The 11 Key Questions to Ask of a BI Solution

Can your solution answer Yes to all 11?

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Finally, Business Intelligence That Says Yes

Historically, business intelligence has promised a lot of "Yes," but the reality has been filled with "Nos." The promises are enormously compelling. Companies collect vast amounts of information about markets, customers, operations, and financial performance. Harnessing this information to drive better business results can have tremendous impact. Some corporations have achieved impressive gains after investing millions of dollars and multiple years of effort into building traditional analytical systems.

However, these success stories are frustratingly few and far between. Traditional BI, long the only option, can be prohibitively costly and complex. For companies without millions of dollars to invest, the options have been few and unattractive.

Further, even when these investments of time and resources can be made, they don't guarantee success. For too many companies, BI doesn't deliver on its promises -- it is too costly, too complicated, too difficult to scale and extend.

The end result is a reality in which only a small minority of employees have access to BI. According to Gartner, only 20% of employees use BI today. This falls far short of the potential transformative capabilities of BI throughout a company.

It's time for BI that says Yes. Yes to the requirements of your budget, business, and business users. Yes to fewer compromises.

This whitepaper first looks at the fundamental requirements that a BI solution should deliver to your company. Next, this whitepaper covers the 11 Key Questions that you should be asking of a future BI technology partner. When the BI provider can answer Yes to all of these questions, you have BI that is capable of fulfilling your analytical and reporting needs both today and over time – it is flexible, powerful, and efficient. It is BI that says Yes.

The Four Foundational

Requirements:

• Historical analysis

• Forecasting/future projections

• Integration of data from
across business functions

• Easily explored reporting and
analysis

Business Insight—Four Foundational Requirements

Any organization investing in business intelligence needs to define the capabilities that will help them to win against the strongest competitors in their market. Here are the four bedrock requirements that should define the core capabilities of your solution:

Historical analysis and reporting.

Fundamentally, BI should give you insight into both business performance and the drivers of that performance. An understanding of business influencers and results is the foundation for successful, proactive decision making. Technically, this capability requires the mapping and analysis of data over multiple years. This can also often mean the modeling and manipulation of hundreds of millions of database rows.

Forecasting and future projection.

While understanding historical data is a first step, it is also vital to project those findings into the future. For example, once you know how different types of sales deals have progressed in the past, you can examine current opportunities from that perspective and make future forecasts. The ability to forecast and align your business resources accordingly are key to success.

Ability to integrate information from multiple business functions.

Strategic insight often requires data from multiple systems. For example, operational results require a financial perspective to show the full picture. Sales management benefits from a comprehensive view of the demand funnel. Targeted, customized marketing efforts require analysis compiled from customer, marketing, and purchasing data. Your solution needs to be able to easily integrate information from multiple sources in order to get answers to broad business questions.

Easily explored reporting and analysis.

Decision makers need to understand overarching business views and trends. They also need to examine increasing levels of detail to understand what actions can be taken to achieve further success. It's not enough to simply have a report; if that report is not explorable, it might raise critical issues but not satisfy the need to know more detail in order to make a decision. A full range of drill-down and drill-across capabilities make it possible for decisionmakers to fully understand an issue at hand and make critical decisions.

These four capabilities form the foundation of a powerful business intelligence solution that can answer the critical questions facing your business. If a solution cannot meet one of these requirements, your solution will not have the full range of analytical capability that you will need to be competitive.

Even seemingly basic questions can require data from a variety of operational systems, 3rd party data sources, and spreadsheets.

The 11 Key Questions to Ask of a BI Solution

If the solution that you are considering meets the Four Foundational Requirements, it is time to delve more deeply. The following twelve questions will help you to assess your options and ensure that you are getting a robust, powerful solution that meets your business requirements.

Question 1: Can I get a comprehensive view of my business?

Even basic business questions such as "Which marketing campaigns generated the most revenue this year?" or "Did the product redesign have the desired effect on part inventory levels?" could require data from different operational systems, 3rd party or partner sources, databases, and individual spreadsheets. As a result, a core BI requirement is the ability to access, acquire, and integrate data from multiple sources.

