CHALLENGE THINKING. LEAD CHANGE.
Transform Your Organization from Data-Aware to Insights-Driven

Boris Evelson, VP, Principal Analyst
My information management journey
Per capita cheese consumption correlates with Number of people who died by becoming tangled in their bedsheets
Predictions 2018: The Honeymoon For AI Is Over
Success At Artificial Intelligence Means Hard Work — Treat It Like A Plug-In Panacea And Fail
by Boris Evelson, Michele Goetz, and Brian Hopkins
November 9, 2017
Over the next decade, AI won’t replace managers, but managers who use AI will replace those who don’t.

Over the next decade, AI won’t replace managers, but managers who use AI will replace those who don’t.


Over the next decade, AI won’t replace BI, but BI tools which use AI will replace those that don’t.

Source: 2018 Q1 planned Forrester research document “AI Unlocks The Business Intelligence In BI”
Enterprises must transform from data-driven to insights-driven
Systems of insight (SOI) power insights-driven business

“A new kind of company — we call them insights-driven businesses — has formed. They are growing at an average of more than 30% annually and are on track to earn $1.8 trillion by 2021”
Income-Statement-Based Top-And Bottom-Line Tangible BI Benefits

“Which ‘income statement’ revenue line items is your BI business case based on?”

- Increase margin, profitability: 41%
- Increase gross sales: 33%
- Other top-/bottom-line improvement: 26%
- Better return on fixed assets: 14%
- BI as a profit center (selling data, analysis): 12%
- Increase prices: 7%
- Accelerate collections: 3%

Base: 152 professionals with knowledge of business intelligence in their organizations (multiple responses accepted)

Note: “Don’t know,” “Other,” and “We base our business case strictly on intangible benefits” not shown.

Source: Forrester’s Q4 2016 Global Business Intelligence Business Case Online Survey
“Which ‘balance sheet’ line items is your BI business case based on?”

- Increased ratio of revenue to marketing expenditure: 25%
- Improving working capital utilization: 16%
- Information-based assets (e.g., goodwill): 14%
- Higher asset value based on better information*: 13%
- Value of intellectual property: 12%
- Reduced inventory, reduced inventory working capital: 11%
- Increase ratio of earnings to capital employed: 10%
- Reduced capital reserve requirements for doubtful debt, operational risk, etc.: 7%
- Accounts payable savings: 6%
- Reduced capital reserve requirements (BASEL III, Solvency II, and others): 3%

Base: 147 professionals with knowledge of business intelligence in their organizations (multiple responses accepted)
Note: “Don’t know,” “Other,” and “We base our business case strictly on intangible benefits” not shown. Source: Forrester’s Q4 2016 Global Business Intelligence Business Case Online Survey
*E.g., the value of oil and gas reservoirs is calculated based on the confidence level of the underlying estimate of the reservoir size and accessibility.
“We are drowning in data and starving for insight.”
— Global Bank

The quote >10 years old and we still hear about it from most of our clients
46% of organizations still don’t realize quantitative BI/analytics ROI
49% of organizations still take one or more years to realize payback on their BI/analytics investments.

“What was/will be the estimated payback time period on your BI investment?”

- Less than six months: 7%
- Six to 11 months: 11%
- 12 to 23 months: 18%
- Two to three years: 16%
- Three or more years: 15%

Base: 136 professionals with knowledge of business intelligence in their organizations
Note: “Don’t know” and “Other” responses not shown.
Source: Forrester's Q4 2016 Global Business Intelligence Business Case Online Survey
Business and technology pros are not in complete alignment

TECHNOLOGY
› Single BI platform
› Streamlined data architecture
› Centralized support
› Single version of the truth

BUSINESS
› I just want to get my job done
› Single version of the truth is not my top priority
› Good enough but timely data/info is good enough for me
While the number of companies storing >100Tb of data almost doubled in 2017...

Source: Forrester’s Business Technographics® Global Data And Analytics Survey, 2017
...We only get insights from a subset of ALL data available

Structured data

Unstructured data

Source: anecdotal evidence
Majority of analytical apps are still being built using spreadsheets

- 66% report >50% of BI content in spreadsheets
- 15% report >80%

Source: Forrester’s Business Technographics® Global Data And Analytics Survey, 2017
We have entered the Age of the Customer
Business agility is a key success factor in the age of the customer

![Diagram showing Business Agility Dimensions]

Source: Forrester’s “The 10 Dimensions Of Business Agility” report
Agile enterprises are more likely to be industry leaders

Source: Forrester’s “The 10 Dimensions Of Business Agility” report
Data-aware: Data-only approach failed to capture customers' true mindset and preferences.

Insights-driven: The company has a research department that combines quantitative and qualitative methods to infuse customer insight across the organization. Etsy boasts a five-year average annual revenue growth of 43%.

