5 Keys to Unlocking the Big Data Analytics Puzzle

Anurag Tandon
Director, Product Marketing
March 26, 2014
A Little About Us

- A top analytics software vendor by revenue.
- Operates in 44 cities in 26 countries worldwide.
- Over 4,000 customers across 20 industries.
- $576M in revenue in 2013.
- $100M+ dedicated annually to R&D.
- Innovator in web, mobile, and cloud-based analytics.

A global footprint. A proven innovator. A leader in enterprise analytics for 25 years.
What is Big Data?

Volume

Terabytes, Petabytes, Exabytes stored in Databases, Hadoop, NoSQL

Variety

Many disparate sources and a variety of structured and unstructured formats

Velocity

Speed of data flow and ingest, real-time processing of events and logs

The 3V definition by Gartner
The Case for **Big Data Analytics**

Why companies should invest in Big Data

- **Better access to low-level data for analysis**
  Uses: investigate transactions and events, remove sampling biases, better predictions, pattern detection, operational efficiency

- **Better integration of all company data sources**
  Uses: all customer interactions, uncover new revenue opportunities, multi-structured analysis of text/image/video, fraud detection and risk management

- **Integrate company data with external data sources**
  Uses: holistic 360° customer view, deep segmentation and targeting, geospatial analysis, social media analysis, brand management
## Prominent Big Data Analytics Use Cases by Industry

Most use cases are extensions of traditional business analytics, but with newer and richer data sources.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Use Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>Multi-Channel Customer Insights, Customer Segmentation, Promotional Effectiveness</td>
</tr>
<tr>
<td>Financial Services</td>
<td>Customer Transaction Analysis, Merchant Analytics, Fraud Detection</td>
</tr>
<tr>
<td>Communications</td>
<td>Customer Intelligence, Network &amp; Traffic Analysis, Customer Data Services</td>
</tr>
<tr>
<td>High-Tech</td>
<td>Digital Media Analytics, Social Media and Behavior Analysis, Ad Optimization</td>
</tr>
<tr>
<td>Healthcare</td>
<td>Patient Claims Analysis, Hospital &amp; Physician Quality, Pharmaceutical Drug Analytics</td>
</tr>
<tr>
<td>Public Sector</td>
<td>Citizen Welfare Programs, Crime Investigation, Cyber Security</td>
</tr>
</tbody>
</table>
Just A Few of Our Customers Using These Solutions Today

These organizations run MicroStrategy against some of the largest data systems in the world

<table>
<thead>
<tr>
<th>Retail</th>
<th>Lowe's</th>
<th>Metro Group</th>
<th>Carrefour</th>
<th>McDonalds</th>
<th>Starbucks Coffee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Services</td>
<td>SWIFT</td>
<td>PayPal</td>
<td>BBVA</td>
<td></td>
<td>&amp; Several Other Top Global Financial Service Companies</td>
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<tr>
<td>Communications</td>
<td>Netflix</td>
<td>at&amp;t</td>
<td>Sprint</td>
<td>Comcast</td>
<td>Deutsche Telekom</td>
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<td>High-Tech</td>
<td>Facebook</td>
<td>Yahoo!</td>
<td>eBay</td>
<td>Apple</td>
<td>LinkedIn</td>
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<td>IMS</td>
<td>GlaxoSmithKline</td>
<td>AstraZeneca</td>
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<tr>
<td>Public Sector</td>
<td>United States Postal Service</td>
<td>Transportation Security Administration</td>
<td>Department of Housing and Urban Development</td>
<td>DFW</td>
<td></td>
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</table>
Solving the Biggest Data Challenges

Recurring themes found in the MicroStrategy customer base globally

Companies that compete on the basis of data rely on MicroStrategy to get maximum value out of their data assets.

The largest global organizations standardize on MicroStrategy to run their mission critical applications and operations.
Five Key Capabilities for Big Data Analytics

Only MicroStrategy can provide these 5 key capabilities for successful Big Data analytics

1. Access any data across your enterprise
2. End user access to advanced and predictive analytics
3. Self-service analytics to production-ready dashboards
4. Analysis of multi-structured and streaming data
5. In-memory scale for highly interactive Big Data apps
# No Data Left Behind

Optimized connectors to your entire Big Data ecosystem

<table>
<thead>
<tr>
<th>Big Data &amp; NoSQL</th>
<th>cloudera</th>
<th>Teradata Aster</th>
<th>amazon Web services</th>
<th>IBM</th>
<th>ibm</th>
<th>intel</th>
<th>Pivotal HD</th>
<th>mongoDB</th>
<th>MarkLogic</th>
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<tbody>
<tr>
<td>Columnar Databases</td>
<td>Amazon Redshift</td>
<td>Sybase IQ</td>
<td>Vertica Parallel query</td>
<td>Infobright</td>
<td>kognitio</td>
<td>google bigquery</td>
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<td>Informix</td>
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<td>Sybase MarlaDB</td>
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<td>Microsoft SQL Server</td>
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<td>SaaS-Based App Data</td>
<td>Salesforce</td>
<td>Connection cloud</td>
<td>Zendesk</td>
<td>Intacct</td>
<td>Google</td>
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<tr>
<td>User / Departmental Data</td>
<td>Excel</td>
<td>CSV</td>
<td>Apeva</td>
<td>TXT</td>
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Bring All Relevant Data to Decision Makers
Query Execution Times in an Environment with Hadoop
**MicroStrategy** Provides Options

