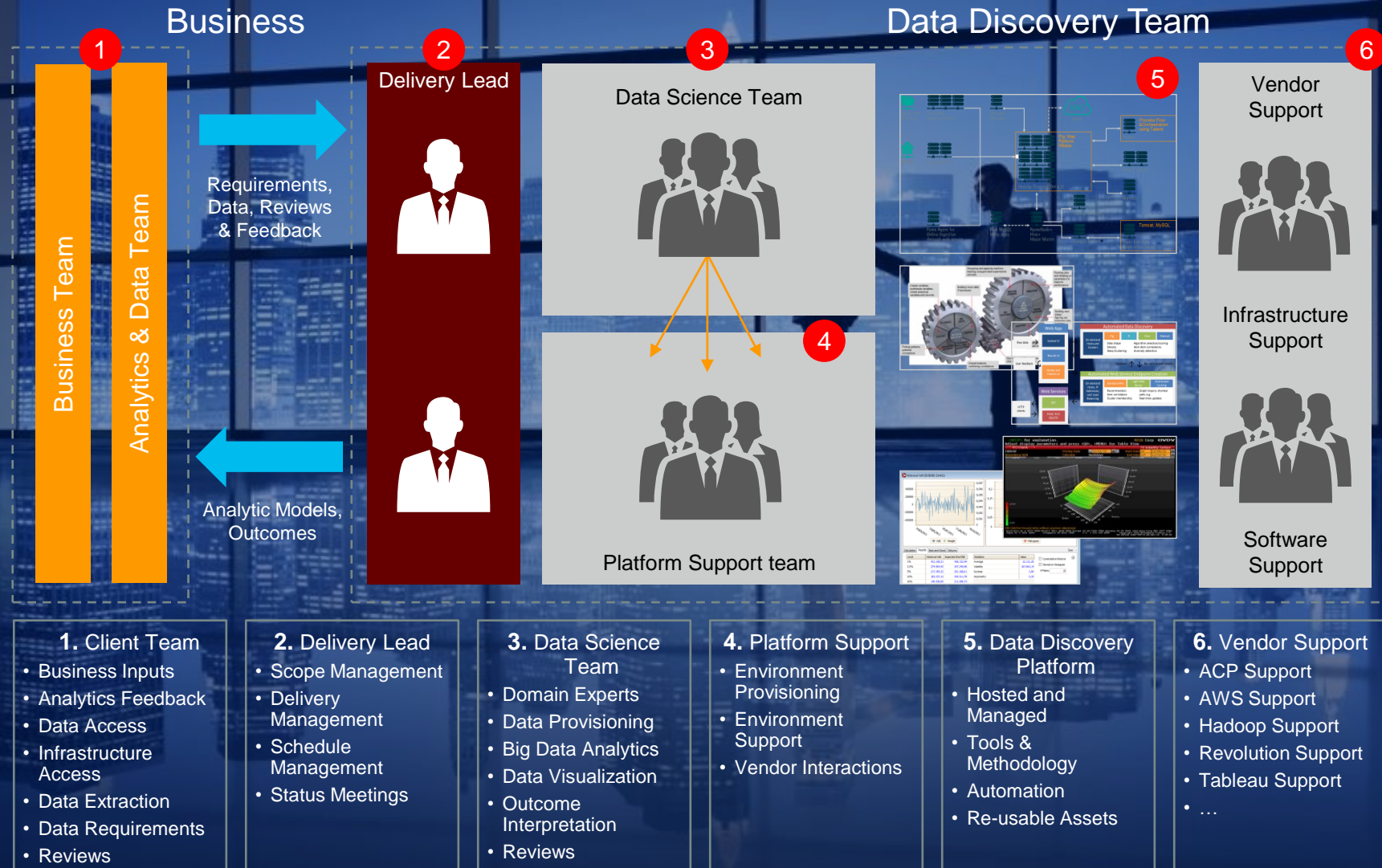- Launch business pilots with available data and use existing cloud solutions if internal takes too long

- Expand pilots with internal and external Big Data

- In parallel develop a Digital value creation road map aligned with group strategy

- Develop Digital Factory / Big Data CoE capability on back of pilot streams

- Industrialize successful initiatives

- Build and expand real-time capabilities

Data management considerations

Business Insight layer ⬅

Analytic Layer ⬅

- Action making based on insight

- Creating insight in Big Data platform.
- Running service catalog and structured analysis

CDW

External data of interest to be fed in to CDW

Big Data Lake Reservoir?