Traditional BI solutions provide this capability, but it can be arduous to implement and maintain. Traditional BI accesses multiple data sources with complex and expensive ETL systems that bring data together into one physical database. Unfortunately, this database is totally disconnected from the world of the business user. This requires another round of programming to connect the physical data with the business user model.

A more modern solution enables you to:

- **Experience a powerful, usable solution.** Traditional solutions build from the bottom up. A more modern approach starts instead from the top - the logical business model. It then works downwards to manage the physical data that is required to deliver these business views. This "top down" approach manages the complexity that results from integrating multiple data sources – so that the solution is both powerful and easy to use.

- **Analyze information from all types of data assets.** Data are provided to the business in a variety of ways. Your BI solution needs to extract information from corporate systems, stand-alone databases, flat files, XML files, and even spreadsheets.

- **Access remote or secured databases.** Traditional BI uses an ETL process to extract data out of a source database and place it into a data warehouse, while some SaaS providers can only access data that is uploaded to their servers. The more sophisticated SaaS BI providers can both upload data and access local databases; that is, it allows you to access and analyze data without actually uploading it. This is accomplished via real-time queries against the database.

- **Manage the required metadata.** In addition to the management of data sources, multi-source BI requires the management of all accompanying metadata, the information about the data itself.

Modern BI solutions make it possible even for smaller organizations to afford a comprehensive BI solution.

Question 2: Does it provide full features at an affordable price?

Traditional BI solutions were often affordable only to the largest companies, which had the large budget, IT staff, and resources required for initial deployment and ongoing maintenance. Departments of enterprises and SMBs were effectively priced out of the market.

Recently, the attractiveness of the midmarket has resulted in new "midsize" solutions from traditional players and from new vendors. The catch, however, is that the lower price often only purchases a "crippled" or partial solution.

So how can a smaller organization get a true BI solution? A fully deployed BI solution must include the following: ETL and scheduling, database, metadata management, banded/pixel perfect reporting, dashboards, e-mail alerts, and OLAP slice-and-dice functionality.

Look for a solution that:

- **Delivers a full BI solution, not parts of one.** The license should include everything that you need for a true solution: ETL, database management, meta-data management, OLAP slice-and-dice query generation, banded reporting, ad hoc reporting, and visual dashboards. A solution that has all of the necessary components, already integrated for you, will deliver the fastest, greatest value to your organization.

- **Has easy-to-understand, affordable pricing.** Traditional solutions have many cost components – hardware, software, consultants, in-house IT, support, and ongoing maintenance. As a result, the pricing is both high and difficult to track fully. Modern solutions, such as ones delivered software-as-a-service (SaaS), have more transparent and affordable pricing. SaaS pricing is more comprehensive – the cost of hardware, software, and support is in one monthly number. SaaS pricing is also more affordable, since it leverages a shared cost structure, and these lower costs are spread over time. This makes it easier to deploy and maintain a BI solution.

Question 3: Can I start seeing value within 90 days?

In order for BI to be effective, it has to be deployed quickly enough to address the critical issues that you are currently facing.

Time to value is a prime determinant of the ROI of a business intelligence deployment. Traditional BI solutions have struggled to deliver value to stakeholders within a desirable timeframe. Due to challenges such as high upfront capital expenditures, extensive IT resource requirements, and lengthy development schedules, many traditional BI projects have taken over 12 to 18 months to complete.

Modern BI solutions can dramatically reduce the time to value by making use of the following:

- Fully integrated solutions, from ETL to analytical engine to reporting engine
- Automation of standard processes
- Use of templates for typical reporting requirements, such as sales reporting, financial reporting, etc.
- Software-as-a-service (SaaS) or on-demand, delivery models
- Leveraging of existing data warehousing investments

Modern solutions can also enable processes and approaches for BI deployment that increase the likelihood of success. These include:

- **Proving success incrementally and iteratively – avoiding the "Big Bang."** In the earlier days of BI, customers were tempted to create a "big bang" solution, since the cost and effort of creating the initial solution and updating it over time were so high.   Today, a BI solution offering a fully integrated architecture – one with all of the components already provided, working together -- allows companies to focus on initial high-need projects, prove success, and expand or adapt over time. This ability to iterate over time provides value more quickly, lowers ongoing cost, and increases the likelihood of success.

