

Quantify The Tangible Business Value of BI.

A Forrester Report from Yellowfin



Quantify The Tangible Business Value Of BI

Business Case: The Business Intelligence Playbook

by Boris Evelson and Martha Bennett

March 1, 2016

Why Read This Report

The business case report of the business intelligence (BI) playbook guides application development and delivery (AD&D) professionals working on BI initiatives through the maze of BI business case categories and typical BI ROI components, and it identifies areas where quick wins are possible.

Forrester reviews and updates the BI playbook reports periodically for continued relevance and accuracy; we revised this edition to factor in the latest findings from Forrester's Q4 2015 Global Business Intelligence Business Case Online Survey.

Key Takeaways

Apply “Start Small, Think Big” Wisdom To Sequencing Your BI Business Cases

BI business cases involve many complexities, such as calculating direct versus indirect costs and proving benefit causality. Start with simpler cases, such as cost savings to a single department. Once you have enough experience and expertise, proceed to more complex enterprisewide business cases based on top- and bottom-line benefits.

Use The TEI Process To Provide The Discipline For Success

BI projects must not only be technically sound; they must also stand up to the question of “What will we get for our money?” Forrester's Total Economic Impact™ (TEI) approach helps organizations make better technology expenditure decisions by quantifying, communicating, and realizing the complete value of technology investments.

Apply Recommendations From This Research To Big Data Projects

Even though the debate over BI versus analytics versus big data is best left for other research, this report's recommendations are equally applicable to analytics and big data initiatives. True, these projects may use different tools and apply different sequences of events and priorities, but ultimately they all transform data to information.

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March 1, 2016

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Forrester surveyed 158 readers of Forrester BI-related reports.

Related Research Documents

[Put The Business Back In Your Data Management Business Case](#)

[The Total Economic Impact™ Methodology: A Foundational Framework For Investment Decisions](#)

[Treat Information As A Strategic Asset](#)

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Don't Just Jump Into Creating A Hefty Enterprisewide BI Business Case

Business intelligence and its next iteration, systems of insight (SOI), have moved to the top of AD&D pros' agendas for enterprise software adoption. Investment in BI tools and applications can have a number of drivers, both external (such as regulatory requirements or technology obsolescence) and internal (such as the desire to improve processes or speed up decision-making). However, putting together a BI business case is not always a straightforward process. Before embarking on a BI business case endeavor, consider that:

- › **You may not actually need a business case.** Determining whether a BI business case is necessary includes three main considerations. Is it an investment that the organization *must* make to stay in business, *should* consider because other investments are changing the organization's IT landscape, or *wants* to make because of expected business benefits?
- › **A business sponsor does not obviate the need for a business case.** It may be tempting to conclude that you can skip making a business case for BI whenever there is a strong push for investment from the business side, in particular when budget holders are prepared to commit money. Resist this impulse whenever possible: The resulting project will likely suffer from a lack of focus, and recriminations are likely to follow sooner or later.
- › **A staged approach to developing and building BI business cases usually works best.** Focus first on "quick win" projects — projects that aren't complex and whose benefits you can easily articulate and measure. Once you successfully complete these practice runs and win credibility with your key business stakeholders, move on to more complex business cases, such as those involving top- or bottom-line benefits (see Figure 1).

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FIGURE 1 Scenarios For Making The BI Business Case

	Long-term enterprise value	Complexity of benefits case: BI* only	Complexity of benefits case: BI plus other EIM† components
Cost savings	Low	Low	Low to medium
Top- and bottom-line benefits	Medium	Medium	Medium to high
Higher asset value	Medium to high	Medium to high	Medium to high
Enterprise performance improvement	High	High	Very high
BI as a profit center	Medium to high	Low	Medium

*Business intelligence reporting and analytics

†Enterprise information management: business intelligence (BI), master data management (MDM), data warehouse (DW), and extract, transform, load (ETL).

Don't Develop A BI Business Case Unless You Have To

The catalyst for BI investment scenarios that don't require a business case tends to be an event external to the organization or a development outside of a department or business unit. The most typical scenarios are:

- › **Compliance with regulations, legislation, or audit requirements.** Compliance with government and industry regulations is not negotiable — it's a requirement for remaining in business.¹ And just as email is the communication and collaboration lifeblood of any modern organization, BI is an integral, inseparable part of compliance and risk management. Collecting data and using BI infrastructure to turn it into information that supports regulatory reporting is a constant obligation and a struggle that organizations of all sizes, in all markets, and in all geographies must endure. The degree may vary, but the requirement remains.
- › **Response to a technology ultimatum.** This scenario can occur in a variety of permutations. For instance, a BI vendor may announce a deadline by which it will end support for the BI platform version you're using or sunset an application in favor of another product (notable recent examples include Oracle Hyperion Interactive Reporter and SAP NetWeaver BI tools, like BEx and others). Firms may also face a different type of technology ultimatum around infrastructure or hardware refreshes when their BI application version no longer runs — or is no longer certified to run — on their current installed database or servers.
- › **Dependence on other enterprise initiatives.** Technology choices from line-of-business (LOB) or cross-enterprise initiatives will require you to re-evaluate an incumbent BI platform. This frequently happens with global rollouts of ERP and CRM platforms, which come tightly embedded with BI packages.² Also, as more and more enterprises move their ERP, CRM, collaboration, office, and

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other applications to the cloud, many technology management pros will face pressure to move their BI platforms to the cloud, either fully or partially via hybrid solutions. Depending on the circumstances, a move to new software may be inevitable, and trying to construct a business case is an exercise in futility. If migration to different BI software is not a foregone conclusion, a basic cost/benefit analysis is a sensible next step, as it will quickly show whether it makes sense to stick with the existing or take the plunge with the new.

Take A Deep Breath Before Proceeding; Instead, Organize And Prioritize

When your organization must make technology investments, you may see an opportunity to introduce more wide-ranging, strategic BI initiatives. Nevertheless, you should:

- › **Resist the temptation to widen the scope too much.** To maximize the chances of project success, you must maintain a laser-sharp focus on the “must-make” investment, regardless of its catalyst.
- › **Seize the opportunity only if you’re truly ready.** The only exception to the above rule is if your organization is sufficiently mature to embark upon building a strategic business case, involving tangible benefits, while also making the technology and process choices necessary to deal with, for example, compliance requirements.