Internal data of interest to be fed in to Big Data Platform

External data of interest to be investigated for further use from a Digital Perspective

Sourcing of data in to CDW, most often financial data

Sourcing of internal data not in CDW, most often not financial data

Data Discovery Operating Model

Business

Data Discovery Team

1

2 Delivery Lead

3 Data Science Team

4 Platform Support team

5

6 Vendor Support

Infrastructure Support

Software Support

Business Team

Analytics & Data Team

Requirements, Data, Reviews & Feedback

Analytic Models, Outcomes

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1. Client Team
- Business Inputs
- Analytics Feedback
- Data Access
- Infrastructure Access
- Data Extraction
- Data Requirements
- Reviews

2. Delivery Lead
- Scope Management
- Delivery Management
- Schedule Management
- Status Meetings

3. Data Science Team
- Domain Experts
- Data Provisioning
- Big Data Analytics
- Data Visualization
- Outcome Interpretation
- Reviews

4. Platform Support
- Environment Provisioning
- Environment Support
- Vendor Interactions

5. Data Discovery Platform
- Hosted and Managed
- Tools & Methodology
- Automation
- Re-usable Assets

6. Vendor Support
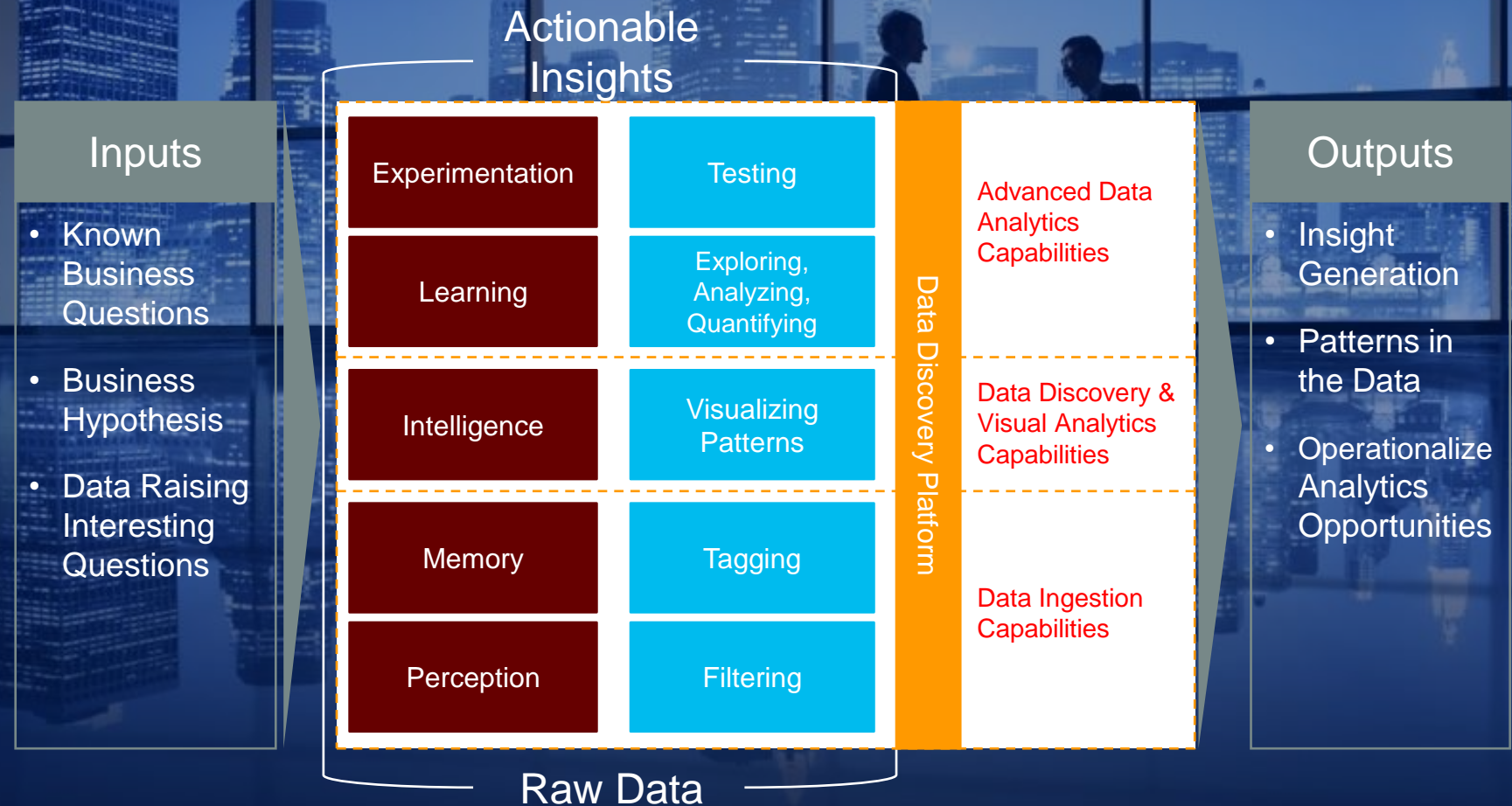- ACP Support
- AWS Support
- Hadoop Support
- Revolution Support
- Tableau Support
- …

