

For: Application
Development
& Delivery
Professionals

Best Practices: Maximize Your Chances Of Business Intelligence Success

by Martha Bennett and Boris Evelson, July 24, 2013

KEY TAKEAWAYS

For BI Initiatives To Succeed, They Need To Align With Business Goals

In most cases, starting a BI initiative that's not clearly linked to specific KPIs or business goals or aimed at addressing a specific pain point is sowing the seeds of eventual project failure. This is why it's crucial to have the processes and mechanisms in place to establish what the desired outcome would be and to start from there.

Agility Is The Most Important Characteristic Of All Processes

Processes and frameworks are vital project ingredients, and BI initiatives are no exception. What makes BI projects different is the need for agility. But this doesn't mean having to adopt an "Agile" methodology as such. The important point is not to stick to traditional waterfall methodologies, which are unsuited to the majority of BI projects.

Change Management And Training Must Be An Integral Part Of Any BI Project

Introducing new BI capabilities typically involves change. The implications are often far-reaching, requiring people to work in different ways; in many cases, they also result in process and organizational change. Failure to address change management and training right from the beginning may put the success of the entire BI initiative at risk.

Best Practices: Maximize Your Chances Of Business Intelligence Success

Processes: The Business Intelligence Playbook

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WHY READ THIS REPORT

What can you do to make sure that your business intelligence (BI) initiative doesn't end up on the scrap heap of failed projects? Seeking answers to this question isn't unique to BI projects — but there is an added sense of urgency in the BI context, given that BI-related endeavors are typically difficult to get off the ground; there are horror stories aplenty of big-ticket investments that have not yielded the desired benefit. This report provides application development and delivery (AD&D) professionals and their peers with a summary of the most important ingredients that contribute to BI success, as well as a review of the most typical pitfalls that can derail BI projects — and how to avoid them.

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Notes & Resources

Forrester interviewed business intelligence leaders and experts at six user companies of different sizes and geographic distributions. We also spoke with BI practice leads and senior consultants at Column Technologies, HCL, IBM, Infosys, KPMG, PwC, Tata Consultancy Services, and Tian Marketing.

Related Research Documents

[Establish Ongoing Processes To Assess Your Business Intelligence Maturity](#)

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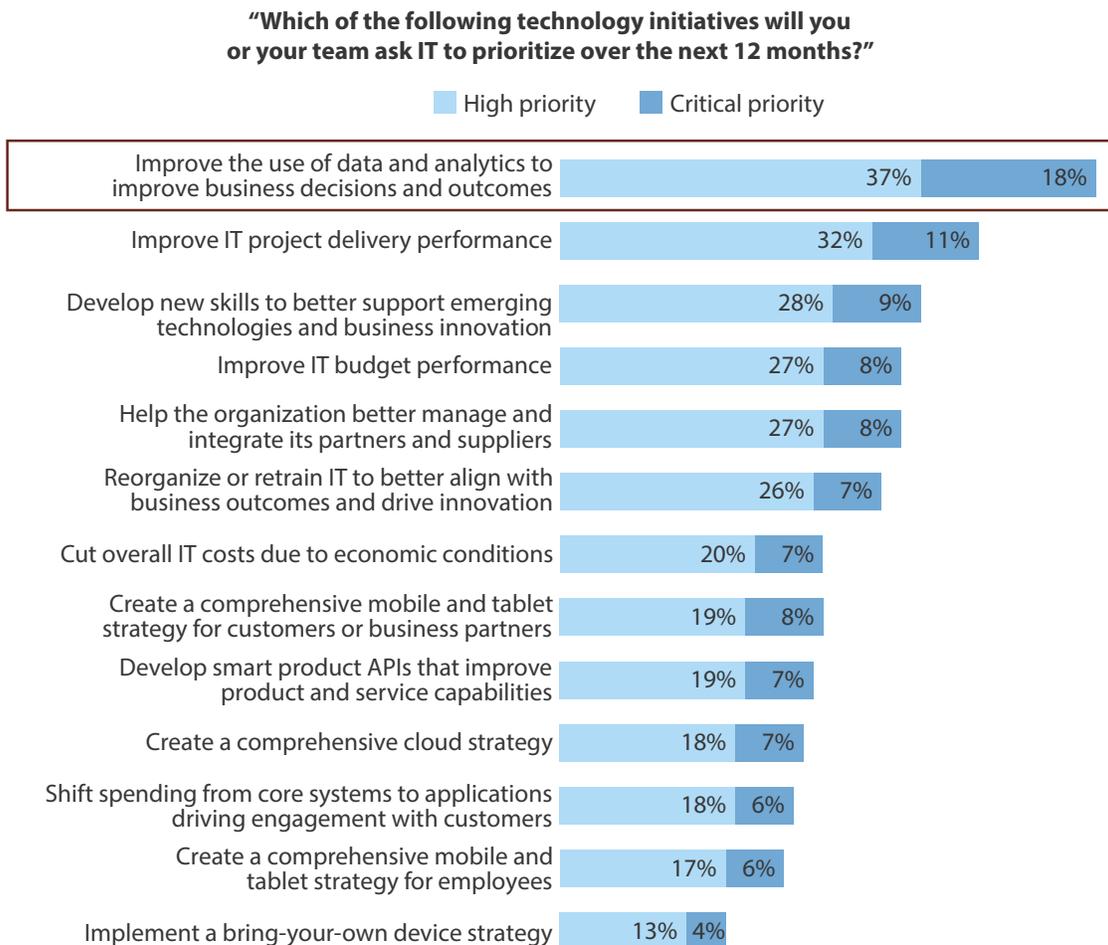
[The Future Of BI](#)
January 10, 2012



TREAT BUSINESS INTELLIGENCE AS A CORE CAPABILITY OF YOUR BUSINESS

There is no doubt that companies understand the importance of business intelligence (BI) to supporting the efficient and effective running of the business. Whether it's optimizing processes, improving customer service, increasing the accuracy of marketing initiatives, breaking into new markets, or seeking ways to get ahead of the competition, firms recognize that getting the right data to the right person at the right time is a key prerequisite to business success. Ever-increasing volumes of internal and external data, shortening business cycles, and challenging economic conditions make it imperative to deliver a complete, up-to-date view of the business quickly and efficiently. It is also clear that companies recognize the value of data and analytics when it comes to improving decisions and outcomes, as BI has been a top implementation priority for organizations for a number of years now (see Figure 1 and see Figure 2).