Follow A Staged (From Simple To Complex) Approach To Show Tangible Benefits

As enterprise BI deployments proliferate and organizations gain more experience, Forrester sees fewer BI business cases rely on intangible benefits like “improved customer satisfaction” or “shorter decision-making cycles.” Indeed, only 11% to 16% of the respondents to our Q4 2015 Global Business Intelligence Business Case Online Survey still build BI business cases based on intangible benefits, compared to 20% in 2013 (but this is holding steady compared to 2014’s results of 12% to 14%). Intangible benefits are great, but it’s often hard to sell BI initiatives without something more concrete. This is why we recommend the following staged approach:

1. Follow a battle-proven ROI methodology like Forrester’s TEI.
2. Organize multiple BI business cases into distinct categories (cost savings versus top- and bottom-line benefits).
3. Prioritize these business cases according to the degree of complexity and difficulty.
4. Get your feet wet with the simplest cases (such as automating a manual process).
5. Accumulate the lessons learned.
6. Proceed to more difficult cases involving top- and bottom-line benefits.

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Use TEI To Improve The Odds Of Success

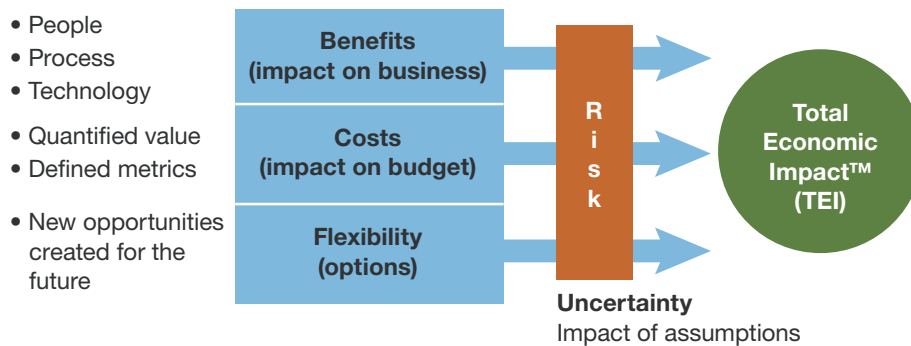
Even though only 16% of our survey respondents report using an established third-party business case methodology, why reinvent the wheel?³ Rather than agonizing and arguing over specific line items to include and exclude from your scenario, use Forrester's Total Economic Impact™ (TEI) as the framework for your BI business cases.⁴ The product and feature differences between the leading BI software providers have diminished as the vendors have built, or acquired, functionalities to fill out their product suites. Therefore, be less concerned about which vendor is “best” and instead devote your attention to how the chosen solution will deliver business value. BI projects must not only be technically sound; they must also stand up to the question, “What will we get for our money?”

Forrester's TEI approach helps organizations make better technology expenditure decisions by quantifying, communicating, and realizing the complete value of technology investments. Distill the business case for a BI project into a single sentence:

“We will be doing [A] to make [B] better, as measured by [C], which is worth \$[X].”

You must enumerate four key dimensions of BI value: benefits, costs, flexibility, and risk (see Figure 2 and see Figure 3).

FIGURE 2 Forrester's Total Economic Impact™ (TEI) Value Delivery Process



Source: “The Total Economic Impact™ Methodology: A Foundational Framework For Investment Decisions”
Forrester report

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FIGURE 3 BI-Specific Total Economic Impact™ (TEI) Components

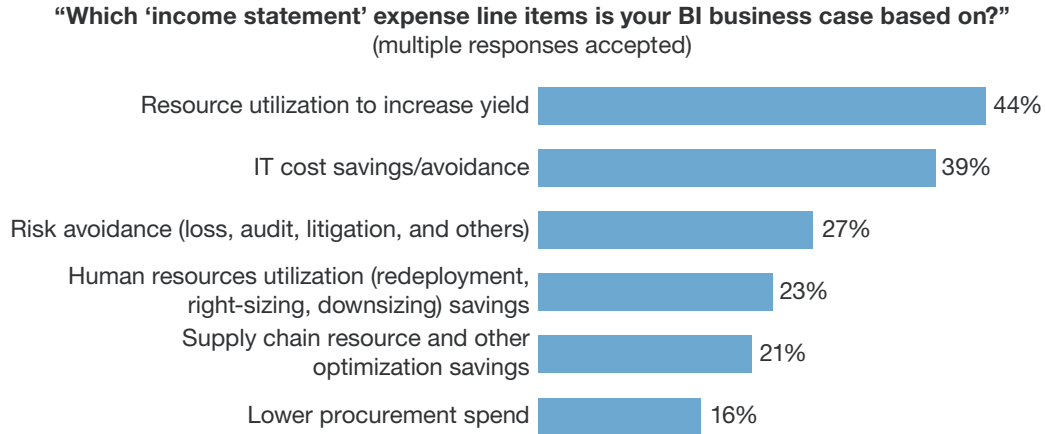
Benefits	Costs	Risks	Flexibilities
Cost savings: <ul style="list-style-type: none"> Automating manual processes Business intelligence (BI) instance and platform consolidation 	Hardware Software Professional services Change management costs Direct versus indirect costs	Project Vendor Supporting causality of benefits Not adopting agile approaches	Opportunity to expand to: <ul style="list-style-type: none"> New business domains and functions New geographies More users Opportunities to leverage: <ul style="list-style-type: none"> Platforms/tools in other projects Human resources expertise in other projects
Top- and bottom-line benefits Increased value of assets Decreased capital requirements BI as a profit center	Subscriptions: <ul style="list-style-type: none"> Software-as-a-service Data-as-a-service 		

Apply “Start Small, Think Big” Wisdom To Defining BI Benefits

Start with the simplest BI business cases based mostly on resource utilization (to increase yield), risk avoidance, human resources utilization, or any other business value with the goal of improving profitability (see Figure 4). Why? Cost-savings/cost-avoidance business cases are easier to build and support, as they carry more tangible and quantifiable benefits such as cost reductions and productivity gains. While BI project sponsors can and should scrutinize the real dollar value of intangible benefits, such as improved customer satisfaction, definitive cost savings are more difficult to dismiss.