# Example of Big Data Analytics Methodology

Methodology allows for continuous data discovery platform where data from any source is rapidly mobilized to draw new insights, come to meaningful conclusions, and to innovate faster

Actionable Insights

Inputs				Outputs
• Known Business Questions	Experimentation	Testing	Advanced Data Analytics Capabilities	• Insight Generation
• Business Hypothesis	Learning	Exploring, Analyzing, Quantifying		• Patterns in the Data
• Data Raising Interesting Questions	Intelligence	Visualizing Patterns	Data Discovery & Visual Analytics Capabilities	• Operationalize Analytics Opportunities
	Memory	Tagging		
	Perception	Filtering	Data Ingestion Capabilities	

Data Discovery Platform

Raw Data

Data Discovery Platform

We have developed unique assets and accelerators to help our big data analytics practitioners drive issues to outcomes in a big data world

Data Discovery	Data Visualization
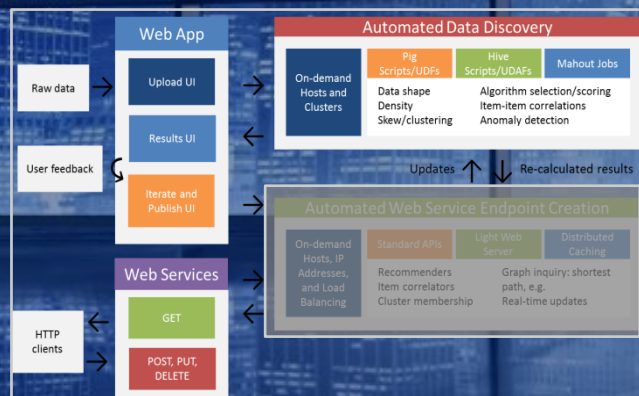
Asset: Accenture Automated Data Discovery Engine (ADDE)