- **Deploying to the existing infrastructure; avoiding major infrastructure upgrades.** The second major reason that traditional solutions are slow to deploy is that they often require an additional investment in new hardware or software. This lengthens timeframes, since a major capital purchase requires a financial approval process that can take up to a full year of review and approval. If a solution can leverage the existing infrastructure, this process step is avoided. Also, if the solution itself is more affordable, or, like SaaS solutions, offered as a subscription (which can be charged to operating expenses, not capital budgets), this budgeting process step can be bypassed or shortened.

- **Deploying with the IT team you have.** The construction of a traditional BI solution requires many specialized resources like data modelers and ETL specialists. Any plan that requires these professionals will confront resource bottlenecks.

Data security and availability are key requirements of a BI project.

Question 4: Can I be assured that my data is secure and available?

Data security and availability are key requirements for any IT system. You need a BI solution that matches the same high levels of performance, reliability, and security that you expect of the other systems in your portfolio.

Security is fundamental, since the data your business uses is critical to competitive advantage, effective operations, and consumer or patient privacy. Availability is also critical, since you need to be able to make decisions in a timely manner, addressing issues as they emerge. Your system needs to be ready to respond when you need it.

Your BI system should:

- **Provide high availability.** If the solution that you are considering is a traditional, on-premise one, how often is it down for maintenance or updates? How reliably is it available, given your configuration? If the solution that you are considering is a SaaS solution, what is the uptime guaranteed in subscription contracts? You will want to be sure that your solution will be available 99% of the time, if it is on-premise or SaaS.

- **Be built on high performance hardware.** If you are selecting a SaaS vendor, make sure that their solution is operating on high performance hardware that will provide the necessary reliability and availability that you seek. If you are selecting an on-premise vendor, make sure that you are making the appropriate investments into the type and quantity of hardware that will provide high reliability and will also scale over time.

- **Provide flexible security models.** Most deployments have varying levels of feature access, depending on the user's role. Some users may only be able to view a subset of reports, such as sales reports, while others will have full access to all data, reports, and administration features. The solution needs to ensure that users have access appropriate to their role. This will require features such as defining row and column filters to limit data to those individuals and groups who require it.

- **Have SAS 70 data center certification (SaaS providers only).** If you are reviewing SaaS vendors, be sure that the data center where the information will be stored has SAS 70 Certification. This represents that a service organization has been through an in-depth audit of their control objectives and control activities, which include controls over information technology and related processes.

Traditional IT solutions can monopolize IT resources. Modern solutions have a lighter IT footprint, so that IT can focus on higher priorities.

Question 5: Can I proceed with limited IT resources?

Traditional BI solutions require significant IT resources up front for deployment, as well as a high level of ongoing resources for maintenance, support, and report creation and updating.

These intense IT requirements often limited the use of BI by smaller and midsize organizations, which didn't have a deep IT bench, or departments of enterprises, which didn't get enough allocation of IT resources.

Worse, IT resources were often required for report creation or updating. This led to long lines outside of the IT department by business managers who wanted new or better reporting. IT was swamped, and unable to focus on other priorities.

Modern solutions have a lighter IT footprint, which allows IT to focus on high priority projects, and also ensures that business users get their questions answered quickly and independently of IT. Look for a solution that:

- **Minimizes IT resource requirements.** Reducing the upfront and ongoing IT resource requirements both saves money and increases the speed of deployment. SaaS based solutions, for example, require less IT resources since the solution is provided as a service – there is no hardware to buy, no software components to cobble together. Updates happen automatically, so IT maintenance burdens are dramatically reduced.

- **Respects IT standards and expertise.**   An organization's IT team is fundamental to the company's ongoing operational success. The solution should meet IT requirements for security, availability, and compatibility with other systems.