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FIGURE 4 Typical Cost-Savings/Cost-Avoidance BI Business Cases Across All Business Domains

Base: 140 professionals with knowledge of business intelligence in their organizations

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

Source: Forrester’s Q4 2015 Global Business Intelligence Business Case Online Survey

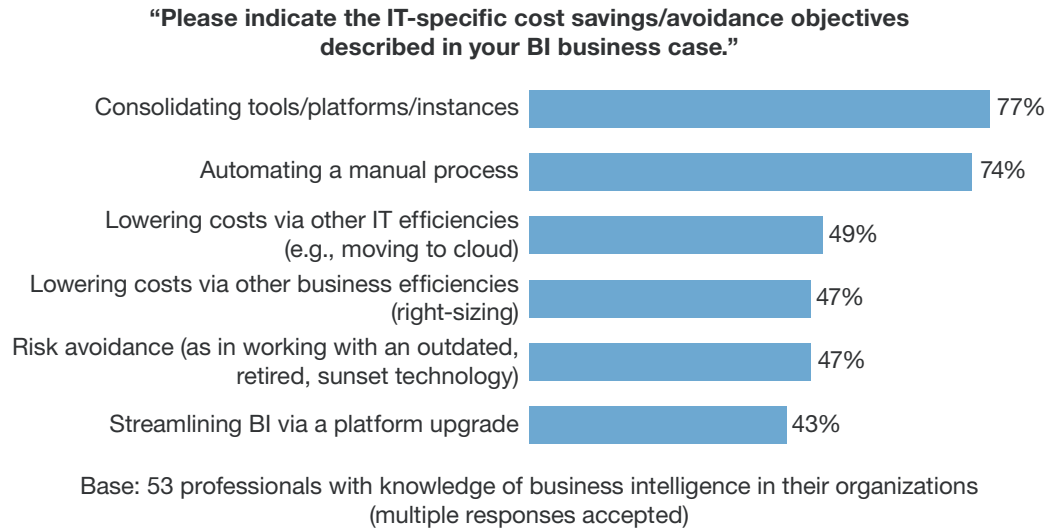
Start With A Business Case For Automating Manual Processes

The majority of survey respondents build BI business cases on labor and other cost-savings/cost-avoidance scenarios (see Figure 5). A typical hypothetical goes like this:

- › **Define the current manual process.** Company A’s monthly financial consolidation and reporting process takes three full-time equivalents (FTEs) five business days per month. This includes two days to collect, integrate, and consolidate income statements and balance sheets from several LOBs and subsidiaries and three days to prepare and reconcile monthly statements. In this mostly manual process, LOB data is transmitted by email and consolidated and reported on using spreadsheets.
- › **Propose automation steps.** This business case recommends replacing the manual process with 1) an automated extract, transform, load (ETL) process to collect, standardize, and consolidate data from spreadsheets; 2) a financial reporting data mart to store and aggregate LOB data; and 3) automated report generation tools and processes.
- › **Quantify and reap the benefits.** This solution enables Company A to reduce the five-day monthly cycle to two days and requires only one FTE to run the new process. A 15 person-day effort is now reduced to two person-days; two FTEs can be redeployed or eliminated; and one FTE can take on additional duties for three days per month.

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FIGURE 5 Business Cases Based Specifically On BI Business Technology Costs/Resource Optimization

Note: “Don’t know” and “Other” responses not shown.

Source: Forrester’s Q4 2015 Global Business Intelligence Business Case Online Survey

Benefit (Intelligently) From BI Instance And Vendor Consolidation

Many large enterprises have built, improved, and expanded their BI infrastructure and applications for close to 20 years. These large enterprises are often global, have integrated other businesses via multiple mergers and acquisitions, and have experienced years of varying requirements and priorities across LOBs. The resulting BI environments are filled with numerous redundant and overlapping BI applications from multiple vendors, and frequently they also run different versions of the same software. BI pros within such organizations should target their business case at streamlining these BI environments.⁵ To hit the ground running:

- › **Consolidate multiple instances of the same BI product.** Many firms support multiple implementations of the same BI tool and allow each LOB, functional group, or geographic region to manage its own siloed BI instances and negotiate separate contracts with the same vendor. Consolidate the physical implementation of these BI products, the contracts, and the organizational structures. Work with your procurement teams to renegotiate the terms of disparate contracts into a single enterprise contract; this can often lead to substantial discounts based on a larger user base and number of total licenses. Consider adopting a shared-service IT model that pools your development resources into a center of excellence to support all users across the organization.⁶
- › **Select a strategic BI platform and start consolidating applications.** If a single vendor can address most of your BI business requirements, make sure that you’re organizationally and culturally ready to standardize on a single BI platform. Selecting a single BI platform is not an

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easy task for many reasons; for example, you have to make significant investments not just in software but also in custom application development, training, and change management. Forrester recommends a methodical approach: First, align BI technical architecture requirements with other enterprise software standards like ERP and middleware; then map these functional requirements against each vendor's capabilities using our Forrester Wave™ methodology.⁷

- › **Supplement the enterprise BI platform with BI tools to address specific use cases.** A single BI platform may not be practical in a global enterprise. BI pros working in complex organizations must create a decision tree to determine which BI tools are best suited to meet specific use cases and requirements.⁸ Forrester helps multiple large organizations create a BI decision tree that provides guidance on which BI tools to eliminate completely and which to use under specific circumstances. Ensure that your underlying data management infrastructure is centralized (at least virtually) and scalable. Move all data through the same logical pipe of integration and transformation logic, and centrally define and govern your key business metrics. Overlaying several special-purpose BI tools on top of a trusted data management infrastructure can put you far ahead of many of your peers and competitors.⁹

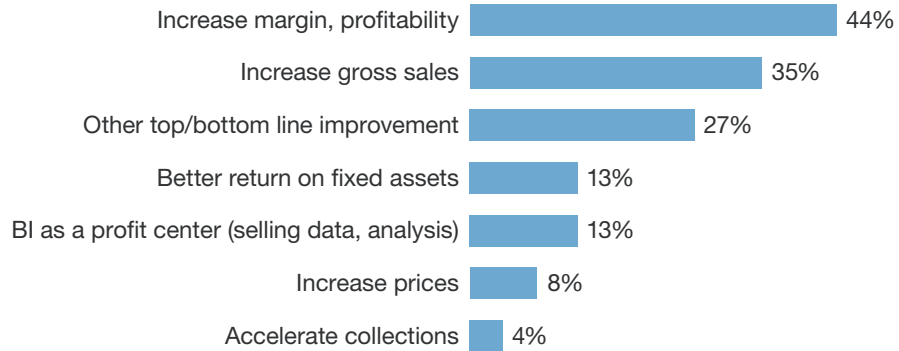
Graduate To BI Business Cases Based On Top- And Bottom-Line Benefits

