FOCUS

Focus Experts' Briefing: BI: On Demand, On Premise, Open Source or Outsource?

Focus Research

October 2010

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Introduction

On-premise or on-demand, Business intelligence (BI) solutions can help businesses to become more intelligent about key processes. But what are the benefits to implementing a cloud-based BI system over traditional software? Are on-demand BI applications as popular in the enterprise as they are with SMB/midmarket companies? There's also the option of outsourcing: What are some reasons people don't outsource BI? How do the architectures and of enterprise vs. open source vs. SaaS BI compare? This Research Briefing leverages the expertise and experience of Focus Experts and other Focus Community members. Their guidance will help gain insight into the on-premise/on-demand/open source/outsourcing issues surrounding BI.

We would like to recognize the contributions of the following Focus Experts to this Experts Briefing:

Malcolm Chisholm (www.focus.com/profiles/malcolm-chisholm/public/) (see page 6)

Louis Columbus (www.focus.com/profiles/louis-columbus/public/) (see page 4)

Kirsty Lee (www.focus.com/profiles/kirsty-lee/public/) (see page 4)

Barbara Lewis (www.focus.com/profiles/barbara-lewis/public/) (see pages 3 and 5)

J Michael Mangalam (www.focus.com/profiles/j-michael-mangalam/public/) (see page 7)

Wayne Kernochan (http://www.focus.com/profiles/wayne-kernochan/public/) (see page 8)

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1 Q&A: Why Choose Cloud-Based BI?

Why would one opt for a cloud-based BI system over traditional software?

What are the benefits to implementing a cloud-based BI system over traditional software? Why would a company chose to have this data in the cloud?

— *Doug Stripling*

Best Answer

This is a great question with implications far beyond BI. In general, cloud-based services allow the customer (meaning you) to push data center hardware and infrastructure onto the vendor. By sharing data center costs among many customers, the software vendor can offer economies of scale, compared with traditional on-premise software. Beyond the infrastructure aspects, cloud vendors typically sell software on a usage, pay as you go, basis. In contrast, traditional vendors require a large upfront payment but then you "own" the software.

In general, cloud based software is simpler to deploy, but the tradeoff is less control and flexibility than you might have with on-premise software. That's not always a bad thing, but it is a difference.

Before buying cloud software, ask your financial folks to analyze lifetime costs (say, 5-10 years) of on-premise vs cloud purchase. Be sure to include all implementation costs and also support/maintenance costs over that life time.

— *Michael Krigsman, Focus adviser and CEO of Asuret Inc.*

Additional Answers

There are a number of reasons to opt for SaaS BI (cloud BI) over the traditional, on-premise software:

1. Lower TCO. SaaS solutions are often significantly more affordable than traditional software (both upfront costs and ongoing maintenance). Combine that with the fact that you only have to buy what you need with SaaS, there is significant savings here.

2. Faster time to value. SaaS solutions often take less time to deploy. You can typically start seeing value in the first 90 days, instead of waiting months or years for a traditional deployment to roll out.

3. Ease of use. Most SaaS BI solutions were built to be friendlier to the business user, which is also ultimately friendlier to IT. If business users can explore and create dashboards and reports on their own, they get answers more quickly and IT has less of a line outside of its door.

— *Barbara Lewis, director of Birst*

Of the early adopters of cloud-based BI systems I have spoken with, the ability to bring BI applications, frameworks and tools on a role-based level quickly and inexpensively into their organizations is the deciding factor. Low up-front costs are a consideration, yet not the only one. The other fascinating dynamic in this market right now is the array of pricing strategies being offered by vendors. Pricing literally has become nearly as customizable as the applications in some niches of this market.

CIOs are under greater pressure right now to make BI and all its potential pay off, yet none of them wants to risk their careers on an entirely new application purchase. The result is that cloud-based BI is giving these CIOs a convenient strategy to mitigate risk by piloting these applications, while also delivering an entirely new, and often more customizable graphical interfaces than their legacy BI systems. CIOs like this because they have a chance to deliver an upgraded user interface, often role-based, entirely through the cloud, without ripping and replacing a legacy BI system.

