Quantify The Tangible Business Value Of BI

by Boris Evelson and Martha Bennett, January 8, 2015

KEY TAKEAWAYS

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

BI business cases involve many complexities, such as direct versus indirect cost calculations 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 Relative Rather Than Absolute Benchmarks

Don’t just assume that a 10% ROI over a three-year period is bad and a 100% ROI over a one-year period is good -- it’s all relative to whether you are an industry leader or a laggard. Use the insights we obtained from a panel of Forrester clients to benchmark your BI business case results against your peers.

Leverage The Total Economic Impact 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 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 BI versus analytics versus big data discussion is best left for other research, recommendations from this document 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 at the end of the day they all transform data to information.
Quantify The Tangible Business Value Of BI

Business Case: The Business Intelligence Playbook
by Boris Evelson and Martha Bennett
with Holger Kisker, Ph.D. and Sophia Christakis

WHY READ THIS REPORT

As the demand for pervasive and comprehensive business intelligence (BI) applications increases, so does the complexity and cost of large enterprise BI implementations. Organizations must demonstrate tangible value from BI by building solid business cases in an area where cause and effect often are not straightforward. However, building a BI business case is not for the faint of heart due to the gray areas around which processes and tools to include; the multiple BI components that typically need to be customized and integrated; and the frequent unpredictability of BI systems integration efforts. This document, the business case report of the 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 identifies areas where quick wins may be possible. This report was originally published in May 14, 2013; Forrester reviews and updates the BI playbook reports periodically for continued relevance and accuracy, we revised this edition to factor in the latest survey findings from Forrester’s Global Business Intelligence Business Case Online Survey.

Table Of Contents

2 Don’t Just Jump Into Creating A Hefty Enterprisewide BI Business Case
4 Use TEI To Improve The Odds Of Success
6 Apply “Start Small, Think Big” Wisdom To Defining BI Benefits
14 Dissect Your Initial And Ongoing Deployment Costs
16 Future Flexibility: Do You Create Or Jeopardize?
17 Catalog The Risks And Uncertainties

RECOMMENDATIONS

19 Simplify Your BI Business Cases Before You Start

20 Supplemental Material

Notes & Resources

Forrester surveyed 59 clients.

Related Research Documents

Measure The Business Impact Of Improved App Strategy
December 24, 2014

How To Make A Business Case For Data Investment
January 10, 2014

The Total Economic Impact™ Methodology: A Foundational Framework For Investment Decisions
January 24, 2013
DON’T JUST JUMP INTO CREATING A HEFTY ENTERPRISEWIDE BI BUSINESS CASE

Business intelligence has moved to the top of the agenda when it comes to plans for enterprise software adoption. Investment in BI tools and applications can have a number of drivers, including external catalysts like regulatory requirements or technology obsolescence and internal catalysts 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, firms should consider that:

- **You may not actually need a business case.** Determining whether a BI business case is a necessity revolves around three main considerations. Is it an investment that the organization *must* make in order 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 one can omit the step of 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 is likely to 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 tends to work best.** Focus first on “quick win” projects — projects that aren’t very complex and whose benefits you can easily articulate and measure. Once you successfully complete these practice runs, move on to more complex business cases, such as those involving top- or bottom-line benefits (see Figure 1).

---

**Figure 1 BI Business Case Scenarios**

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

*Business intelligence reporting and analytics
†Enterprise information management: BI, MDM, DW, and ETL.
Don’t Develop A BI Business Case Unless You Have To

The catalyst for BI investment scenarios that do not require a business case as such 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. Examples include BCBS 239, Basel III, Dodd-Frank, and FATCA in the banking sector and the Annual Report on Self-Insured Group Health Plans in the healthcare industry.\(^2\) 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 have to endure. The degree may vary, but the requirement remains.