When and if you feel comfortable that you've successfully built and supported cost-savings/cost-avoidance business cases and have established your credibility with business owners, you're ready to proceed to the next level. However, prepare to defend your business case against reverse causality and the impact of other variables. When well prepared, many of our survey respondents have succeeded with basing their tangible business cases on:

- › **Measurable top-and bottom-line improvements.** Some of the top scenarios in this category include increased margin and profitability, increased gross sales, and better return on fixed assets, and a relative newcomer: BI as a profit center (see Figure 6). For example, razor-sharp customer segmentation — based not just on simple demographics but also on detailed psychographics, prior buying behavior, and enriching analysis with social media data — may provide better campaign responses and increase cross-sell/upsell ratios.¹⁰ Another important tangible benefit of an evolved customer segmentation strategy is consistent growth in customer equity, AKA customer lifetime value. Basing differentiated customer treatments on this metric helps you connect the dots between marketing and customer programs and top- and bottom-line financial performance.
- › **Balance sheet items.** The top scenarios in this category include improved ratio of revenue to marketing expenditure, better working capital utilization, information-based assets (e.g., goodwill) and higher asset value based on improved insights (see Figure 7). For example, the value of oil and gas reservoirs is often calculated based on the confidence level of the underlying estimations of reservoir size and accessibility. Other scenarios include value of intellectual property, increasing ratios of earnings to capital employed; reducing inventory and inventory working capital based on inventory or supply chain optimization; and reducing capital reserve requirements based on dubious debt or operational risk.

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FIGURE 6 Income-Statement-Based Top- And Bottom-Line Tangible BI Benefits**“Which ‘income statement’ revenue line items is your BI business case based on?”**

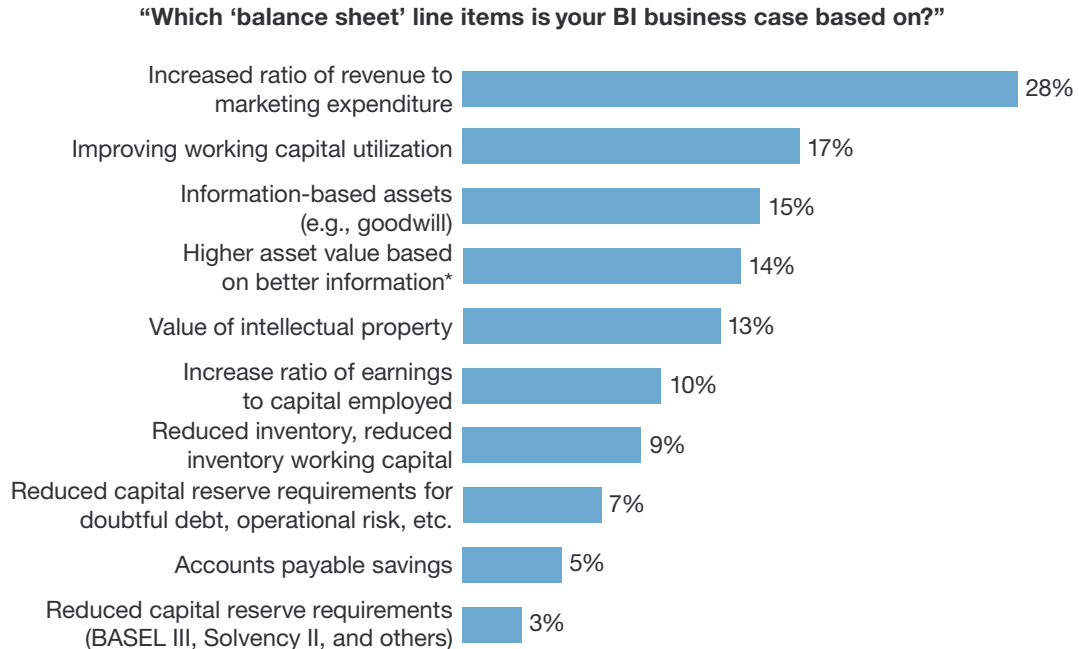
Base: 133 professionals with knowledge of business intelligence in their organizations
(multiple responses accepted)

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

Source: Forrester’s Q4 2015 Global Business Intelligence Business Case Online Survey

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FIGURE 7 Balance-Sheet-Based Tangible BI Benefits

Base: 128 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 2015 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.

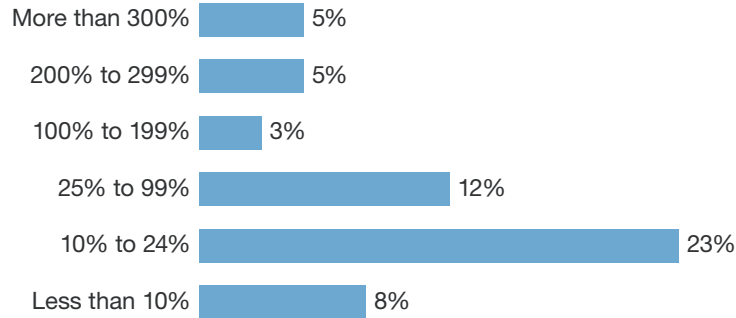
Significant ROI Is Possible, But BI Business Case Challenges Are Sticky

The good news is that those who follow many of the best practices described in this report do see significant return on investment (see Figure 8). While the results do not support a real pattern — which makes sense, given that each BI business case, just like each BI use case, is different — 48% of respondents report an ROI of 10% or more, and 35% achieve that ROI within two years (see Figure 9). Unfortunately, this is a drop from 2014, when 61% respondents reported an ROI of 10% or more, and 48% of them reported achieving the ROI within two years. Anecdotal evidence points to a few reasons behind the re-emergence of BI business case challenges: higher visibility and scrutiny of BI initiatives, increased data volumes and complexity, and ongoing cultural shift of BI roles and responsibilities between business and IT professionals.

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FIGURE 8 Return On Business Intelligence Investments

“Based on the conditions you indicated earlier in this survey, what is the estimated or actual ROI on your BI investment?”



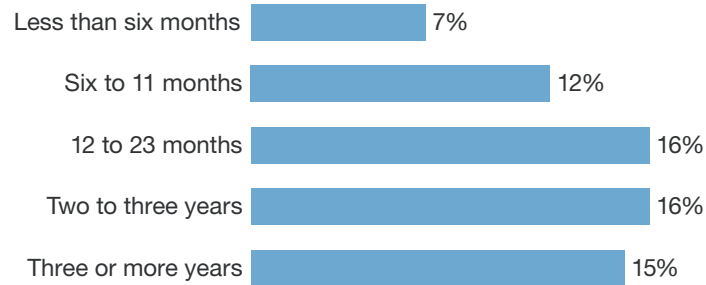
Base: 111 professionals with knowledge of business intelligence in their organizations

Note: “Don’t know” and “Other” responses not shown.