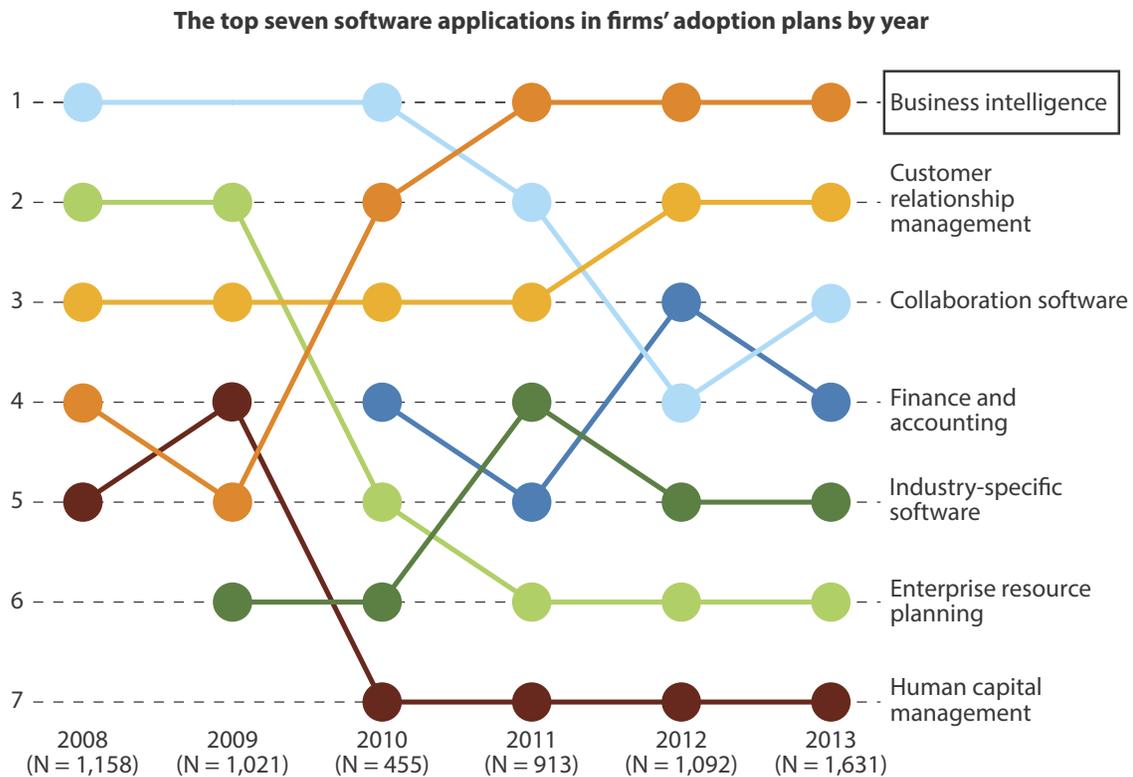
Figure 1 Companies Recognize The Importance Of Data And Analytics



Base: 3,616 business decision-makers from firms with 100 or more employees (multiple responses accepted)

Source: Forrsights Business Decision-Makers Survey, Q4 2012

Figure 2 Business Intelligence Is The Top Implementation Priority



Note: We first included industry-specific software in the Q4 2008 survey; we first included finance and accounting in the Q4 2009 survey.
 Source: Enterprise And SMB Software Survey, North America And Europe, Q3 2007, Q4 2008, and Q4 2009; Forrsights Software Survey, Q4 2010, Q4 2011, and Q4 2012
 Source: May 27, 2011, "Forrsights: The Software Market In Transformation, 2011 And Beyond" Forrester report

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Source: Forrester Research, Inc.

Business Intelligence Success Remains Elusive For Many

Recognizing the importance of data and analytics is one thing. Actually putting in place the processes and tools required to deliver data and analytics in the most efficient and appropriate way to meet the needs of business decision-makers is a different matter: The majority of organizations continue to struggle to get the desired value out of their BI investments (see Figure 3). Business users' complaints about their ability to access the data they need to support a decision when they need it from their enterprise BI applications include:

- **Insufficient or inaccessible data.** This is one of the most frequent gripes about BI implementations. "I know we have this data; why can't I get to it?" is a refrain that echoes through many offices, in particular when new visualization and analytics tools have shown what might be possible.

- **Excessive or “wrong” data.** Users may have a variety of reports and/or dashboards available to them, but they are either being overwhelmed by the sheer quantity of data or feel that the data they get isn’t quite what they need. A marketing specialist in a global consumer goods firm told us that she has access to all of the data she could ever wish for — but it’s delivered in different formats by different systems, and she has no idea how it all fits together.
- **Untrustworthy data.** This is a common concern in organizations where a new set of reports or analytics capabilities has replaced tried and trusted data sets. The efficiency improvements that firms hope to get from new BI tools are easily negated. This often happens when business professionals either don’t use the new system or seek to replicate results using their tried-and-true spreadsheet models.
- **Unacceptably long turnaround times for new reports or other BI capabilities.** It doesn’t matter if the delay is days, weeks, or months; if a business professional’s need has changed by the time a new report or dashboard appears, it’s of little value to her.
- **BI tools that aren’t right for the job.** Business professionals often grumble that they “simply can’t do anything” with the information presented to them. Examples include static reports that don’t allow the user to drill down into the detail, let alone run what-if scenarios; report formats that make information difficult to digest, such as endless tables of numbers instead of visualizations; and tools that only a handful of extensively trained specialists can use.