- **Responding 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 entirely in favor of another one of its products (notable recent sunset 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 necessitate the re-evaluation of an incumbent BI platform. This frequently happens with global rollouts of enterprise resource planning (ERP) and customer relationship management (CRM) platforms, which come tightly embedded with BI packages. Also, as more and more enterprises move their ERP, CRM, collaboration, office and other applications to the cloud, many technology management professionals will face pressure to move their BI platforms to the cloud fully or via hybrid solutions sooner or later, at least partially. Depending on the exact 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 may show very quickly 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 an organization must make technology investments, it may see an opportunity to introduce more wide-ranging, strategic BI initiatives. Nevertheless, you should:

- **Resist the temptation to widen the scope too much.** In order 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 “resisting the temptation” rule are organizations that are sufficiently mature to embark upon building a strategic business case, involving tangible benefits, at the same time as making the technology and process choices necessary to deal with, for example, compliance requirements.

As the enterprise BI deployments and experience continue to grow Forrester sees fewer BI business cases rely on scenarios that involve intangible benefits like “improved customer satisfaction” or “shorter decision-making cycles.” Indeed, only about 12-14% of the respondents to our Q4 2014 Global Business Intelligence Business Case Online Survey still build BI business cases based on intangible benefits compared to 20% in 2013. Intangible benefits are great, but it’s often hard to sell BI initiatives without something more concrete. This is why Forrester recommends the following staged approach to developing and building business cases:

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

USE TEI TO IMPROVE THE ODDS OF SUCCESS

Even though only 17% of our survey respondents reported using an established third-party business case methodology, why reinvent the wheel? Rather than agonizing and arguing over specific line items to include in and exclude from your scenario, leverage Forrester’s Total Economic Impact™ (TEI) as the framework for your BI business cases. 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, AD&D pros contemplating investments in BI technologies need to be less concerned about which vendor is “best” and instead devote their attention to how the solution chosen 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].”
There are four key dimensions of BI value that you must enumerate: benefits, costs, flexibility, and risk (see Figure 2 and see Figure 3).

**Figure 2 Total Economic Impact Value Delivery Process**

- People
- Process
- Technology
- Quantified value
- Defined metrics
- New opportunities created for the future


**Figure 3 BI-Specific TEI Components**

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Costs</th>
<th>Risks</th>
<th>Flexibilities</th>
</tr>
</thead>
</table>
| Cost savings  
- Automating manual processes  
- BI instance and platform consolidation | Hardware  
- Software  
- Professional services | Project  
- Vendor | Opportunity to expand to  
- New business domains and functions  
- New geographies  
- More users |
| Top- and bottom-line benefits | Change management costs | Supporting causality of benefits | Opportunities to leverage  
- Platforms/tools in other projects  
- HR expertise in other projects |
| Increased value of assets | Direct versus indirect costs | Not adopting agile approaches | |
| Decreased capital requirements | Subscriptions  
- Software-as-a-service  
- Data-as-a-service | |
| BI as a profit center | | | |
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.

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

<table>
<thead>
<tr>
<th>“Is your BI business case based on specific ‘income statement’ expense line items?”</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource utilization to increase yield</td>
<td>49%</td>
</tr>
<tr>
<td>Risk avoidance (including loss, audit, litigation and others)</td>
<td>46%</td>
</tr>
<tr>
<td>Human resources utilization (redeployment, right sizing, down sizing, etc.) savings</td>
<td>39%</td>
</tr>
<tr>
<td>Supply chain resource and other optimization savings</td>
<td>37%</td>
</tr>
<tr>
<td>Lower procurement spend</td>
<td>34%</td>
</tr>
<tr>
<td>We base our BI business case strictly on intangible benefits</td>
<td>12%</td>
</tr>
</tbody>
</table>

Base: 59 professionals with knowledge of business intelligence in their organizations

Note: “Don’t know” and “Other” not shown.
Source: Forrester’s Q4 2014 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 scenario 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 now be redeployed or right-sized; and one FTE can take on additional duties for three days per month.

