Making Leaders Successful Every Day
Complimentary Webinar:
Big Data: Gold Rush Or Illusion?

Holger Kisker, Ph.D. Vice President, Research Director
Martha Bennett, Principal Analyst

May 28, 2013, 11:00 a.m. CET/10:00 a.m. UK time

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Agenda

1. Forrester introduction
2. Big data: gold rush or illusion?
3. We can help
4. Q&A
Forrester is a global research and advisory firm
We help you make better decisions in a world where technology is radically changing your customers
How we help

FORRESTER’S PLAYBOOK FRAMEWORK

Executive Overview

DISCOVER

Vision

Market Overview

PLAN

Strategic Plan

Stakeholder Map

Capabilities Assessment

ACT

Organization

Best Practices

Tools And Vendors

OPTIMIZE

Performance Management

Ongoing Management

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Introducing the presenters

Holger Kisker, Ph.D.
VP, Research Director
Serving Application Development & Delivery Professionals

Martha Bennett
Principal Analyst
Serving Application Development & Delivery Professionals
Data is the most valuable asset
Firms recognize the importance of data . . .

<table>
<thead>
<tr>
<th>Initiative</th>
<th>High priority</th>
<th>Critical priority</th>
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</thead>
<tbody>
<tr>
<td>Improve the use of data and analytics to improve business decisions and outcomes</td>
<td>37%</td>
<td>18%</td>
</tr>
<tr>
<td>Improve IT project delivery performance</td>
<td>32%</td>
<td>11%</td>
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<tr>
<td>Develop new skills to better support emerging technologies and business innovation</td>
<td>28%</td>
<td>9%</td>
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<tr>
<td>Improve IT budget performance</td>
<td>27%</td>
<td>8%</td>
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<tr>
<td>Help the organization better manage and integrate its partners and suppliers</td>
<td>27%</td>
<td>8%</td>
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<tr>
<td>Reorganize or retrain IT to better align with business outcomes and drive innovation</td>
<td>26%</td>
<td>7%</td>
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<tr>
<td>Cut overall IT costs due to economic conditions</td>
<td>20%</td>
<td>7%</td>
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<tr>
<td>Create a comprehensive mobile and tablet strategy for customers or business partners</td>
<td>19%</td>
<td>8%</td>
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<tr>
<td>Develop smart product APIs that improve product &amp; service capabilities</td>
<td>19%</td>
<td>7%</td>
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<tr>
<td>Create a comprehensive cloud strategy</td>
<td>18%</td>
<td>7%</td>
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<tr>
<td>Shift spending from core systems to applications driving engagement with customers</td>
<td>18%</td>
<td>6%</td>
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<tr>
<td>Create a comprehensive mobile and tablet strategy for employees</td>
<td>17%</td>
<td>6%</td>
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<tr>
<td>Implement a bring-your-own PC, smartphone, and/or tablet strategy</td>
<td>13%</td>
<td>4%</td>
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Base: 3,616 business decision-makers from firms with 100 or more employees

Source: Forrsights Business Decision-Makers Survey, Q4 2012
. . . and BI is a top investment priority . . .

The top seven software applications in firms’ adoption plans by year

1. Business intelligence
2. Customer relationship management
3. Collaboration software
4. Finance & accounting
5. Industry-specific software
6. Enterprise resource planning
7. Human capital management

Source: Enterprise and SMB Software Survey, North American And Europe, Q3 2007; Enterprise And SMB Software Survey, North America And Europe, Q4, 2008; Enterprise And SMB Software Survey, North American And Europe, Q4 2009; Forrsights Software Survey, Q4 2010; Forrsights Software Survey, Q4 2011; and Forrsights Software Survey, Q4 2012

Note: We first included industry-specific software in the Q4 2008 survey; we first included finance and accounting in the Q4 2009 survey.

... but they don’t use most of the data they have

Unstructured: 50 TB
Semi-structured: 2 TB
Structured: 12 TB

SMBs: 9 TB
LEs: 75 TB

Average data volume per company

Utilized 12%

Base: 634 business intelligence users and planners

Source: Forrsights Strategy Spotlight: Business Intelligence And Big Data, Q4 2012
Data sources continue to multiply
Most BI remains backward-looking

Data volume (bytes)

Zetta

Exa

Peta

Tera

Unstructured external data

Unstructured internal data

Traditional reporting

Years

Months

Days

Hours

Mins

S

S

Mins

Hours

Days

Months

Years

Past

Now

Future

Real-time

Predictive

Source: September 20, 2011, “Understanding The Business Intelligence Growth Opportunity” Forrester report
### BI projects are shifting to other technologies