Choose how to access and analyze data

### Direct
- Report
- Dashboard
- Visual Insight

### Modeled
- Report
- Dashboard
- Visual Insight

**Unified MicroStrategy Metadata**
- Reusable Data
- Reusable Objects
- Reusable Design

**Data Sources**
- Databases
- Big Data
- Personal / Departmental
- Cloud Data
The Full Range of **Advanced Analytics** from One Place

- **Optimization**: What do we want to happen?
- **Projections**: What is likely to happen based on past history?
- **Relationship Analysis**: What factors influence activity or behavior?
- **Benchmarking**: How are we doing versus comparables?
- **Trend Analysis**: What direction are we headed in?
- **Data Summarization**: What is happening in the aggregate?

**Industry’s most powerful SQL Engine and 300+ native analytical functions**

**World’s most popular advanced analytics tool.**
Free, open source.

**Specialty Tools**

**MicroStrategy**
### MicroStrategy Support for Predictive Analytics

All of the most commonly used techniques are supported.

#### Primary Work Horses of Data Mining

<table>
<thead>
<tr>
<th>Technique</th>
<th>Most of the time</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
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<tbody>
<tr>
<td>Regression</td>
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<td>38%</td>
<td>15%</td>
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<tr>
<td>Decision trees</td>
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<td>34%</td>
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<td>Cluster analysis</td>
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<td>Ensemble models</td>
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<td>Factor analysis</td>
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<td>Random forests</td>
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<td>Association rules</td>
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<td>Support vector machines (SVM)</td>
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<td>Anomaly detection</td>
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<td>Proprietary algorithms</td>
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<td>Rule induction</td>
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<td>MARS</td>
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- ☐ = via PMML
- ☐ = via R
- ✓ = MicroStrategy Native

Source: 2013 Rexer Data Miner Surveys

www.RexerAnalytics.com

Over 1,250 Data Miners from 75 Countries
Self-Service Analytics Empowers the Business User

- Stunning Visualizations
- Instant Query Results
- Effortless Dashboards
- No IT Needed

![Data Visualization](image-url)
Tight Integration of Self-Service Analytics and Production BI

With MicroStrategy, it becomes possible to distribute Big Data insights, which decision makers will trust.

Move Seamless between Styles

Visual Data Discovery

Dashboards

Reports and Statements

Advanced Analysis

OLAP Analysis

Only MicroStrategy Delivers Agility and Governance

- Common metadata for trusted single version of the truth
- Flexibility for business to quickly work with new data
Analysis of **Unstructured and Semi-Structured Data**

Cover these prominent use cases alongside analysis of structured data

**Interactive Search**
- Find keyword and event occurrences in any data
- Quickly investigate:
  - Website logs
  - Application usage
  - Surveys and free form text fields
  - Event and error monitoring logs

**Text Analytics**
- Apply semantic and syntactic models to text data
- Extract relevant information to:
  - Optimize search engine marketing
  - Understand sentiment on topics
  - Get a 360 degree view of customers
  - Detect fraud

**Streaming Analytics**
- Assess rapidly changing data streams
- Analyze an array of data from:
  - Sensors and devices
  - Images, audio, and video
  - Email and document management systems
  - Other operational and transactional data
MicroStrategy PRIME: In-Memory Big Data Analytics

World’s first technology to combine 3 key breakthroughs for highly interactive big data applications

1. In-Memory Data Store
2. Massively Parallel Processing on Commodity Hardware
3. Look-Ahead Analytics – Integrated Data & Visualization Layers

Interactive Exploration

_______ of _________

Terabyte Datasets

_______ by _________

100,000s of Users
MicroStrategy PRIME in Action at Facebook

“We have this thing that’s running. It’s one of the most amazing things I’ve seen. It’s running against the entire Facebook user base, 1.1 billion users.”

Guy Bayes
Head of Enterprise BI, Facebook

- 200+ petabytes of Hadoop Source Data
- 30+ Terabytes Analyzed in PRIME
- 200+ Node Cluster
- 3,500 Cores
- 175 Billion Rows
Two Ways to Experience MicroStrategy Today

Best of all, they're free!

MicroStrategy Analytics Desktop

Fastest, easiest self-service analytics tool for business users.
100% free!

MicroStrategy Analytics Express

Cloud-based self-service visual analytics for any organization.
Free for one year!

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