Figure 5 Business Cases Based Specifically On BI BT Costs/Resource Optimization

"Please indicate the more specific cost savings/cost avoidance objectives described in your BI business case."

- Consolidating tools/platforms/instances: 68%
- Automating a manual process: 62%
- Lowering costs via other business efficiencies (rightsizing): 55%
- Lowering costs via other IT efficiencies (e.g., moving to cloud): 49%
- Risk avoidance (as in working with an outdated, retired, sunset technology): 45%
- Streamlining BI via a platform upgrade: 40%

Base: 53 professionals with knowledge of business intelligence in their organizations

Note: “Don’t know” and “Other” not shown
Source: Forrester’s Q4 2014 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 multiple mergers and acquisitions to a greater or lesser extent, and 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, frequently also running different versions of the same software. BI pros within such organizations should target their business case at streamlining these BI environments by first consolidating multiple instances of BI servers and then selecting and standardizing on a single BI vendor platform. 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 more substantial discounts based on a larger user base and a greater 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 of the tool across the organization.

- **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 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.

- **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. 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 clean. 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 in fact put you far ahead of many of your peers and competitors.
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-type business cases and have established your credibility with business owners, you’re ready to proceed to the next level. Here you will definitely have to prepare to defend your business case against reverse causality and the impact of other variables. Additionally, many of the 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 sales, and better return on fixed assets (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. 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 is often the way to 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 (Goodwill, etc.) and value of intellectual property (IP) (see Figure 7). Another popular benefit is higher asset valuation based on better information. 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 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.

The good news is that those who follow many of the best practices described in this document do see significant ROI (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 — the majority of survey respondents (54%) report ROIs between 10% and 199% within two years (48% achieve that ROI within two years) (see Figure 9). However, ROIs greater than 200% are also not unheard of.
Figure 6 Income-Statement-Based Top-And Bottom-Line Tangible BI Benefits

"Is your BI business case based on specific ‘income statement’ revenue line items?"

- Increase margin, profitability: 51%
- Other top/bottom line improvement: 42%
- Increase gross sales: 41%
- Better return on fixed assets: 25%
- Accelerate collections: 17%
- BI as a profit center (selling data, analysis): 15%
- We base our BI business case strictly on intangible benefits: 14%
- Increase prices: 12%

Base: 59 professionals with knowledge of business intelligence in their organizations

Note: “Don't know” and “Other” not shown
Source: Forrester’s Q4 2014 Global Business Intelligence Business Case Online Survey
**Figure 7** Balance-Sheet-Based Tangible BI Benefits

<table>
<thead>
<tr>
<th>Benefit Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased ratio of revenue to marketing expenditure</td>
<td>27%</td>
</tr>
<tr>
<td>Improving working capital utilization</td>
<td>25%</td>
</tr>
<tr>
<td>Information-based assets (Goodwill, etc.)</td>
<td>24%</td>
</tr>
<tr>
<td>Reduced inventory, reduced inventory working capital</td>
<td>22%</td>
</tr>
<tr>
<td>Higher asset value based on better information*</td>
<td>20%</td>
</tr>
<tr>
<td>Accounts payable savings</td>
<td>19%</td>
</tr>
<tr>
<td>Increase ratio of earnings to capital employed</td>
<td>19%</td>
</tr>
<tr>
<td>Value of intellectual property</td>
<td>15%</td>
</tr>
<tr>
<td>We base our BI business case on strictly intangible benefits</td>
<td>14%</td>
</tr>
<tr>
<td>Reduced capital reserve requirements for doubtful debt, operational risk, etc.</td>
<td>8%</td>
</tr>
<tr>
<td>Reduced capital reserve requirements (BASEL III, Solvency II, and others)</td>
<td>0%</td>
</tr>
</tbody>
</table>

Base: 59 professionals with knowledge of business intelligence in their organizations