There are many reasons for this long list of grumbles from business users, and why so many of them create their own analytics environments using spreadsheets or procure data discovery and visualization tools without involvement from their colleagues in IT. The most important are:

- **Lack of governance and business ownership.** Governance frameworks are necessary to ensure that you use data to support business decisions in the best possible way and without compliance breaches, regardless of whether it’s how you capture, store, analyze, or use data; who has access to data and for what purpose; how you define metrics and key performance indicators (KPIs); or what reports and dashboards you make available and to whom. While IT has responsibilities as the custodian of data and governance processes, it can only discharge them effectively if the business side takes ownership of the decision on what data it needs and what rules apply to that data.
- **Overreliance on traditional IT approaches.** Waterfall software development methodologies aren’t suited to the majority of BI projects; many organizations spend more time and effort on getting data into a data warehouse (DW) than making it available for use. Uncompromising stances when it comes to “a single version of the truth”; overly controlling approaches, such as insisting that all data used in analytics has to go into the DW first, following lengthy due diligence processes; and not supporting end user self-service are also key inhibitors of BI success.

- Not having a knowledge management and collaboration environment.** Many organizations have more than one BI platform, and each BI environment may have thousands of reports. Then there's all of the data that resides outside of the existing BI environment. This makes it very difficult for business professionals to find what they need, whether it's a report, data, or a colleague with relevant expertise.

Figure 3 Companies Struggle To Achieve Their BI Goals



Source: Forrsights BI/Big Data Survey, Q3 2012

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Source: Forrester Research, Inc.

SUCCESSFUL BI PROJECTS ARE BUSINESS PROJECTS

To understand what distinguishes a successful BI implementation from one that struggles — or even fails completely — we spoke with 15 BI specialists and carried out extensive secondary research. Our interviews included executives in charge of BI programs in a variety of industry sectors and company sizes, as well as BI practice leaders or their equivalent in a number of global consulting firms and smaller specialist providers. We also explore the topic of BI success or failure in our ongoing dialogue with clients, as well as discussions during conferences and workshops. While the best practices we identified may seem obvious, they are what differentiates those who struggle

with their BI initiatives from those who succeed. Methodologies, tools, and processes certainly help deliver successful BI projects, but can't make the difference between failure and success on their own. BI leaders who want to maximize their chances of success are strongly encouraged to:

- **Put the “business” into business intelligence.** Ensure that all BI initiatives have a business sponsor and align with the business strategy, goals, and KPIs. Put the appropriate processes in place to ensure close collaboration with the relevant business execs and subject-matter experts (SMEs), both throughout a project and after its completion. Make sure that project success is a shared responsibility.
- **Be agile and aim to deliver self-service.** Whether or not you formally adopt Agile methodologies, the focus must be on short review cycles and frequent deliverables. Develop a process that works for you and stick to it — agile doesn't mean “ad hoc” or “free-for-all.” Throughout the process, aim to deliver as much BI capability as possible in the form of self-service tools.
- **Establish a solid foundation for your data as well as your BI initiative.** Knowing what data you have and how you capture, store, and process it is just as important as having rules and guidelines in place to ensure that any reporting or analytics functions yield reliable results and don't give rise to compliance issues. Of equal importance is having governance principles and processes for your BI environment itself. At the same time, it's important to ensure that governance frameworks and processes don't become so onerous that they get in the way, and that you develop them in small steps with tangible deliverables.
- **Select the most appropriate tool set.** Take into account current and future requirements from the technical and business perspectives, and don't neglect to assess the current skills base in the IT and business departments. Develop a set of criteria based on use cases to help you decide when to adhere to corporate standards and when exceptions make sense. There is rarely an occasion when one size fits all.
- **Seek external help if needed.** Understand where your limits are and involve external experts as required. This applies to all stages and aspects of a BI initiative, including requirements gathering, technology selection and deployment, and change management and training.
- **Make change management and training an integral part of any BI initiative.** Be aware of the nontechnology implications of BI initiatives, whether it's replacing a single tool or introducing a whole new way of doing things. Put appropriate support mechanisms in place right from the beginning.

BEST PRACTICE NO. 1: PUT THE “BUSINESS” INTO BUSINESS INTELLIGENCE

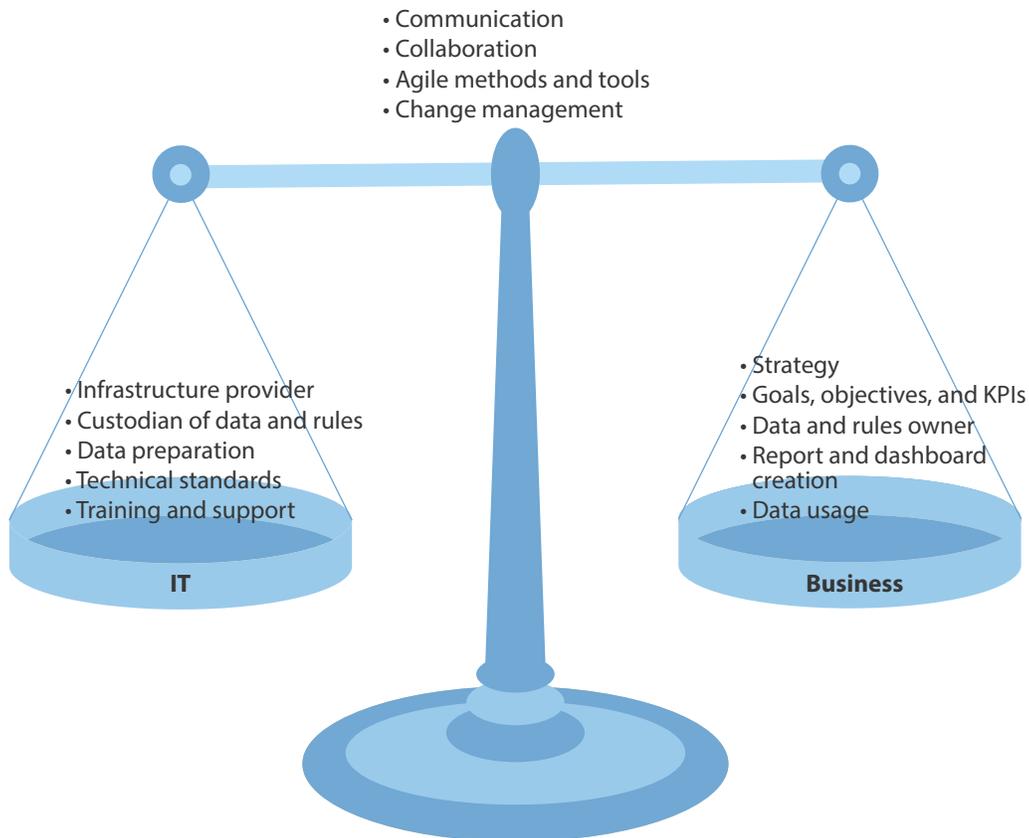
This may sound like a foregone conclusion, but it isn't. Some BI projects fail at an early stage; others go right through to final delivery and signoff before someone declares that they don't meet expectations. The most commonly cited reason in all cases is a lack of involvement from the business, either at the executive or SME level — or most often both. But it's about more than just having a business sponsor and a set of requirements — it's about having the relationships and processes in place that ensure collaboration with business execs and SMEs. For BI projects to be successful, it is paramount that:

- **Business and IT sit at the same table right from the beginning.** This means having a constructive working relationship between business and IT that revolves around the business, not technology. It also requires a business sponsor who's prepared to champion a BI project at the executive level and take the lead where necessary to surmount roadblocks along the way.
- **BI aligns with business strategy, goals, and KPIs.** This applies to each individual BI project in the same way that it applies to an organization's overall BI strategy. If you can't express the desired business outcome of enabling very specific business decisions based on the availability of particular data, don't even start the project. Yes, there are cases where business execs or SMEs can only articulate the desired outcome in potentially vague, qualitative terms when they aren't sure yet what kind of results they'll get — a classic chicken-and-egg problem and a great supporting argument for Agile BI, which enables real-time prototypes and proofs of concept. And even if requests are very specific in terms of what new reports or dashboards are required, but it's not an optimal starting point unless you link them to specific business outcomes. Take the discussion right back to the business goal or issue.
- **A process to ensure that alignment is in place.** Whether the process centers on storyboarding techniques, checklists, scorecard methodologies, or some combination thereof is a matter of choice. What works best for an individual organization depends on a number of factors, such as company culture and structure, BI maturity, and existing processes. Most important is the outcome: mapping what the business is asking for to a well-defined, existing KPI or business goal. This can include addressing a pain point that's clearly part of the overall business strategy.
- **The end of a project isn't the end of the business/IT partnership.** While BI implementations typically consist of discrete projects and ongoing support, no firm should ever regard a BI initiative as completely “finished.” Requirements for new reports or dashboards are bound to surface, usability issues are certain to arise, and new data sources or tools with greater capabilities are likely to appear — the list is endless. To prevent today's BI success from becoming tomorrow's legacy application, business and IT executives alike need to have an ongoing dialogue, even after the successful delivery of a project.
- **The business has (or takes) ownership of BI usage.** Aligning the BI objectives and priorities of the business and IT organizations is often quite challenging. Some of the challenges are due to disconnects between business and IT program drivers — for example, the business goal of

revenue generation and risk mitigation versus the IT goal of cost savings, and the business priority of selecting the best tool for the job versus the IT priority of using enterprise-standard BI tools. Don't fight such potential disconnects — leverage them. AD&D pros should do what they do best: control, manage, and plan, handling the data preparation layers of the BI stack like data integration, metadata, and data warehousing. Then business users and business process pros can get more involved and own the data usage layers of BI, writing their own reports, ad hoc queries, and dashboards and analyzing the data that has been integrated and standardized according to corporate policies (see Figure 4).

One client, a global manufacturer, recently told Forrester that it staffed its new BI competency center entirely with employees who were “shadow IT” BI experts from various lines of business. These experts were superusers who knew exactly where to get the data and how to use it — but did it only for their own workgroups using homegrown desktop applications. The leadership challenged them to put their money where their mouth was, stop complaining about the lack of IT support for enterprise BI, come out of the shadows, and become the development and support center for enterprise BI. It was and still is a hugely successful endeavor.

Figure 4 BI Success Depends On Balancing Responsibilities And Tasks



Pitfalls To Avoid: Taking An IT-Led Approach May Seem Easier

A BI project can still end in failure even if the business was the driving force behind it. The risk is even greater if business executives abdicate their responsibilities to IT. From an IT perspective, this may feel like the proverbial easy way out: Just focus on delivering on time and to specification. Ultimately, though, the business will blame IT for not delivering the desired benefit with the project. Hence, IT executives should refuse to embark upon, or continue with, a project when any of the following occur:

- **Business requirements are not aligned with goals or KPIs.** It doesn't matter whether you define requirements in terms of specific desired outcomes, data items, new reports, dashboards, or tools — if the business professionals concerned can't link their wish list to the business objective or KPI that this new intelligence or capability will support, raise the warning flag. You may need your entire portfolio of diplomatic skills here, but this is the time when the onus really is on your colleagues in the business areas concerned to clarify how having certain data or capabilities is likely to contribute to business success.
- **The business sponsor hands over responsibility to IT.** It happens quite often: Business and IT specialists work together on requirements; once they've reached agreement, the business sponsor signs off on the budget and sometimes also specifically on which tools IT will deploy. And then they're gone, expecting IT to deliver what's been agreed, on time and within budget. It's debatable whether any technology project can be successfully delivered in this way; BI projects certainly can't, even when they're on time and within budget. Needs may change along the way; but more importantly, needs often only get clarified once the project is underway and the business reviews the interim deliverables.
- **Strategic and tactical initiatives are out of balance.** IT typically thinks in strategic terms — enterprise DW, a single version of the truth, a centralized platform — whereas business tends to take a more tactical approach (“I need to measure these KPIs”). Unless firms approach these strategic and tactical aspects in parallel, rather than sequentially, project failure is likely.
- **IT takes the BI lead.** This sounds rather cruel, given that IT executives not only have a unique insight into the data a business holds and has access to, but also have an end-to-end view of an organization's processes. And there's nothing wrong with IT being the catalyst for a new BI initiative; there are many examples of IT introducing the business to the art of the possible. However, if it's not possible to convince the business to become an active participant in the project, such initiatives rarely succeed; they either become bogged down in endless arguments over scope and budget, or the resulting deliverable isn't quite what the business needed after all. There's only one exception to this rule: As one of the systems integrators we interviewed emphasized, there are situations where a purely technical refresh is required before IT can claim its seat at the business table to discuss the potential for new BI capabilities.