Uses machine learning tools to automate routine data ingestion and organization tasks, making data discovery options available for less experienced users
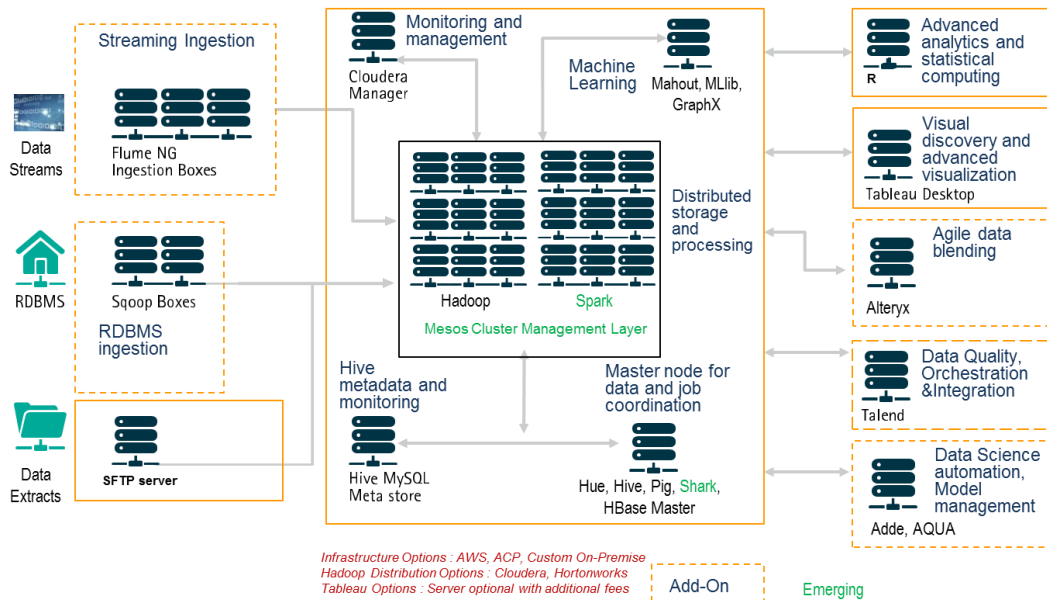
Approach: Visual Analytics

Leverages a visual analytics approach with an interactive data interface to uncover actionable insights

Data Discovery Platform

Data Discovery platform has opened the market for new suppliers enabling new possibilities leveraging a variety of big data technologies and visualization tools

- Hadoop – distributed filesystem

- Casandra – NoSQL DB

- Talend – Data quality

- Tableau Desktop – Visualization

- R – Advanced open source analytics

- And more

Note that vendors like HP, Teradata, SAS and Oracle is trying to find ways to operate

Summarize

- **Performance and scalability**
  - ✓ Programming language close to the iron
  - ✓ Cloud if according to policy

- **Security**
  - ✓ Masterdata handlinmg is very important
  - ✓ Recovery and replication is a must to always monitor information

- **Operations and cost**
  - ✓ Big Data platform and cost/performance ratio
  - ✓ Analytical capability
  - ✓ Still emering and easy to go wrong, vendor lansdcape is changing rapidly

- **Data access**
  - Lake vs resovoir, the information sourcing can be changed........

Read more

JOURNEY TO ANALYTICS ROI
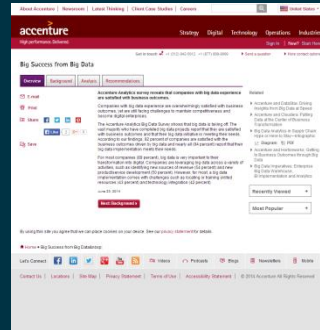
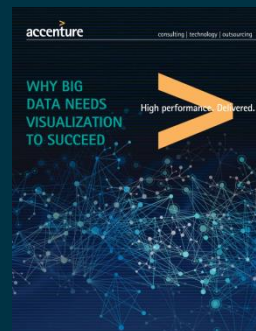**BIG SUCCESS FROM BIG DATA**
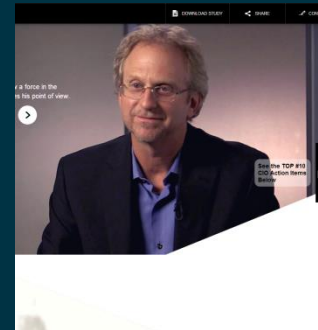
HIGH PERFORMERS IN IT: DEFINED BY DIGITAL

DATA ACCELERATION: ARCHITECTURE FOR THE MODERN DATA SUPPLY CHAIN
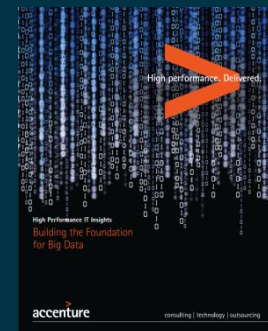

DATA MONETIZATION IN THE AGE OF BIG DATA

WHY BIG DATA NEEDS VISUALIZATION TO SUCCEED

EVERY BUSINESS IS A DIGITAL BUSINESS: FROM DIGITALLY DISRUPTED TO DIGITAL DISRUPTERS

BIG DATA @ ACCENTURE