Newcomers

- Hotels.com
  Make it about customer obsessed culture.

- STITCH FIX™
  Build systems of insight to drive experiences and processes.

- TESLA
  Invest in insights platforms to bring multidisciplinary teams together.

- Etsy
  Blend quantitative and qualitative insights then implement them across your organization.

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Data-aware: Data-only approach failed to capture customers' true mindset and preferences.

Insights-driven: Tapped into customer journeys through a partnership with TripAdvisor. Leveraged customer's travel planning activity and delivered more relevant, real time offers.
Four components of Agile BI
Artificial intelligence (AI) enabled BI tools will take enterprises one step closer to becoming insights-driven

Don’t get left behind: 51% already invested in AI in 2017, up 25% from 2016
What is AI?
AI is a combination of multiple technologies
Seven key gaps in current generation BI technology which AI can address

1. BI tools are still somewhat hard to use for non professionals
2. Predictive analytics is done offline, by specialists
3. Sometime a picture is not worth a thousand words
4. Getting insights is a slow, unreliable process
5. Insights are often not actionable
6. BI tools do not analyse unstructured data
7. You don’t know what you don’t know
Six AI based approaches to close gaps in BI tools

1. Leverage BI for data beyond data warehouse
2. Automate data preparation tasks
3. Interact with computers in a more natural, cognitive UI
4. Democratize advanced analytics, aka point-and-click machine learning
5. Integrate text mining and analytics into BI
6. Deploy guided, prescriptive, actionable analytics
A retailer uses AI to predict the next 30 days of sales SKU volume with 90% accuracy. It allows the AI system to purchase over 200,000 items per month with no human intervention, reducing surplus inventory by 20% and product returns by 2 million per year.

A telecom uses AI to infer social and professional relationships based on social media posts, and POS transactions. Once AI determines a friend or a colleague relationship it initiates an offer to a customer based on his friend/colleague behavior, resulting in 15% lift.
### AI-enabled BI features are key BI platform differentiators

<table>
<thead>
<tr>
<th>Feature</th>
<th>Expertise</th>
<th>Strategy</th>
<th>Focus on BI</th>
<th>Focus on SaaS/cloud</th>
<th>R&amp;D and IP creation</th>
<th>Partners</th>
<th>Market Presence</th>
<th>Revenue</th>
<th>Customer logos</th>
<th>Presence in all global regions</th>
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<tbody>
<tr>
<td>Current Offering</td>
<td>50%</td>
<td>3.16</td>
<td>2.23</td>
<td>1.90</td>
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<td>Actionable and suggestive BI</td>
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<td>Advanced analytics</td>
<td>14%</td>
<td>3.00</td>
<td>1.00</td>
<td>1.00</td>
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<td>Architecture</td>
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<td>Cloud/hybrid architecture</td>
<td>4%</td>
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<td>Cross-product integration</td>
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<td>Data curation</td>
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<td>Data visualization/geospatial</td>
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<tr>
<td>Ease of use</td>
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<tr>
<td>Integration with other tools and applications</td>
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<td>Full BI stack</td>
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<td>Mobile</td>
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<td>NLG and NLP</td>
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<td>Text mining</td>
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<tr>
<td>Upgrades</td>
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</tbody>
</table>

All scores are on a scale of 0 (weak) to 5 (strong).
Recommendation: five best practices to become an insights-driven business

<table>
<thead>
<tr>
<th>Insight-driven principle</th>
<th>Data-aware firms . . .</th>
<th>Insights-driven firms . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating models are based on insights</td>
<td>Support business decisions with data.</td>
<td>Build businesses that create specific competitive advantages through insight.</td>
</tr>
<tr>
<td>Insights must be actionable</td>
<td>Know they have a lot of data but struggle to turn it into action.</td>
<td>Harness actionable insights from analytics, employees, and customers and then implement them in software to drive action.</td>
</tr>
<tr>
<td>Learning and experimenting are continuous</td>
<td>Collect data slowly and use it in long-cycle business analytics decision making.</td>
<td>Purposefully measure the impact of applied insights, and then optimize in closed-loop, agile cycles of experimentation and learning.</td>
</tr>
<tr>
<td>Investments in insights capabilities are strategic</td>
<td>Build data lakes and platforms and invest in self-service data tools in the hope that good things will result.</td>
<td>Invest to achieve businesses’ strategic objectives, which always include competitive advantage through insight.</td>
</tr>
<tr>
<td>Insight collection and implementation is a team sport</td>
<td>Centralize reporting and advanced analytics functions to drive efficiency.</td>
<td>Build agile, cross-functional insights teams embedded in their businesses and accountable for clear, insights-driven outcomes.</td>
</tr>
</tbody>
</table>

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Thank you