Note: “Don’t know” and “Other” not shown
Source: Forrester’s Q4 2014 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 estimation of the reservoir size and accessibility.
**Figure 8** Return On BI Investments

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

- More than 300%: 2%
- 200% to 299%: 5%
- 100% to 199%: 14%
- 25% to 99%: 8%
- 10% to 24%: 32%
- Less than 10%: 8%

Base: 59 professionals with knowledge of business intelligence in their organizations

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

Source: Forrester’s Q4 2014 Global Business Intelligence Business Case Online Survey

---

**Figure 9** Payback Time Period On BI Investments

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

- 3 years or more: 17%
- 2 years to 35 months: 19%
- 1 year to 23 months: 41%
- 6 to 11 months: 5%
- Less than 6 months: 2%

Base: 59 professionals with knowledge of business intelligence in their organizations

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

Source: Forrester’s Q4 2014 Global Business Intelligence Business Case Online Survey
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, we recommend proceeding as follows:

- **Learn from the pros.** Companies such as financial data providers package their financial data into industry vertical- and domain-specific analytical offerings and sell it to their partners, such as suppliers and distributors. For example, some of the top players in this space — Acxiom, Dun & Bradstreet, LexisNexis, Thomson Reuters, Experian Information Solutions, IMS Health, TomTom, Visa, and BDNA — long ago figured out how to monetize their data. 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 where partners benefit by understanding how all products — theirs and their competitors' — in a particular product line are performing, and the retailer gets an additional revenue stream. Needless to say, you should only 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 are finding their existing markets and business models threatened by newcomers leveraging new technologies and communication capabilities. BI has a key defensive role to play here. This could be by exploiting opportunities that involve turning 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 (ROD).” Invest as little as possible and focus on quick, low-cost initiatives that are most likely to 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 re-architecting and modernizing one is a multiyear, multimillion-dollar effort. When building an “über-business case” for BI, you will also inevitably get push back from some business exec. He or she 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 revenue or stock price boost, enterprisewide BI business cases will be challenging. They are not impossible, though, so we recommend proceeding cautiously by:

- **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. 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, you should 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.** Even though cause-and-effect relationships are hard to prove, in a recent Forrester survey we found a correlation between BI spending and company growth: global technology decision-makers of top performing companies (revenue growing by 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. 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.

**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 to newer so-called “on-demand” solutions that use subscription pricing model where costs are billed on a monthly basis. Forrester recommends that you:

- **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, HR, 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 just 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 questions: 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 (i.e., mobile)? What hardware is needed? What are the costs for upgrades? What discounts are available from the vendor, under what conditions?

- **Dissect deployment costs.** The biggest costs associated with BI — or any software-centric business improvement initiative — are often the expenditures associated with 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 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 is required? Is third-party maintenance a viable alternative? How will maintenance costs grow over time?

- **Don’t get blindsided by administrative and infrastructure costs.** Implementing technologies and solutions into and existing IT infrastructure can spawn hidden costs that you need to surface 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** BI-Specific Versus Broad BI Business Cases

“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.)?”

![Diagram showing BI-Specific Versus Broad BI Business Cases](image)

Base: 58 professionals with knowledge of business intelligence in their organizations

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

Source: Forrester’s Q4 2014 Global Business Intelligence Business Case Online Survey

---

**FUTURE FLEXIBILITY: DO YOU CREATE OR JEOPARDIZE?**

Flexibility is the value of the option to take a second or third action in the future. There are three types of flexibility: the option to add additional functionality for current users, the ability to link users across departments, and the potential to include users in new geographies.

- **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 to 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. Best practice 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? What 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
Risk is the possibility of a negative outcome. New revenues may not materialize as planned, or anticipated cost reductions may not be achieved. BI projects often promise to “transform the way we do business with customers.” That’s a tall order — and 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. A vendor of a product or technology may need to be replaced at some point due to vendor failure, driving up costs. Ask the following questions: 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?