BEST PRACTICE NO. 2: BE AGILE AND AIM TO DELIVER SELF-SERVICE

Even the best-planned and -supported BI deployment will not achieve the desired result if the chosen development methodology isn't suited to delivering a BI initiative. In particular, traditional waterfall SDLC methodologies are not appropriate for the majority of BI initiatives, which tend to revolve around needs and requirements that typically aren't fully defined at the start of the project. To maximize the chances of BI project success:

- **Use agile methods where possible.** Note that this doesn't have to be "Agile" in the strict sense of following a set methodology such as Scrum or Kanban. For the majority of experts we spoke with, it's about being "agile" and taking an iterative approach, with the emphasis on breaking all elements of a project into the smallest possible chunks, working collaboratively, and reviewing tangible deliverables frequently. How it works in practice tends to be quite organization-specific, but it's important to note that agility and flexibility don't mean doing things in an ad hoc manner. Teams still need to agree on and codify processes — albeit lightly, rather than setting them in concrete. Before you can break rules in the interests of moving a project forward, you need to have them in the first place — whether they're about allocating roles in the project, setting meeting schedules, having lists of go-to people, or deciding how to document requirements and processes. And don't forget about project and program management: Make use of the tools and frameworks that your organization is likely already using.¹
- **Put a methodology in place to classify BI initiatives and process steps.** There are some exceptions to the use of agile. The key ones are major, enterprise-grade BI platform deployments; well-defined and largely fixed BI requirements, as for tax and regulatory reporting; and data preparation. As one executive put it: "When it comes to data, there are times when A really must come before B, and B before C."
- **Focus on frequent deliverables.** Frequent (sometimes daily) review sessions involving business stakeholders and demonstrations of early prototypes to business professionals not only serve to show progress, but also to ensure that you can make adjustments before it's too late. Breaking projects into the smallest possible chunks facilitates the delivery of something tangible at the earliest possible stage; this not only helps keep business professionals engaged, it typically also results in ideas for future development.
- **Consider collocating team members for parts of the project.** While virtual teams can be very effective, especially with the right support processes and collaboration tools in place, there are times when teams can achieve the most effective results most quickly when its people literally work side by side. This applies equally to smaller firms, where it's simply a matter of migrating to a different floor for a period of time, as it does to larger firms or when external partners are involved, when considerable investment may be required to bring people together. All of the BI specialists we spoke with had stories of projects that reached an impasse; they finally made the required breakthrough by collocating the relevant team members for at least as long as it took to solve the issue.

- **Seek to deliver self-service capabilities whenever possible.** Forrester advocates that business users build about 80% of reports and dashboards themselves to ensure that they make optimal use of their organization's BI tools and skills. Provided that an appropriate framework is in place to govern the use of tools and data, self-service helps break the never-ending cycle of unfulfilled requirements.² That said, not everyone is ready to build their own apps or embark upon a voyage of data discovery. In one of the organizations we spoke with, it was a major step to move experienced business professionals away from their existing set of static reports delivered in a variety of formats to a new reporting tool. Providing this set of users with self-service tools at this stage would have been a step too far; most likely, they would have rejected the new BI environment.

Pitfalls To Avoid: Choosing Too Rigid A Process — Or None At All

Regardless of the method and process chosen, the key to successful BI delivery is finding the right balance between control and flexibility. Things go wrong when:

- **Process adherence is too rigid.** Following agreed-upon processes and procedures is necessary to prevent the kind of chaos and confusion that ultimately lead to project failure. But *always* following methodologies or processes to the letter can also be detrimental. As soon as there are signs that something isn't right with a project — for example, progress is too slow or under-the-radar subprojects start appearing — it's time to review whether it's appropriate to make an exception or tweak the process. This applies specifically in the context of BI projects, where requirements may change quickly or only become clear through rapid iteration or trial-and-error approaches.
- **There are no processes in place, or everyone's ignoring them.** While flexibility and agility are the keys, don't use them as an excuse not to put a set of rules in place that govern how BI initiatives are run. If such rules are absent — or no one follows them — things will go wrong: duplication of effort, missed requirements, use of the wrong data, or failure to agree on the metrics for a report. Sooner or later, chaos will reign, costs are likely to get out of control, and project failure is certain. The only exception: early-stage, experimental projects involving a small number of people. The key is to recognize the point at which such projects turn into mainstream initiatives requiring a process framework to ensure their successful continuation.
- **Project leaders fail to distinguish between scope creep and adjusting requirements.** By applying agile methodologies, those involved in a project can make sure that they adjust requirements as necessary and that the end result is an application that's fit for purpose rather than an expensive mistake. But the line between refining requirements and scope creep is often a fine one. Seeing the first report, dashboard, or application typically gives business users ideas for more — which you should welcome in principle. But make sure that the focus remains on the original objective of the project and examine each new idea or request accordingly; if a new requirement doesn't map 100% to the project goals, it must go into the queue for later.