- **Empowers the end users.** When end users are more self sufficient, the demands on IT are lighter, and IT can better prioritize their activities. Ideally, trained users can define reports, dashboards, and alerts on their own, without any Java programming or scripting. IT can oversee critical data management functions without getting bogged down in time consuming user-facing report definitions.

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A solution that is already integrated has far lower deployment and ongoing risk than a solution that starts as standalone components.

Question 6: Does it avoid risky integrations?

Another major contributor to the high risk in traditional BI solution development is the large number of products and technologies that must be bolted together to get a full solution. To start with, an ETL product is used to manage the task of extracting data, transforming it for analysis and inserting it into the warehouse. These tools are very technical and require expensive programmers with specialized training.

But vendors have menacing gaps within their own product suites. Most BI suites have been created from acquired technologies with only loose integration between the capabilities. Most enterprise BI vendors require you to use separate technologies for OLAP, reporting, dashboards, and even on-line access to data. These separate products each require configuration and support.

Modern vendors take an entirely different approach to solving the technology problem. They:

- **Deliver all key functionality in one solution.** A fully integrated BI platform means you have one solution to master and all of your metadata is encapsulated in one place.

- **Require your staff to learn one technology and toolset.** A single solution has one set of commands, syntax, and data structures throughout. Once your users have been quickly trained to develop applications on the underlying platform, they will be fully equipped to create all types of customer facing functionality.

- **Avoid custom coding.** Because Birst connects everything within one application, you eliminate all of the situations where you would be required to use custom java code to script data or custom reports.

- **Ease vendor management.** Birst reduces the number of responsible parties to the magic number of one. You won't have to live with finger pointing and cross vendor diagnostics when you have a problem. Birst provides a unique answer to the ultimate need that you have for accountability.

Insight is most powerful when it is unleashed by the business users themselves, not just a dedicated analytics team.

Question 7: Can business users easily create and explore their own dashboards and reports?

Knowledge and speed are critical to solving business challenges. While BI provides the information, it is the business manager who provides the timely response to the new information. When insight is in the hands of business professionals who can make a difference, organizations can achieve great success.

For this reason, it's vital for a BI solution to make it easy for business users, not just IT users, to analyze and explore information. The more BI becomes "pervasive" in an organization, the more agile and proactive a business can become.

Achieving a solution that is easy for business users to "self serve" is challenging, however. A solution has to be powerful enough to manage complexity and make it simple for the end user.

To ensure that you have a solution from which your business users can "self serve," look for one that:

- **Is easy to learn and use.** Users should be able to come up to speed on the system within days, not months. The solution itself should take advantage of user interface standards – dragging and dropping, dropdown boxes, highlighting – that are already familiar to a web savvy audience. The vendor should also provide adequate online, webinar, or in-person training to ensure that your user base can take best advantage of the solution.

- **Makes it easy to explore data and new information.** A report is of limited use if you can't easily dig for more details or find the drivers of why a result happened as it did. Dashboards and reports that allow you to "drill" into deeper details, filter information to the exact data set that you need, or reset information to desired parameters make it possible for you to truly explore your data.

- **Delivers quick responses; allows users to hone in on interesting data.** Even if the solution is analyzing gigabytes of information from across multiple tables and data sources, answers need to be delivered quickly to the user. Responsiveness, when combined with easy data exploration, allows users to continue asking questions, refining them with each answer, to hone in analyzing the exact issue of interest.

- **Makes the complex easy.** In order to make BI approachable for business users, the solution needs to manage complexity to make analysis easier to conduct. For example, one of the most complicated aspects of BI is dealing with time variables. Every company has its own approach, and many business questions include complex time nuances. Modern solutions can simplify this complexity, allowing users to simply select options from a menu. Rather than figuring out how to create formulas on their own, time-based reports can be created with ease.

Ideally, the solution can meet your current needs and easily scale to meet future needs – even when that's expanding from ten to ten thousand users.

Question 8: Can the solution scale to a large, diverse user base?

Even BI projects with modest initial goals can eventually become huge deployments, and you want to make sure that your solution can handle whatever the future holds.   If you are a midsize business with ambitions to grow significantly larger, or a department of a large organization that realizes that your solution may become a standard for the entire company – you want to make sure that your solution can handle large, diverse groups of users, even if that's not where you're starting.