- **Planning to implement in the next 12 months**

<table>
<thead>
<tr>
<th>Technology</th>
<th>% Planning</th>
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<tr>
<td>Dashboard</td>
<td>25%</td>
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<td>Performance analytics</td>
<td>23%</td>
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<td>Process analytics</td>
<td>23%</td>
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<td>Advanced visualization</td>
<td>22%</td>
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<td>Embedded analytics</td>
<td>21%</td>
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<td>Predictive analytics</td>
<td>21%</td>
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<td>Metadata-generated analytics</td>
<td>20%</td>
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<td>OLAP</td>
<td>18%</td>
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<td>Search/interactive discovery</td>
<td>18%</td>
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<tr>
<td>Web analytics</td>
<td>14%</td>
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<td>Streaming analytics</td>
<td>14%</td>
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<tr>
<td>Location analytics</td>
<td>13%</td>
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<tr>
<td>Reporting</td>
<td>12%</td>
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<tr>
<td>Text analytics</td>
<td>12%</td>
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<tr>
<td>Nonmodeled data exploration</td>
<td>12%</td>
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</table>

Report: projects will shift from new implementations to extensions of scope.

Source: Forrsights Strategy Spotlight: Business Intelligence And Big Data, Q4 2012

Base: 634 business intelligence users and planners
Fundamental shifts in BI

› The “Google Effect”
› The “good enough” principle
› Self-service tools
› Data visualization
› Predictive analytics
› **Big data**
› Mobile
› Cloud-based delivery models
“Big data” is:

Techniques and technologies that make handling data at extreme scale affordable.
“Big data” is:

Techniques and technologies that make handling data at extreme scale affordable.

Several different technologies!

Many different use cases!

Extreme in different dimensions!
What is “extreme scale” in big data?
There is no single “big data” technology

- Core Hadoop
- The wider Hadoop ecosystem
- Appliances
- Preconfigured/preintegrated systems
- Streaming technologies
- In-memory processing/analytics
- Advances in semantic technologies/NPL
- Cloud-based services
Different requirements, different technologies

- Generalized NoSQL
- Hadoop
- Standard SQL
- Appliances
- Specialized NoSQL
- Streaming
- In-memory Analytics

Polystructured

Highly structured

Batch

Real-time
Big data analytics is growing quickly

“What best describes your firm’s current usage/plans to adopt big data technologies and solutions?”

- Implemented, not expanding
- Planning to implement in the next 12 months
- Interested but no plans
- Expanding/upgrading implementation
- Planning to implement in more than 1 year

37% are planning a big data technology project in 2013 or beyond

20% have implemented some big data technology

Base: 634 business intelligence users and planners

Source: Forrsights Strategy Spotlight: Business Intelligence And Big Data, Q4 2012
Royal Tech Institute Stockholm [IBM] optimized traffic management. Real-time 250,000 GPS/s (signals) -> 20% less traffic/emissions, 50% shorter trips

Chevron High-performance computing for drilling site evaluation [IBM, summer 2010]. 50 TB per survey. Increased success rate from 1 in 5 to 1 in 3.

dm (Retailer) workforce scheduling and optimization [Blue-Yonder]. Predictive analysis (450,000 /week) based on sales, weather, traffic -> improved employee/customer satisfaction

macy’s (Retailer) price optimization [SAS]. Based on sales and competition -> 270 million price calculations in less than 2 hours (down from 30 hours); now several price changes per day.

motel (Retailer) workforce scheduling and optimization [Blue-Yonder]. Predictive analysis (450,000 /week) based on sales, weather, traffic -> improved employee/customer satisfaction

OTTO (Retailer) inventory optimization [Blue-Yonder] Based on weekly sales forecast (135 GB), 300 million data sets (sales, campaigns, products), improved forecast 40% (1 billion/year), real-time

Fujitsu (Bus service) carrier service optimization [Fujitsu]. 200,000 input/output operations/second. Response <1 ms: status, position, ETA, consumption, compliance -> all real-time

UOB (Singapore bank) high-performance risk analysis [SAS]. 45,000 instruments with 100,000 parameters: 8.8 billion risks analyzed in less than 1 minute (down from 18 hours), aggregated risk portfolio. Upfront strategy evaluation.

SEMIKRON (Semiconductor) manufacturing optimization [Exasol]. 5 billion data points for production processes, material, movements, product per production cycle -> monitoring, archiving, comparison, optimization.

TELITALIA (Telecom) churn/loyalty management [HP]. Call analysis (more than 500 million/day) combined with social media analysis to assign risk scores to business lines and individual customers.
Key lessons learned to date

› Skills requirements are often underestimated.
  • BI or research project?