Source: Forrester’s Q4 2015 Global Business Intelligence Business Case Online Survey

FIGURE 9 Payback Time Period On Business Intelligence Investments

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



Base: 111 professionals with knowledge of business intelligence in their organizations

Note: “Don’t know” and “Other” responses not shown.

Source: Forrester’s Q4 2015 Global Business Intelligence Business Case Online Survey

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Consider BI As A Profit Center

Got data? Why not turn it into a revenue stream? If you think this is a real opportunity for your organization, proceed as follows:

- › **Learn from the pros.** Companies such as financial data providers package their financial data into industry- and domain-specific analytical offerings and sell it to their partners, such as suppliers and distributors. For example, some of the top players — Acxiom, BDNA, Dun & Bradstreet, Experian Information Solutions, IMS Health, LexisNexis, Thomson Reuters, TomTom, and Visa — long ago figured out how to monetize their data.¹¹ Businesses can build an eCommerce infrastructure to deliver these data services on their own or via established data provider mechanisms such as the Microsoft Windows Azure Marketplace.
- › **Find your own unique opportunity to profit from BI.** Some companies, especially retailers with mountains of point-of-sale (POS) data, are experimenting with selling analytical applications to their partners, such as manufacturers, suppliers, wholesalers, and distributors. These retailers package their POS data at a certain level of aggregation to protect partner confidentiality; create analytical POS data warehouses; and sell access to the POS analytics to their partners for a subscription fee. It's a win-win scenario: Partners benefit by learning how all products (theirs and their competitors') in a particular product line are performing, and the retailer gets an additional revenue stream. You should consider such an endeavor and build a business case for it only once your internal BI house is in order, so that you don't risk exposing your dirty data, unstable architecture, or runaway costs to the outside world.
- › **Leverage digital disruption.** Many enterprises find their existing markets and business models threatened by newcomers using new technologies and communication capabilities.¹² BI has a key defensive role to play here. This could be by exploiting opportunities that turn company data into revenue streams, as outlined above. But it needn't stop there: For example, you could build entirely new product or service portfolios based on timely extraction and analysis of the data you have, whether it's generated by systems, humans, or machines. Don't approach this with conventional ROI metrics; instead, adopt return on disruption. Invest as little as possible and focus on quick, low-cost initiatives that have the greatest potential.

Correlate BI Investments With Business Performance

It shouldn't come as a surprise that starting an enterprisewide strategic BI initiative from scratch or rearchitecting and modernizing one is a multiyear, multimillion-dollar effort. When building an "über-business case" for BI, you will also inevitably get pushback from business execs. They will ask, "If I invest X millions of dollars to acquire a competitor, or develop a new product, the ROI on that initiative is very clear — so why should I invest money in BI if the benefits are mostly long-term and intangible?" The true value of enterprise BI, as just one of the many factors contributing to company success, can only be shown over the long term. Until corporate boards start restructuring incentive compensations to reward long-term company growth over short-term boosts in revenue or stock price, enterprisewide BI business cases will be challenging.¹³ But they are not impossible. Proceed cautiously by:

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- › **Correlating BI maturity with enterprise performance.** As you measure your BI maturity periodically — one of our top recommendations! — track potential correlations between your BI maturity and other corporate performance metrics, such as revenue growth, profit margins, stock price, and industry ranking.¹⁴ If you do find such a correlation within your enterprise, you've hit a gold mine — your BI project budgets are safe for the foreseeable future. If you don't, reassess your BI strategy to find out if business users are looking at the right metrics and using BI applications in the manner originally intended.
- › **Learning from leaders who successfully correlated BI with tangible business benefits.** Cause-and-effect relationships are hard to prove, but a recent Forrester survey found a correlation between BI spending and company growth: Global technology decision-makers of top-performing companies (those with revenue growth of more than 15% year over year) reported spending on average 33% more of their technology budget on BI-related projects than their slower-growing peers.¹⁵ Further, independent research has indeed established a cause-and-effect relationship, finding that firms that adopt data-driven decision-making have output and productivity that is 5% to 6% higher than what would be expected given their other investments and IT usage.¹⁶

Dissect Your Initial And Ongoing Deployment Costs

Use the TEI methodology to scrutinize critical BI costs: the capital costs of hardware and software, deployment and integration costs, ongoing subscription fees and/or maintenance costs of the BI technology, and administrative expenses for managing new BI assets. The timing of project costs can significantly differ for traditional on-premises solutions compared with newer so-called on-demand solutions that use subscription pricing, where costs are billed on a monthly basis. Forrester recommends that AD&D pros:

- › **Draw lines between direct and indirect costs.** Drawing boundaries between direct versus indirect BI components is highly subjective. Some direct cost components of a BI business case are clear, such as software licenses, data marts, reporting infrastructure, and analytical applications such as customer, human resources, or risk analytics. But what about data quality and master data management (MDM) — critical components of a successful BI implementation — and operational processes like order management and customer service? In another example, a portal supports the management, organization, and delivery of BI reports but is so much more than a window into BI applications. Draw a clear line around where pure BI components start and stop, and get stakeholders' agreement on these lines of demarcation (see Figure 10).
- › **Dig into hardware, software, and subscription costs.** These costs are often the most visible to decision-makers but are only the tip of the iceberg. Enterprises must ask the following: What is the initial purchase price for hardware and software licenses? Are there ongoing subscription charges for using the application? What storage fees will surface as usage grows? Are there specific license fees for individual user types (e.g., mobile)? What hardware is needed? What are the costs for upgrades? What discounts are available from the vendor, under what conditions?