A modern, SaaS architecture is highly flexible and scalable.   It allows organizations to start small, but add users quickly and at large scale. To be future proof, you want your solution to:

- **Quickly and easily scale to thousands of users.** If your user base grows from ten people to thousands in a short period of time, you want to be sure that you can handle that growth in stride, without a major re-architecting of the solution or the use of the full efforts of your IT team. This has two benefits –since you only have to pay for what you need today, and you only have to pay for what you need tomorrow, too.   You don't have to pay upfront for "shelfware" that may or may not get used. The solution should be able to add on users quickly, without a serious degradation in performance, and without major resource and time requirements.

- **Support multiple roles.** As deployments get larger, users tend to fall into different categories – super users, average users, occasional users. They may have different demands on data, or have different security levels. Your solution has to be able to easily accommodate these different types of users, their access patterns, feature needs, and the ability to easily administer them all.

- **Grow without resetting.** Scale should be organic and evolutionary, not disruptive. You should be able to expand easily, without having to make significant new investments in infrastructure or supporting headcount. It should be a natural expansion, not a complete reconstruction of the existing implementation.

The demands of your business can change rapidly and dramatically. Your BI solution needs to keep pace.

Question 9: Can the solution keep up with my business as its needs change?

A changing business landscape can challenge every company's key systems, but BI solutions confront even bigger obstacles than most. First, because of their historical perspective, they must rationalize data across every version of the business over a period of several years. BI cannot just move on to the next release—it must accommodate the next release, as well as every prior iteration. Second, much of the value of BI is to make sense of changing measures of business effectiveness. Changes in customers, competitors, product offerings, suppliers, and business units are all the target of your BI effort. A successful solution must accommodate easily a dynamic business environment, rather than requiring major reconstruction of data and functionality with each new major product update.

A successful solution must:

- **Add new data sources without requiring a major reset of the solution.** As your BI solution demonstrates its value with initial projects, demand will increase to analyze more data sources. Your system should be architected in such a way that it can accommodate this data easily and seamlessly, without significant IT intervention or recoding of the solution.

- **Be able to evaluate changes over time.** To be effective, a BI solution must model the many changes that happen over time. Looking at data from an historical perspective requires a technology that can provide meaningful views across data that is constantly changing.

- **Offer business users self-service, so that they can answer their own questions quickly and easily.** Successful BI solutions become popular solutions. If IT intervention is required for every new report request or report update request, organizations end up with angry business users and choked up IT request queues. When business users are empowered to build and update their own reports and dashboards, the business is agile and the IT agenda is focused on priorities. SaaS BI solutions, which have the lightest requirements of IT teams, are particularly helpful on this point. Heavy IT footprint solutions, such as open source software, can create substantial IT backlogs over time.

When information can be easily and securely shared with partners, vendors, or customers, the entire business ecosystem is more efficient and effective.

Question 10: Can the solution easily serve my entire ecosystem?

Increasingly, organizations function by working with a network of suppliers, retailers, partners, and channel resellers. Empowering these participants in your ecosystem with timely information and analysis is a key to making this network function smoothly.

Achieving this extended view of information brings additional challenges to your BI system, however. It requires a solution that can be easily and securely accessed anywhere in the world. It also requires that information be tailored to the level of access required – suppliers may have different views from logistics partners. It may also require the effective delivery of information to a broad array of devices - not just desktops and laptops, but mobile phones or tablet computers as well.

A solution that serves your entire ecosystem should:

- **Deliver a solution globally.** While your direct employees may be concentrated in one locale, your extended network is probably national or global. Because of this, your solution must be accessible from any point in the world where it is needed. While delivering a system like this in the traditional method is complicated and prohibitively expensive, it can be achieved fairly easily with SaaS solutions, which are available anywhere there is an internet connection.

- **Provide for multiple levels of access, with high security.** The solution should be able to control for which type and amount of data gets seen, as well as which partners have the ability to add data or create their own reports. Users could vary from people who only get alerts, people who can see reports, and people who have full access to the solution. All should be protected with the highest level of information security.