BEST PRACTICE NO. 3: PUT A SOLID GOVERNANCE FOUNDATION IN PLACE

In the context of BI, there are two key aspects to governance: data governance and governance of the BI deployment itself. In order to use data to improve operational efficiency and gain competitive advantage, organizations first need to understand what data they have available from internal and external sources and the value that this data has in terms of process improvement, decision-making, development of new products and services, and so on. They also need to be clear how they define each data item and what internal and external rules apply to the capture, storage, and further processing of such data. BI governance covers rules and processes pertaining to report creation, ownership, distribution, and usage, as well as prioritization of must-have and nice-to-have capabilities. That's why all BI projects — including experimental ones flying under the “big data” flag — have as their prerequisite:

- **The recognition that data management and quality are important.** For most IT professionals, this is a given; they understand what it takes to provide the required support structures and processes and are able to make it happen. They're also aware of the risks posed by inadequate data management mechanisms.
- **A willingness to address data governance shortcomings and break down silos.** Even those organizations with well-established data management programs and data governance structures often put them in silos; furthermore, the advent of new (often external) information sources means that data of unknown quality and sometimes doubtful provenance enters the mix. This makes it all the more important to have organizationwide governance structures in place; close collaboration is needed between those involved in BI projects and those who are responsible for data governance overall.
- **An understanding that data and BI governance aren't IT responsibilities.** Technology is essential for putting effective governance mechanisms in place and maintaining them and to help organizations comply with applicable laws and regulations. But first and foremost, governance is about a clear understanding of who's responsible for what, and having processes in place to govern things like permissions and entitlements and making decisions on what metrics and reports the company needs and how it uses them. That typically means having the business take ownership to define the rules and processes pertaining to data as well as BI provision.

Pitfalls To Avoid: Treating Governance As An Afterthought — Or Overdoing It

Many organizations that don't already have governance frameworks in place try to skimp on the data governance step and avoid BI governance altogether. In particular, when it comes to projects involving data discovery or bringing in external information sources, the temptation is just to get on with it and think about the boring bits later. The three most common mistakes are:

- **Hoping that the issue will just go away.** It won't. If anything, it'll get worse, because sooner or later somebody will want, or need, to understand the data that fed the model or algorithm that became the basis of a particular decision. The old adage "garbage in, garbage out" continues to apply, except in amplified form: "Big garbage in, even bigger garbage out." This can have serious consequences in terms of misguided business decisions or compliance breaches. Or, in the words of a telco exec, "If you neglect data quality and governance, you're toast." Equally, without BI governance, you may end up with report and dashboard proliferation or find that the wrong people are using the reports, dashboards, and tools — or the right people using them but not for their intended purposes.
- **Putting IT alone in charge of governance.** In many cases, IT might actually be quite capable of taking care of it. However, that doesn't mean that the IT specialists have the required business understanding to make optimal decisions. For example, the risk of compliance failure can remain high because IT may not understand all of the nuances of local legislation. Or, at the other extreme, costs can increase unnecessarily because IT applies the same principles of security and integrity to all data, even where this is not warranted.
- **Regarding data governance as a necessary evil.** For many organizations, data governance is a box-ticking exercise aimed mostly at ensuring regulatory compliance. This in turn makes it almost inevitable that the business will see it as a cost and an overhead, rather than an essential building block of a data-driven business strategy.³
- **Being too rigid in the approach to governance.** There are cases when "good enough" really *is* good enough. Agility and flexibility are crucial in the governance context as well; too rigid a governance framework will not only get in the way, but someone will circumvent it sooner or later.⁴

BEST PRACTICE NO. 4: SELECT THE RIGHT TOOLS

Technology alone doesn't deliver a good BI solution, but all BI implementations have technology at their heart in one form or other. Selecting the right tool can make the difference between a BI project that struggles to get off the ground and one that people embrace with open arms. This is why it's important to:

- **Select the most appropriate tools from a strategic as well as tactical perspective.** As is usually the case, the 80/20 rule applies. Can the tool do most of what most of its potential users want it to do? How easily can it accommodate potential future requirements? Who are those users — BI professionals in the IT department, power users on the business side, or occasional users on the business side? Are there real-time (or near real-time) processing requirements? How large and/or diverse are the data sets? What's the likely life span of the solution? Does the software comply with corporate standards?

- **Find the right balance between enforcing standards and permitting exceptions.** From a cost and support perspective, it makes sense to try and standardize on a single platform and as small a tool set as possible. In practice, this is rarely feasible, particularly in large, diverse organizations. Such organizations should focus on adhering to governance frameworks and interface standards; when it comes to the core BI platform, strategic considerations and standards should take the upper hand. As far as end user tools are concerned, it may be perfectly appropriate to select software that may only be in use for a comparatively short period of time, before either it — or the need for it — has been superseded. The key is to have processes in place that govern tool selection. Whether decision-making involves checklists or decision flow charts or other methods is a matter of choice, as are the criteria to apply when considering deviations from corporate standards.⁵
- **Emphasize the rationalization of data management platforms.** Concentrate your efforts to rationalize platforms, adhere to corporate standards, and save costs on data management, rather than on BI platforms. If all data flows through a single logical pipeline and gets integrated, transformed, and cleansed along the way, it will be much easier for you to support multiple BI platforms. If every BI platform accesses the same data sets, inherits the same data catalogs, structures, and other metadata, having different BI user interfaces will matter a lot less.

Pitfalls To Avoid: Allowing Technology Selection By Accident

Having said that technology alone cannot deliver BI success, making the wrong choices is likely to have a detrimental effect on a project. At best, your costs will go up and you'll have to extend your time scales; at worst, the entire initiative may fail. More than that, it can make it more difficult to get future BI efforts off the ground, as everybody focuses on the failure. The most common mistakes are:

- **Buying everything from your incumbent provider by default.** There are many reasons why it makes sense to acquire additional software from a vendor whose solutions you already use for other business functions, such as enterprise resource planning. However, it shouldn't be a foregone conclusion for you to do so, even if the license terms appear more favorable to begin with. If a tool doesn't provide at least 80% of the functions you require, or poses serious issues in terms of usability or training requirements, it's most likely worth looking elsewhere.
- **Not carrying out technical due diligence.** "Caveat emptor" still applies; beware of vendors making promises. This may sound like a rather condescending warning to IT professionals, but we continue to see companies signing substantial deals without putting vendor claims to a thorough test. It always gets painful when a buyer doesn't properly assess integration or skills requirements; it's even worse when, for example, they don't realize that the individual components of a vendor's complete BI suite don't all have the same technical heritage, or that the so-called "self-service" tool can only be used by extensively trained power users.