■ 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 one constructs 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 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 the fact that it is not possible to be precise upfront when it comes to defining requirements and estimating costs. Instead, they focus on where the real value is delivered, and that is providing applications that work for the business. Agile approaches — such as 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 — can do wonders for BI project and application success.

- **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 whether it was because the business was performing better for other reasons and could 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.
Figure 11 Benefits From BI 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: 54 professionals with knowledge of business intelligence in their organizations

Note: “Don’t know” and “Other” not shown
Source: Forrester’s Q4 2014 Global Business Intelligence Business Case Online Survey

RECOMMENDATIONS

SIMPLIFY YOUR BI BUSINESS CASES BEFORE YOU START

If you want to join the good company of the survey respondents — 34% of whom had already completed and verified their BI business cases, and 12 out of the 20 who had already completed their BI business cases and reported the same or better results than originally projected — we recommend the following steps:

- **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.
Focus on what’s tangible and measurable. Aim not to 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 or cost avoidance or bottom- or top-line benefit. Execs who understand what really drives their business will also be able to articulate what BI capabilities they need in order 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 value can be delivered. 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.

Do not be shy about reaching out to the 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. Seek 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.16

SUPPLEMENTAL MATERIAL

Methodology
Forrester’s Q4 2014 Global Business Intelligence Business Case Online Survey was fielded to 59 readers of Forrester BI reports with knowledge of their firms’ BI business case. For quality assurance, we screened respondents to ensure they met minimum standards in terms of content knowledge.

Forrester fielded the survey during Q4 2014. 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.
Forrester’s Business Technographics® Global Data And Analytics Survey, 2014, was fielded to 1,658 business and technology decision-makers located in Australia, Brazil, Canada, China, France, Germany, India, New Zealand, the UK, and the US from SMB and enterprise companies with 100 or more employees. This survey is part of Forrester’s Business Technographics and was fielded from January 2014 to March 2014. ResearchNow fielded this survey on behalf of Forrester. Survey respondent incentives include points redeemable for gift certificates. We have provided exact sample sizes in this report on a question-by-question basis.

Each calendar year, Forrester’s Business Technographics fields business-to-business technology studies in 10 countries spanning North America, Latin America, Europe, and Asia Pacific. For quality control, we carefully screen respondents according to job title and function. Forrester’s Business Technographics ensures that the final survey population contains only those with significant involvement in the planning, funding, and purchasing of business and technology products and services. Additionally, we set quotas for company size (number of employees) and industry as a means of controlling the data distribution and establishing alignment with IT spend calculated by Forrester analysts. Business Technographics uses only superior data sources and advanced data-cleaning techniques to ensure the highest data quality.

**Companies Interviewed For This Report**

- Fujitsu
- HCL Technologies
- IBM
- QlikTech
- SAP
- SAS
- Wipro

**ENDNOTES**


2. 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: “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 Annual Report on Self-Insured Plans is part of the US Patient Protection and Affordable Health Care Act of 2010. It requires the Secretary of Labor to provide Congress with an annual report containing general information on self-insured employee health benefit plans and financial information regarding employers that sponsor such plans. The report must use data from the Annual Return/Report of Employee Benefit Plan which many self-insured health plans are required to file annually with the Department of Labor.

3 Source: Forrester’s Q4 2014 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™ (TEI) methodology. TEI provides a rigorous cost and benefit analysis framework that explicitly incorporates an evaluation of future technology and business flexibility and associated risk. For more information, see the January 24, 2013, “The Total Economic Impact™ Methodology: A Foundational Framework For Investment Decisions” report.

5 Many BI professionals spend countless hours and resources navigating the complex landscape, rationalizing, shortlisting, and selecting BI vendors. Application development and delivery professionals should not reinvent the wheel but rather leverage the BI vendor categorization and shortlisting methodology regarding the tools and technology in this report to act and speed through the process of shortlisting BI vendors that best fit your organization’s requirements, environment, and culture. For more information, see the May 23, 2014, “Forrester’s 10-Step Methodology For Shortlisting Business Intelligence Vendors” report.