› Many of the emerging tools and technologies aren’t yet enterprise-grade.
  • Lack of management features and security

› The security and privacy implications are far-reaching.
  • We’re in uncharted territory, from an ethical as well as a legal perspective.
Successful data projects need to align information and process governance.

Low-quality outcomes:
- Fragile or weak data foundation
- Business processes without data considerations
- Predictive analytics

High-quality outcomes:
- Strong data management foundation
- Processes connected to master data
- Trusted predictive analytics

Low-quality outcomes lead to low-quality outcomes, while high-quality outcomes lead to high-quality outcomes.
Top performers spend more on data initiatives!

“In 2013, approximately what percentage of your firm’s IT budget will go to BI-related purchases, initiatives, and projects?”

**BI spending as % of total IT spending**

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<thead>
<tr>
<th></th>
<th>Top performer</th>
<th>Peers</th>
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<tr>
<td></td>
<td>11.90%</td>
<td>9.50%</td>
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(15% or more YoY growth) (less than 15% YoY growth)

Base: 460 business intelligence users

Source: Forrsights Strategy Spotlight: Business Intelligence And Big Data, Q4 2012
Information road map recommendations

• Align your BI / big data project to business goals and KPIs.

• Make sure to select the technology most appropriate for your BI / big data initiative.

• Consider internal/external expertise, deployment options, and business models.

• Review your information governance and extend it to your big data initiative.

• Successful BI / big data is about *products*, *processes*, and *people*. 
We can help
Related Forrester research

› “Navigating The Future Of Customer Intelligence,” March 28, 2013
› “The Future Of Customer Data Management,” March 6, 2013
› “Turn Big Data Inward With IT Analytics,” December 5, 2012
› “Actionable Identity Intelligence Protects Big Data And Zero Trust Identities,” August 1, 2012
› “The Big Deal About Big Data For Customer Engagement,” June 1, 2012
Forrester’s big data related playbooks

- The Business Intelligence Playbook
- The Information Strategy And Architecture Playbook
- The Customer Analytics Playbook
- The Social Intelligence Playbook
- The Business Process Management Playbook
- The Data Security And Privacy Playbook
- The Data Management Playbook (coming soon)
- The Customer Information Playbook (coming soon)
- The Big Data Playbook (in discussion)

For an overview of all live and upcoming playbooks, please visit http://www.forrester.com/marketing/playbooks-all.html
## Leverage a global team of big data experts

<table>
<thead>
<tr>
<th><strong>Holger Kisker</strong></th>
<th><strong>Leslie Owens</strong></th>
<th><strong>Michael Barnes</strong></th>
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<tbody>
<tr>
<td>Big Data, BI Analytics and Data Management</td>
<td>Text Analytics, Natural Language Processing</td>
<td>BI, Big Data and Enterprise Apps in APAC</td>
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<tr>
<th><strong>Martha Bennett</strong></th>
<th><strong>Brian Hopkins</strong></th>
<th><strong>Michele Goetz</strong></th>
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<tbody>
<tr>
<td>BI, Analytics &amp; Big Data, Mobile BI</td>
<td>Big Data, Data Management &amp; Architecture</td>
<td>Big Data, Data Governance, MDM, Data Quality</td>
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<tr>
<th><strong>Mike Gualtieri</strong></th>
<th><strong>Noel Yuhanna</strong></th>
<th><strong>Andras Cser</strong></th>
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<tr>
<td>Big Data, Predictive &amp; Real-time Analytics</td>
<td>Big Data, Data Warehouse, Data Integration</td>
<td>Governance, Risk &amp; Compliance and Data Security</td>
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<tr>
<th><strong>Boris Evelson</strong></th>
<th><strong>Jennifer Belissent</strong></th>
<th><strong>Fatimeh Khatibloo</strong></th>
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<td>BI, BI/Big Data intersect, BI Services</td>
<td>Big Data in Public Sector, Smart Cities</td>
<td>Customer intelligence, Social Media</td>
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<th><strong>Charles Green</strong></th>
<th><strong>Gene Leganza</strong></th>
<th><strong>Henry Peyret</strong></th>
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<td>Information Strategy &amp; Architecture</td>
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Research-based consulting to guide your big data initiatives

» Big data advisory sessions
  • Understand what big data means, the opportunities it presents, and what you should do with it.

» Big data strategy workshops
  • Understand how to pick the right opportunities that will have an impact on your bottom line.
  • Get your IT and marketing teams working together effectively to plan and implement a sound strategy.

» Big data project consulting
  • Big data technology market overview: Understand what technologies are available and which ones will suit your needs.
  • Big data technology assessment: Is your company ready to take on big data and exploit the potential opportunities? Understand where you need to invest to successfully launch your initiatives.
See you there . . .

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› Connect with peers.
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Questions
Thank you

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