Cloud-based BI systems in manufacturing are in pilot phase in many organizations today. The goal is delivery of role-based analytics that can be tailored to the needs of production, supply chain, pricing, sales and demand management departments. There is much potential for cloud-based BI systems that can traverse supply chains globally and also retain ease of use, to overcome user's resistance to a new application. These pilots run 30 to 120 days and usually are bench-marked so performance gains are measured. Due to these factors, organizations will typically opt for a cloud-based BI system.

— Louis Columbus, Focus expert sales/marketing expert at Cincom

There are many advantages of SaaS or online BI over traditional BI:

1. Small and medium-sized businesses often cannot justify the large cap-ex of traditional BI, do not have the IT resources to run an on premise database and server system and are not sure that they have the breadth or depth of data to warrant such a system. Often their needs change and evolve far faster than software can be developed and installed.

2. Traditional BI demands technical expertise both to manage and use. Business users could not quickly perform analysis themselves; queries had to be made through the IT department and often involved long delays. As there is no software to install, there is no daily maintenance or routine tasks to be done, so nothing to require extra IT hands or expertise.

3. With traditional BI, having enough data to justify the BI spend is certainly a problem. The huge upfront costs and time investment often cannot be justified by the need for a couple of key decision-makers to analyze a small number of records. SaaS BI gets rid of this problem, as it provides fully functional BI suite available for just one person. SaaS applications can be rapidly scaled up or down as your business needs change.

4. Most SaaS products are lightweight and designed to complement the investment in data storage that you already have.

5. Access and sharing were the original drivers of the SaaS cloud computing model, so applications make it easy to get useful visualizations to the right people quickly by inviting people to your dashboard's URL or embedding it in a website or blog.

BI products have traditionally required huge upfront costs, had long lead times anddemanded technical expertise to use. SaaS allows powerful functionality without the need for any of these, making it a highly profitable investment for most organizations.

— Kirsty Lee, Focus expert and marketing representative at We Are Cloud.

Read the full conversation:
http://www.focus.com/questions/information-technology/why-would-one-opt-cloud-based-bi-system-over-traditional/

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2 Q&A: On-Demand BI or On-Premise BI?

What's the smarter choice for an enterprise — on-demand BI or on-premise?

What are the benefits of using an on-demand business intelligence application (as opposed to an on-premise software) for an enterprise company? I'm doing some research and am wondering if on-demand BI applications are as popular in the enterprise as they are for SMB/midmarket companies. Do you think that on-premise BI applications are still the smarter choice for an enterprise organization?

— Dan Stewart

Best Answer

I work for Birst, an on-demand BI company, so I can give you some perspective here. I'm not a salesperson, so don't worry, I won't be calling you 15 times. We have a number of enterprise customers who have multiple thousands of users, as well as departments of enterprises with just tens or hundreds of users. In general, they choose on-demand BI because:

1. It's easier and faster to get started. You don't have to buy hardware and software, and if you choose Birst you get a fully integrated, comprehensive solution, so you don't have to integrate disparate products together to get what you want.

2. It's more affordable. Instead of a huge upfront capital expense, you just pay by the month for what you need. The TCO is typically 1/3rd that of on-premise traditional solutions. So enterprises can finally give BI to departments and groups that couldn't afford it before, such as sales, marketing, ops, and HR.

3. It's easier to use. Instead of only a handful of people knowing how to use the system and getting swamped with requests, you can roll it out to lots of business users and they can answer their questions *themselves*. That lets IT focus on higher priority projects and ensures that business folks get their questions answered quickly.

4. It's compatible with what you've got already. Most enterprises have some form of BI in-house already. However, that solution is probably too expensive and complex to extend to that next desired BI project. On-demand BI is fast and affordable, as well as compatible with what you've got now, so you can add it to your portfolio of BI solutions without worrying.

— Barbara Lewis, Focus expert and director at Birst

Read the full conversation:
http://www.focus.com/questions/operations/demand-business-intelligence-enterprise/

3 Q&A: Is It Safe to Outsource BI?

What are some barriers to outsourcing business intelligence?

I was wondering if anyone outsources their BI? Do you like it? Do you find it easier/less stressful or just the opposite? What are some reasons people don't outsource it? What are some barriers?