- **Allowing cost considerations to be the prime driver of technical decisions.** Software is only one of the cost elements in a BI initiative, and typically not even the largest — but, as it's the easiest to quantify, it's also the easiest to squeeze. This is usually a mistake, as hoped-for savings can pale into insignificance compared with the additional costs incurred by choosing the wrong tool. Such additional costs take many forms: extra training needs, more complex (and hence costly) integration requirements, the need for add-on software to overcome functional shortcomings or incompatibilities — the list is endless.

BEST PRACTICE NO. 5: SEEK HELP WHEN YOU NEED IT

Depending on the type of BI initiative you're embarking upon, you may realize that you need to augment internal expertise with external resources. This realization may dawn at any stage — from right at the beginning, when you sense that it's difficult to get stakeholders to agree on anything, to near the end, when it becomes clear that you don't have enough resources to support the rollout of the new tool. External experts can also add value via the methodologies and processes they bring with them. To maximize the chances of BI project success:

- **Decide what kind of assistance you need and choose providers accordingly.** Many different types of external support can come into play during a BI initiative, whether it's a major corporate program or a specific project. For example, you may feel that external facilitation is more likely to ensure alignment with business goals; you would like assistance developing the most appropriate processes to support your BI initiative; your BI experts in IT require technical training; or maybe you just need extra resources on a temporary basis to clean up and integrate data. Another common scenario is the lack of in-house expertise in areas such as advanced analytics or big data technologies. Whatever your need, exercise care when choosing a supplier.⁶ Don't just take into account the portfolio of offerings an individual provider may bring to the table — make sure that it's the right cultural fit for your organization. You and your team are going to have to work very closely with whomever you've chosen to assist.
- **Adapt existing vendor selection processes if required.** This isn't an invitation to ride roughshod over existing corporate processes. However, the hurdles and unexpected requirements that can arise during a BI project require a pragmatic and flexible approach; if a lengthy, bureaucratic process delays partner selection to the degree that the project is at risk, it's probably time to change — or even ignore — that process.
- **Be clear about how you want your external partners to work with you.** Before starting to negotiate, it's important to decide what you expect external partners to deliver, and how. Do you just need extra bodies temporarily to help with specific tasks? Do you want the external partner to continue providing support indefinitely after the project goes live, or do you want to make sure that it transfers skills to your own people during the course of the project?

- **Decide if you're ready for BI software-as-a-service or even BI business process outsourcing.** Several of the organizations we spoke with found that it was quicker and easier to introduce new BI capabilities by making use of cloud services. Typically used as an adjunct to existing BI environments, the as-a-service approach may not only provide a faster path to answering business questions and address skills shortages, but also help introduce new ways of thinking about BI delivery in organizations that have become set in their ways. Cloud-based services may also be more suitable when external data sets are involved.

Pitfalls To Avoid: Abdicating Your Responsibilities

While external partners can make the difference between BI success and BI failure, there are limits to what even the best provider can achieve. You've sown the seeds of failure if you:

- **Expect external parties to solve problems on their own.** Unless you're working collaboratively with your provider, it's unlikely that you'll achieve the desired result. Even with the best skills, no outsider can know your organization, its data, and its processes as well as you do.
- **Automatically award additional work to the same provider.** A company that you've already engaged to upskill your technical staff may not be the best place to facilitate a workshop with your most senior business leaders to tease out clarification about certain KPIs or tackle the delicate subject of process changes that the firm may need to make to get the most value out of the BI initiative that's underway.
- **Abdicate responsibility when using cloud services.** Moving data management or analytics to an external cloud service provider does not change anything when it comes to taking responsibility for data and the processes governing how the data is used. Failing to negotiate service-level agreements that reflect your compliance requirements or to make sure that your cloud service provider can track and prove to you that it's taken care of all regulatory, data protection, and security requirements can lead to uncomfortable moments with auditors and regulators.

BEST PRACTICE NO. 6: MAKE CHANGE MANAGEMENT AND TRAINING INTEGRAL

Change management and training are critical aspects of any BI initiative. Most importantly, you need to include them right from the beginning of any program or project. For the best chances of success:

- **Never underestimate the need for change management.** People are the most critical element of any BI project. Whether it's IT specialists or business professionals, regardless of seniority level, if they're not comfortable with the tools you're introducing or the process changes you're making, they can make the project fail — not through malicious intent, but by simply not engaging and by sticking to known ways of accomplishing their tasks. This is why it's so important to consider change management right from the start and to put the necessary processes and support structures in place.

- **Reflect the skill and comfort level of business users when rolling out new BI tools.** In some organizations, business users may be eagerly queuing up to get new tools, dashboards, reports, or data discovery capabilities. Some may already be very comfortable working with BI tools themselves, even creating their own apps. But all organizations are different; depending on what business professionals are used to, they may eye the new with great suspicion. All of these scenarios require tailored approaches that take company culture and established ways of working into account. For example, when faced with a skeptical user base very much set in its ways, one firm decided to start by simply recreating an existing set of reports in the new BI tool in order to give users the chance to become acquainted with the tool and gain confidence in the data it delivered to them. Once users overcame the initial hurdles and the value and potential of the new tool became clear, the requests for further functions started pouring in.
- **Don't skimp on training and support.** For each end user-facing deliverable in your BI project, assess what support mechanisms may be required, both for existing staff as well as newcomers to the organization or team. Whether you use information observation techniques or formal usability labs and focus groups, make sure that you understand where the knowledge and skills gaps are and how best to address them. And don't leave it until the last minute; apart from anything else, you may find that redesigning a report or dashboard may be a better solution than writing a 20-page training manual for it. Decide early on what mix of formal documentation, eLearning, instructor-led training, and one-on-one tuition is most appropriate. Some companies also assess the potential ongoing training needs of individuals by analyzing how they use the tools available to them and offering appropriate hints and tips (or remedial training, if required).
- **Create a knowledge-sharing environment.** The best tips and tricks often come from colleagues — whether it's business professionals or BI specialists on the technology side — who have already solved a particular problem. Rather than risk having people work with suboptimal solutions, reinvent the wheel, or simply struggle to solve a problem, put the tools and processes in place to enable people to share their discoveries and seek help from the most appropriate expert. Unless this is already in place, it also requires creating a culture that encourages and supports the sharing of expertise.