6 Earlier-generation BI support centers — organized along the same lines as support centers for all other enterprise software — fall short when it comes to taking BI’s peculiarities into account. 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. See the January 25, 2013, “Build An Agile BI Organization” report.

7 In Forrester’s 72-criteria evaluation of enterprise business intelligence (BI) platform vendors, we identified the 11 most significant software providers in the category and researched, analyzed, and scored them. This report details our findings about how well each vendor fulfills our criteria and where they stand in relation to each other to help application development and delivery professionals select the right partner for their enterprise BI platforms. For more information, see the December 18, 2013, “The Forrester Wave™: Enterprise Business Intelligence Platforms, Q4 2013” report.

8 Enterprise marketing technologies promise to enable better customer engagement, improve marketing performance, and boost efficiency. This brief, part of Forrester’s cross-channel campaign management playbook, helps customer insights (CI) professionals make a convincing business case for technology investments within the broader business technology (BT) context. See the December 1, 2014, “Model The ROI Of Enterprise Marketing Technology Investments” report.
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. For more information, see the May 7, 2014, “Navigating The New Data Market Landscape” report.

In his book Digital Disruption (published March 2013), 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 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.


Forrester's BI maturity self-assessment model helps BI professionals quickly assess the maturity of their current-state environments. It also allows BI pros to benchmark their BI maturity against that of their peers and competitors, measure the progress of their BI environment, and correlate BI maturity to other business performance indicators. See the December 15, 2014, “Establish Ongoing Processes To Assess Your Business Intelligence Maturity” report.


Even after doing their best for over 20 years to build centralized, scalable information architecture, Forrester surveys always find that only a small percentage of organizations’ data is actually converted 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. For more information, see the August 25, 2014, “It's Time For A User-Driven Enterprise BI Strategy” report.

Forrester's Total Economic Impact (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, Inc. (https://www.forrester.com/marketing/product/consulting/tei.html).
About Forrester

A global research and advisory firm, Forrester inspires leaders, informs better decisions, and helps the world’s top companies turn the complexity of change into business advantage. Our research-based insight and objective advice enable IT professionals to lead more successfully within IT and extend their impact beyond the traditional IT organization. Tailored to your individual role, our resources allow you to focus on important business issues — margin, speed, growth — first, technology second.

FOR MORE INFORMATION
To find out how Forrester Research can help you be successful every day, please contact the office nearest you, or visit us at www.forrester.com. For a complete list of worldwide locations, visit www.forrester.com/about.

CLIENT SUPPORT
For information on hard-copy or electronic reprints, please contact Client Support at +1 866.367.7378, +1 617.613.5730, or clientsupport@forrester.com. We offer quantity discounts and special pricing for academic and nonprofit institutions.

Forrester Focuses On Application Development & Delivery Professionals

Responsible for leading the development and delivery of applications that support your company’s business strategies, you also choose technology and architecture while managing people, skills, practices, and organization to maximize value. Forrester’s subject-matter expertise and deep understanding of your role will help you create forward-thinking strategies; weigh opportunity against risk; justify decisions; and optimize your individual, team, and corporate performance.

« ANDREA DAVIES, client persona representing Application Development & Delivery Professionals

Forrester Research (Nasdaq: FORR) is a global research and advisory firm serving professionals in 13 key roles across three distinct client segments. Our clients face progressively complex business and technology decisions every day. To help them understand, strategize, and act upon opportunities brought by change, Forrester provides proprietary research, consumer and business data, custom consulting, events and online communities, and peer-to-peer executive programs. We guide leaders in business technology, marketing and strategy, and the technology industry through independent fact-based insight, ensuring their business success today and tomorrow.