- **Integrate partner data.** Your strategic partners demand higher levels of data integration. In the same way that your sales and marketing teams want a unified view of the demand generation funnel, your partners will want to see how, for example, your finished good inventory level expectations match with their production capacity or parts inventories.

- **Deliver to all types of devices.** Supply chain users may be on the factory floor. Sales users may be in transit, and executive users could be anywhere. Keeping your ecosystem in synch requires that information be consumed by the most convenient device, whether this is a desktop, laptop, mobile phone, or tablet computer. SaaS solutions have another advantage here, since they are accessed through a modern browser, so they can be easily adapted to be consumed by small format devices.

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A solution provider that is dedicated to providing best in class BI for its customers, both now and in the future, is a better bet.

Question 11: Is the solution provider dedicated to my ongoing success in BI?

Are the BI provider's technology, incentives and motivations aligned with your ongoing needs as a BI customer? Many traditional BI solutions have core technology developed over two decades ago. These products were architected in the age of thick clients, mainframe applications, and Unix database servers. While these products have been updated with veneers of modern technology, they still retain their older technology foundations.

Also, many traditional BI solutions have a business model that focuses on the initial sale, not ongoing success. In the traditional software model, the initial implementation is the largest payment to the software vendor. So completing the initial sale is paramount, instead of ensuring satisfaction over the full customer lifetime.

Companies deserve better than this. They deserve a company that is dedicated to long term customer success. A modern vendor:

- **Starts with a modern, standards-based architecture.** Unlike traditional vendors that continue to market what are essentially legacy products, modern vendors have technology that is fully aligned with the cloud-based realities of today.

- **Supports seamless, regular upgrades.** Once a traditional BI solution is deployed, it can be complicated, time consuming, and disruptive to upgrade the solution, even when the new features are very desirable. With a SaaS solution, new features and functionality are added regularly and seamlessly, so that you can quickly experience the benefits of new development while avoiding downtime and disruptions.

- **Lives and dies by BI.** The BI product category has come to be dominated by technology giants that generate the majority of their revenues by doing other things besides BI. As a result, the focus on business intelligence innovation and customer satisfaction has declined. A vendor solely focused on business intelligence is more dedicated to innovation and customer success in BI

- **Is successful when the customer is successful – now and in the future.** SaaS vendors have a subscription model. They make their money over the lifetime of a customer relationship, so their incentive is to ensure that companies are up and running quickly, and satisfied with the ongoing solution today, tomorrow, and five years from now. This is a significant departure from the traditional model, where customers paid a significant amount up front, but were left to manage deployment and maintenance themselves; customer satisfaction concerns were left to the customer themselves, and satisfaction was often low.

Conclusion – Evaluating the Major Forms of BI

When considering a BI investment, the 11 Key Questions can guide you to finding the optimal solution for your needs. Here is a summary of how the leading SaaS BI provider, Birst, compares with the other three categories of BI solution – on premise, open source, and in-memory.

The 11 Key Questions	Traditional on-premise	Open Source	In Memory	Birst
1. Can I get a comprehensive view of my business?	Yes	Yes	Yes	Yes
2. Does it provide full features at an affordable price?	No	No	Limited	Yes
3. Can I start seeing value within 90 days?	No	No	Yes	Yes
4. Can I be assured that my data is secure and available?	Yes	Yes	Yes	Yes
5. Can I proceed with limited IT resources?	No	No	Yes	Yes
6. Does it avoid risky integrations?	No	No	No	Yes
7. Can business users easily create and explore their own dashboards and reports?	No	No	Yes	Yes
8. Can the solution scale to a large, diverse user base?	Yes	Yes	No	Yes
9. 9. Can the solution keep up with my business as its needs change?	No	No	Limited	Yes
10. 10. Can the solution easily serve my entire ecosystem?	No	No	No	Yes
11. 11. Is the solution provider dedicated to my ongoing success in BI?	Maybe	Maybe	Maybe	Yes

We invite you to answer these 11 questions for yourself. We are confident that you will find that Birst delivers a Yes for your organization, too.

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