Pitfalls To Avoid: Focusing On Technology Development And Rollout

Many BI tools and capabilities fail to gain traction once they're rolled out, even if the technology is as perfect as can be. Typically, the main reasons for this are:

- **Completely ignoring the need for change management.** Organizations often underestimate just how much it takes to get people to change the way they do their jobs. Throw company culture, politics, and vested interests into the mix and you have a perfect recipe for disaster, in the shape of accusations that an IT project has failed to deliver yet again.

- **Treating training as an afterthought rather than putting it together expertly.** Often, the same people who developed dashboards or reports or configured new tools are also the ones the company asks to provide the training. But that doesn't make them experts in instructional design. Also, given that they know their work inside out, they're not best placed to put themselves in the shoes of somebody who's never seen the new environment before.

WHAT IT MEANS

TIMES ARE CHANGING; YOUR APPROACH TO BI MUST CHANGE ALONG WITH THEM

How companies use the data that's available to them from internal and external sources is increasingly going to be a key competitive differentiator, if not *the* key competitive differentiator. Applying the best practices that we've identified will help deliver the BI capabilities required to make organizations more data-driven — in particular the importance of agility and business user self-service. But it doesn't stop there. Whether you call it "big data" or not, increasing data volumes and the variety of data types that firms must process pose a challenge to existing ways of delivering BI and analytics capabilities. Increasingly tech-savvy business professionals want to have a greater say in the software tools and hardware devices they use as part of their job, and there's a greater variety to choose from than ever before. Firms need to adapt their governance frameworks, technology infrastructures, and tools to strike the right balance between enabling the business to get on with its job and maintaining control where necessary to avoid cost overruns, duplication, and compliance breaches. Firms need to adapt existing approaches to account for:

- **The "good enough" principle.** Many business decisions don't depend on a precise figure; they may only need an indication of trends or a rough estimate. And speed is of the essence for many data requirements. While it remains important to understand a data source and the level of trust that one can apply to it, firms do not need to treat all data with the same rigor.
- **A different approach to data architecture.** Traditional layer-cake architectures — source systems at the bottom, integration and DW in the middle, and BI and analytics on top — are proving ill-suited to the new environment of larger data volumes, greater variety of data types, and differing requirements for data quality and speed of delivery. By contrast, new architectures that involve canonical data models, data virtualization (AKA the information fabric), and hub-and-spoke data management can help break down silos and provides a more flexible environment better suited to catering for the often conflicting demands posed by a data-driven organization.⁷
- **New ways of delivering applications — or not delivering them.** One CIO we spoke with has the strategic goal of providing data to the business via APIs, with the business deciding what tools and applications to deploy. While this approach may be a step too far for many organizations (at least for now), the principle of decoupling back-end systems and data

preparation from the delivery of capabilities to end users — for example, by using new flexible and personalized approaches such as internal app stores — still applies.

ENDNOTES

- ¹ If you want to explore whether a true Agile methodology is right for you, you will find a wealth of information and guidance in the Agile and Lean playbook. Forrester has also conducted an evaluation of the top vendors in self-service BI platforms. See the June 12, 2012, “[The Forrester Wave™: Self-Service Business Intelligence Platforms, Q2 2012](#)” report.

If you find that your project and program management support structures and processes are no longer fit for purpose, or aren’t suited to the context of your BI initiative, see the October 16, 2009, “[Making The Case For The Next-Generation PMO](#)” report.
- ² The key foundational principle for enabling effective self-service is the separation of data preparation and data usage within the framework of an agile BI organization. See the January 25, 2013, “[Build An Agile BI Organization](#)” report.
- ³ Forrester clients describe their data governance work as long on effort, but limited in success. Clients describe an inability to sustain data governance beyond a project, feel it is too bureaucratic, or unable to show business value. Yet there is strong evidence that competency in data governance leads to both operational efficiency and tangible business outcomes. Top-performing organizations are using data for competitive advantage and digging deeper into internal and external data. It is not technology that separates top performers from the rest of the pack; it is data governance and the alignment of data process and business process that makes the difference. See the May 20, 2013, “[Data Governance Equals Business Opportunity. No, Really](#)” report.
- ⁴ For a detailed discussion of how governance models need to change, see the August 31, 2012, “[Rearchitect Governance For Sustainable Business Agility](#)” report.
- ⁵ For guidance on how to match BI tools to the most common use case, check out the following Forrester blog. Source: Boris Evelson, “Use Cases For Specific BI Tools,” Boris Evelson’s Blog, June 28, 2012 (http://blogs.forrester.com/boris_evelson/12-06-28-use_cases_for_specific_bi_tools).
- ⁶ For more details on the best practices and methodology to select a BI service provider, see the October 18, 2012, “[The Forrester Wave™: Business Intelligence Services Providers, Q4 2012](#)” report.
- ⁷ For more details on data virtualization and canonical data model, see the January 5, 2012 “[The Forrester Wave™: Data Virtualization, Q1 2012](#)” report. For more details on emerging hub-and-spoke data architectures, see the June 12, 2013, “[Deliver On Big Data Potential With A Hub-And-Spoke Architecture](#)” report.

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