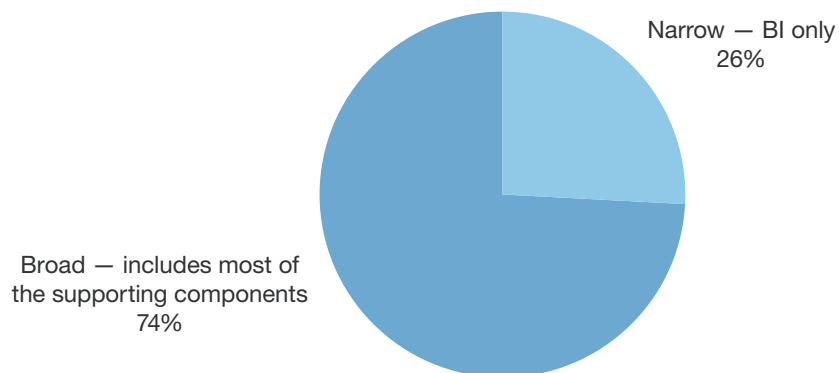
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- › **Dissect deployment costs.** The biggest costs associated with BI — or any software-centric business improvement initiative — are often the expenditures for selecting, configuring, and deploying the new technology. Ask yourself: What are the costs for internal and external staff to deploy the software? How many integration points require consideration? Can integration work be staggered or delayed? What are the costs to maintain and support users during the initial evaluation period? How do you account for the out-of-pocket costs of training users to use the system? How do you account for the lost employee productivity associated with the training time required? How long will it be before users are fully proficient and fully productive using the new system?
- › **Account for the total long-term cost of ownership.** There are often steep upfront costs associated with deploying on-premises perpetual-license software, but don't overlook the ongoing software maintenance costs. What ongoing application maintenance and user help desk support will be required? Is third-party maintenance a viable alternative? How will maintenance costs grow over time?
- › **Avoid getting blindsided by administrative and infrastructure costs.** While cloud-based deployments aim to reduce these challenges and concerns, implementing technologies and solutions into an existing on-premises IT infrastructure can spawn hidden costs that you need to discover and account for. You should ask: What's the impact of deploying new BI capabilities on the costs of our enterprisewide IT infrastructure? Do hidden effects lie outside the primary user group sponsoring the project? What impact will the new project have on the budget and resources of these other groups?

FIGURE 10 Most BI Business Cases Are Based On A Broad Definition Of Business Intelligence

“Is this BI business case BI specific (e.g., reporting, analytics, dashboards, etc.) or does it include other supporting components (e.g., data warehousing, ETL, data quality, master data management, portals, etc.)?”



Base: 108 professionals with knowledge of business intelligence in their organizations

Note: “Don't know” and “Other” responses have been filtered out.

Source: Forrester's Q4 2015 Global Business Intelligence Business Case Online Survey

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Future Flexibility: Do You Create Or Jeopardize?

Flexibility is the value of the option to take a second or third action in the future. BI has three types of flexibility: 1) the option to add additional functionality for current users, 2) the ability to link users across departments, and 3) the potential to include users in new geographies. AD&D pros should:

- › **Buy plain vanilla now; add new flavors later.** The BI market has matured, and vendors have developed vertical-specific functionality, so the need to customize software for highly specialized scenarios has declined. To mitigate risk, carefully define a few high-value process changes and limit your first deployment to capitalizing on those opportunities. Then roll out new functionalities gradually. Ask: What's the smallest number of business process changes that will give us the largest portion of the benefits? What's a logical sequence for rolling out additional capabilities over time? At what pace can users effectively absorb new functionalities?
- › **Connect across the enterprise.** Focus on one functional area at time — with the vision to achieve integration across departmental silos at a future date. Ask: Where should we start in the company? Which end-to-end processes, such as customer profitability, should we improve to raise our margins? How can we integrate customer data from diverse departments and make it accessible across the enterprise?
- › **Enlarge the geographic footprint.** Companies find the most effective approach is to implement changes in a specific business unit or geographic region first and expand to new locations once the startup lessons have been absorbed. When considering BI vendors, ask: How scalable is the application? Which benchmarks attest to scalability? What multilingual capability is built into the application? How does the solution handle foreign currencies, regulations, and privacy requirements?

Catalog The Risks And Uncertainties

Managing project risk is a tall order — that's one of the reasons organizations have learned to pursue their grand vision in smaller, incremental steps. Our TEI approach shines a spotlight on three of the most important risks: project size, vendor risk, and user adoption.

- › **Implement projects in manageable chunks.** Predicted cost and benefit estimates tend to be less accurate for larger projects than for smaller ones. The larger the project, the greater the risk range. Consider the following questions: Have you defined a road map for how you will change customer processes in a sequential manner? Can you let new BI functionalities prove their worth in a series of carefully defined deployments? Will you adhere to strong project management disciplines?
- › **Beware of vendor risk.** At some point, you may need to replace a vendor of a product or technology due to vendor failure, which drives up costs. Ask the following: What is the vendor's installed base of customers? How many live users does it have? How many customers has it acquired in the past year? Does it have the profitability levels and balance sheet strength to sustain participation in the market?

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- › **Don't bank on quick user adoption.** If users of a new application are not properly prepared and trained, they won't accept new ways of working. Call vendor customer references and probe them to understand potential pitfalls and lessons learned. Ask: What business processes changed? How did jobs change? Did the new application meet the cultural and behavioral norms of the users? What skill gaps needed to be filled? How were changes communicated to users?

Three Pitfalls To Avoid In BI Initiatives

BI-specific projects carry additional risk. Avoid the following three typical pitfalls:

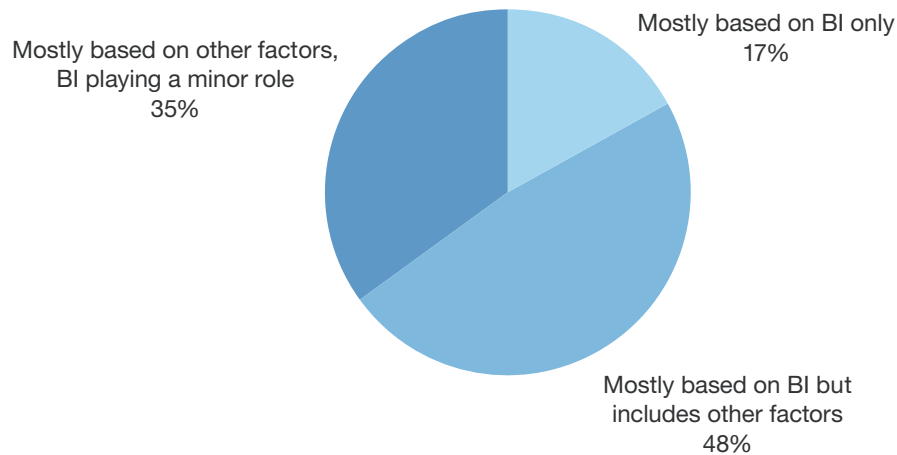
- › **Identifying the infinite variables that may contribute to business benefit is paralyzing.** Many IT or business BI project owners face challenges when they claim that a particular BI initiative is the major contributing factor to increased revenues or reduced customer churn. For example, sales execs at the same company may claim that their improved sales techniques and better-trained sales force generated those achievements. Or economists may point to a direct correlation of these successes with external economic factors (see Figure 11). Unless you construct a highly comprehensive model taking into account hundreds of variables — which is generally impractical and a huge overkill — proving a direct and statistically supported correlation between improved BI and a business benefit is tricky.
- › **Scoping, requirements, and usage patterns are difficult to estimate up front.** Unlike for many other enterprise applications, concise BI requirements only start pouring in after the initial prototype. Agile methodologies are much better suited to BI deployments, as they reflect that it is not possible to be precise up front when it comes to defining requirements and estimating costs.¹⁷ Instead, they focus on where the real value is delivered: providing applications that work for the business. Agile approaches can do wonders for BI project and application success — for example: 1) face-to-face business participation instead of working with technology liaisons; 2) personal ad hoc interactions in place of defined processes, and real-time prototypes instead of specifications; and 3) reacting to change rather than planning in advance.
- › **Correlation does not necessarily prove cause and effect.** An experienced BI budget holder will surely ask you whether the better business performance happened because of the more comprehensive, more advanced BI implementation — or because of other reasons that enabled the business to afford higher investments in BI. Unless you're prepared to support your cause-and-effect argument with a rigor akin to double-blind pharmaceutical drug trials, stick with just a correlation.

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FIGURE 11 Benefits From Business Intelligence Compared With Other Factors In BI Business Cases

“Please indicate the percentage of benefits based purely on the new BI environment versus a mix of other factors (e.g., improved economic conditions, new sales tactics, etc.)”



Base: 101 professionals with knowledge of business intelligence in their organizations

Note: “Don’t know” and “Other” responses have been filtered out.

Source: Forrester’s Q4 2015 Global Business Intelligence Business Case Online Survey

Recommendations

Simplify Your BI Business Cases Before You Start

AD&D pros: If you want to join the good company of our survey respondents — 37% of whom had already completed and verified their BI business cases, and 62% who had already completed their BI business cases and reported the same or better results than originally projected — we recommend the following steps:¹⁸

- › **Cut, cut, and cut again before you migrate or upgrade.** A considerable number of Forrester clients have paid for many BI features and objects that they don’t use. And many of them find, after a simple analysis, that multiple reports perform exactly the same function. Before you start building a business case, run usage analytics on your BI environment to see who is using what, when, and how. In some instances, you may choose to just turn off some features and see if anyone screams. Demand that your preferred systems integrator — which you may be considering for migration or upgrade services — perform at least part of such an analysis as part of its presales activity. Your business case will look a lot more attractive after such a simple exercise.

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- › **Focus on what's tangible and measurable.** Don't succumb to the siren song of business execs — including those with budgets — who claim that they simply “must have” a particular capability. Work to bring the requirement to something you can measure, whether it's in terms of cost reduction, cost avoidance, or bottom- or top-line benefit. Execs who understand what really drives their business can also articulate what BI capabilities they need to support their decisions and to measure what they manage.
- › **Use proof-of-concept (POC) projects as an integral part of business case development.** In particular, when it comes to potential investments involving big data technologies or other emerging solutions, a detailed POC is often the only way of establishing whether the investment will deliver value. Provided such exercises must be well-controlled and tightly circumscribed in their scope, they can become the foundation for a powerful business case.
- › **Make sure the right people are involved.** Unless the catalyst for your BI project is technology obsolescence, or pressure on the IT budget due to elevated costs resulting from technology fragmentation or proliferation, IT shouldn't be the sole or primary driver of the project. IT and business execs should always make decisions about BI investments jointly, and the composition of the project team must reflect this. The more directly the business side is involved, the higher the chances of success are for the BI project.
- › **Seek the help of professionals.** While the framework, best practices, and benchmarks described in this research are a great place to start, the fine points at the next few levels of detail can be mindboggling. Don't be shy about seeking the help of the professionals like Forrester Consulting TEI specialists and other leading professional services organizations with broad and deep experience, expertise, and existing collateral for BI business cases.¹⁹

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Gain greater confidence in your decisions by working with Forrester thought leaders to apply our research to your specific business and technology initiatives.

Analyst Inquiry

Ask a question related to our research; a Forrester analyst will help you put it into practice and take the next step. Schedule a 30-minute phone session with the analyst or opt for a response via email.

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Analyst Advisory

Put research into practice with in-depth analysis of your specific business and technology challenges. Engagements include custom advisory calls, strategy days, workshops, speeches, and webinars.

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Supplemental Material

Survey Methodology

Forrester's Q4 2015 Global Business Intelligence Business Case Online Survey was fielded to 158 readers of Forrester BI reports with knowledge of their firms' BI business case. Forrester fielded the survey during October and November 2015. Respondent incentives included a complimentary copy of this report. Exact sample sizes are provided in this report on a question-by-question basis.

This survey used a self-selected group of respondents and is therefore not random. This data is not guaranteed to be representative of the population, and, unless otherwise noted, statistical data is intended to be used for descriptive and not inferential purposes. While nonrandom, the survey is still a valuable tool for understanding where users are today and where the industry is headed.

Companies Interviewed For This Report

Fujitsu	SAP
HCL Technologies	SAS
IBM	Wipro
QlikTech	

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Endnotes

¹ Examples include BCBS 239, Basel III, Dodd-Frank, and FATCA in the banking sector; periodic finance and accounting requirements related to International Financial Reporting Standards (IFRS), generally accepted accounting principles (GAAP), and Sarbanes-Oxley; and the Health Insurance Portability and Accountability Act (HIPAA) in the healthcare industry.

BCBS 239 is a new regulation covering “Principles for effective risk data aggregation and risk reporting”; banks are required to have strategies in place by 2016 to meet these principles. Source: “Basel Committee on Banking Supervision: Principles for effective risk data aggregation and risk reporting,” Bank for International Settlements, January 2013 (<http://www.bis.org/publ/bcbs239.pdf>).

Basel III is a global standard developed by the Basel Committee on Banking Supervision to “strengthen the regulation, supervision, and risk management of the banking sector.” It is voluntary, but many countries require all of their banks to meet Basel III compliance requirements, and to demonstrate that their capital adequacy and liquidity coverage ratios are such that the institution can withstand the kind of shocks encountered during the financial crisis that started in 2008 and 2009. The Dodd-Frank Wall Street Reform and Consumer Protection Act is also a response to the financial crisis; it aims to promote financial stability in the US and protect consumers from abusive practices on the part of the financial services industry. The Foreign Account Tax Compliance Act (FATCA) requires banks in other countries to disclose US customers’ balances, receipts, and withdrawals to the US Internal Revenue Service. All of these regulations bring with them extensive reporting requirements.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) prescribes how healthcare data on an individual is secured and shared between the patient and other entities in the healthcare ecosystem. Source: “H.R.3103 - Health Insurance Portability and Accountability Act of 1996,” Congress.gov, July 31, 1996 (<https://www.congress.gov/bill/104th-congress/house-bill/3103>).

² ERP stands for enterprise resource planning. CRM stands for customer relationship management.

³ Source: Forrester’s Q4 2015 Global Business Intelligence Business Case Online Survey.

⁴ Underlying any investment is the ever-present question of “What am I going to get for my money?” To answer this question, Forrester developed the Total Economic Impact methodology. TEI provides a rigorous cost and benefit analysis framework that explicitly incorporates an evaluation of future technology and business flexibility and associated risk. See the “[The Total Economic Impact™ Methodology: A Foundational Framework For Investment Decisions](#)” Forrester report.

⁵ Business intelligence is a runaway locomotive that keeps picking up speed in terms of enterprise interest, adoption, and spending levels. There are now more than 50 vendors in the segment. Their architectures and user interfaces vary, but they support similar use cases. This report tells AD&D pros working on BI initiatives how to decide which vendors belong on their shortlists. See the “[Vendor Landscape: Forrester’s 10-Step Methodology For Shortlisting BI Vendors](#)” Forrester report.

⁶ Earlier-generation BI support centers — organized along the same lines as tech support centers for all other enterprise software — fall short when it comes to BI’s peculiarities. These unique BI requirements include less reliance on project planning and the traditional software development life cycle and more emphasis on reacting to the constant change of business requirements. This report provides an organizational framework that describes how application development and delivery professionals working on BI initiatives can align their BI organization for agility; it’s a key part of Forrester’s Agile BI tetrad — Agile BI software development, organizations, processes, and technologies. See the “[Build An Agile BI Organization](#)” Forrester report.

⁷ In Forrester’s 60-criteria evaluation of enterprise BI platform vendors, we identified the 11 most significant software providers and researched, analyzed, and scored their current market offerings. See the “[The Forrester Wave™: Enterprise Business Intelligence Platforms, Q1 2015](#)” Forrester report.

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In Forrester's 15-criteria evaluation of Agile BI vendors, we identified the 13 most significant software providers in the category and researched, analyzed, and scored them. See the "[The Forrester Wave™: Agile Business Intelligence Platforms, Q3 2015](#)" Forrester report.

⁸ This report tells AD&D pros working on BI initiatives how to decide which vendors belong on their shortlists of BI platforms. See the "[Vendor Landscape: Forrester's 10-Step Methodology For Shortlisting BI Vendors](#)" Forrester report.

⁹ In Forrester's 15-criteria evaluation of Agile BI vendors, we identified the 13 most significant software providers in the category — Birst, GoodData, IBM, Information Builders, Microsoft, MicroStrategy, Oracle, Panorama, Qlik, SAP, SAS, Tableau Software, and TIBCO Software — and researched, analyzed, and scored them. See the "[The Forrester Wave™: Agile Business Intelligence Platforms, Q3 2015](#)" Forrester report.

¹⁰ Enterprise marketing technologies promise to enable better customer experience, improve marketing performance, and boost efficiency. This report helps customer insights professionals make a convincing business case for technology investments within the broader business technology context. It provides a ROI model for marketing technology investments using Forrester's TEI framework. See the "[Model The ROI Of Enterprise Marketing Technology Investments](#)" Forrester report.

¹¹ Organizations across industries are experiencing a data explosion that is doing nothing short of revolutionizing business practices. The availability of new data sources and delivery models provides unprecedented insights into customer and partner behavior and enables much improved capacity to understand and optimize business processes and operations. See the "[Navigating The New Data Market Landscape](#)" Forrester report.

¹² In his book Digital Disruption, Forrester analyst James L. McQuivey describes the new competitive landscape, in which threats to an organization's business can come not only from outside its sector but also from newcomers that are vastly smaller in size and scale. He also outlines what established companies can — and should — do to mitigate those threats and become digital disruptors themselves. Source: James McQuivey, Digital Disruption: Unleashing the Next Wave of Innovation, Amazon Publishing, 2013.

¹³ Source: Mark Van Clieaf, Stephen O'Byrne, and Karel Leeflang "The Alignment Gap Between Creating Value, Performance Measurement, and Long-Term Incentive Design," IRRIC Institute (<http://irricinstitute.org/pdf/alignment-gap-study.pdf>).

¹⁴ Forrester's BI maturity self-assessment model helps AD&D professionals assess the maturity of their current BI environments. It also allows them to benchmark their BI maturity against that of their peers, measure the progress of their BI environment, and correlate BI maturity to other business performance indicators. See the "[Establish Ongoing Processes To Assess Your Business Intelligence Maturity](#)" Forrester report.

¹⁵ Source: Forrester's Business Technographics® Global Data And Analytics Survey, 2014.

¹⁶ Source: Erik Brynjolfsson, Lorin M. Hitt, and Heekyung Hellen Kim, "Strength in Numbers: How Does Data-Driven Decisionmaking Affect Firm Performance?" Social Science Research Network, April 22, 2011 (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1819486).

¹⁷ Even after doing their best for over 20 years to build centralized, scalable information architecture, organizations convert only a small percentage of their data to useful information in time to leverage it for better insight and decisions. At both strategic and tactical levels, much of this quagmire can be explained by the fundamental disconnect in goals, objectives, priorities, and methods between technology management professionals and the business users they should ideally serve. See the "[It's Time For A User-Driven Enterprise BI Strategy](#)" Forrester report.

¹⁸ Source: Forrester's Q4 2015 Global Business Intelligence Business Case Online Survey.

¹⁹ Forrester's TEI can help you articulate how your product or service will benefit current customers in terms of cost and ROI. Source: "Total Economic Impact," Forrester Research (<https://www.forrester.com/marketing/product/consulting/tei.html>).

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