— Jeff Craig

Best Answer

BI projects tend to be difficult because ETL developers are not really programmers in the traditional sense. They need a lot more guidance in terms of the techniques and design strategies needed in a BI project, than a traditional programmer needs for a traditional development project. We think that we can get offshore ETL developers who know the tools well, and that they will be as good as traditional programmers. But they will not be as they need a much higher level of guidance on design. Then we have the problem of dealing with data sources that are pure abstractions with little business meaning to the offshore ETL developer. And then we have the information requirements that the users are directing the project to provide - again a complete abstraction to the ETL developer. So the challenge is in the management of the offshore resources. You need a great onshore design team (which you need anyway) and strong requirements/ communications skills both offshore and onshore. The idea of simply hiring some cheap offshore resources that know a given toolset, without these other considerations, will doom a BI project

— Malcolm Chisholm, Focus expert and president of AskGet Inc

Additional Answers

I currently work for a BI outsourcing supplier, and I find it challenging to balance speed with quality of delivery. I believe it can be done well, but it takes time to refine all the current ways of working when you move from in-sourcing to outsourcing.

The problem I see with i-nsourcing is the continuity, availability and expense of employing lots of independent contract resources to supplement your core internal staff.

I believe outsourcing offers a solution to the problems above, but causes a different set of problems around being able to manage bulk knowledge transfer and cultural/communication issues, whilst still working to the same timelines on a project. Outsourcing also has the benefit of providing CxOs with escalation routes for dealing with resource issues as opposed to having to deal with 'too many chiefs' in terms of the contract resources.

I persnally view this as the challenge that we have to face up to. To provide a quality and responsive relationship to our client that continues to meet requirements and provide value, etc. Our current rates of growth in the BI industry says we must be doing something right.

— Phil Bailey

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BI is one area where there is constant demand for tweaking and new reports. There is also the issue of continuously changing data sources. Outsourcing does not work well in such dynamic situation. My previous company opened a new office in India and the employees still reported to the execs, which helped to maintain flexibility to an extent. So it may be a good middle course.

— J Michael Mangalam, Focus expert and VP of ParetoCentral.com

If you have the infrastructure to set up your in-house development team, and a few good resource (say 6-8 who can work closely with the top management), I bet you can have the most effective solution for your business needs.You can make the changes in your solution when the market trend changes or your requirement changes, in just a matter of days. You have the entire control. You can save millions, believe me. You will have more accountability from the developers, and they will know the business better, being within the company. I agree with Mr. Mangalam on the point that flexibility is the key in dynamic.

— Satyarup Siddhanta, Focus expert and continuous improvement analyst at Brady

I also work for a BI services supplier that both advises and outsources. If you deliver in this space you need to have effective resourcing models and robust, tried and tested methodologies for delivery. Phil identifies this accurately above.

Like outsourcing any domain, you should clearly understand all the elements that are needed to deliver BI in your organization. Then you can make a decision on what is to be retained in house and what you believe should be outsourced. Then ratify that approach with any prospective suppliers.

If BI represents a large change, then I believe some form of outsourcing represents the right route. Understanding the IT and business changes that are needed to fulfill a mixed business case of cost savings and business benefit has to be driven through tried and tested approaches, experiences and methodologies. However if you are looking at enhancing the internal service, the market is crowded with large corporates and niche players who deliver differing elements of the BI stack to multiple organizations (think of DQ, base analytics, SaaS etc.).

For the delivery of an ongoing service, outsourcing offers a route to use a standard approach for BI delivery which should drive costs down. For example, development in India and Eastern Europe is always an option, but maintaining quality is key.

But be warned: I strongly believe that unless you have clear business objectives with carefully defined requirements, then outsourcing offers no guarantee of accelerated outcomes or major initial economic savings or gains. Getting the definition of the solution/service right, either by advice or strong internal governance, is absolutely key.

If you are going for a comprehensive service, your supplier needs to be able to make the magical BI link between business outcome and IT delivery, which is always problematic. If you are getting niche support for specific areas, then make sure your supplier (no matter what size) has the experience in-house.

— Carl Statham

Read the full conversation:
http://www.focus.com/questions/information-technology/what-are-some-barriers-outsourcing-business-intelligence/

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4 Enterprise vs. Open Source vs. SaaS BI: Some Thoughts

Introduction

There is a temptation to assume that BI solutions are the same as other applications, and that there will be the same cost considerations, the same functionality, the same tradeoffs. As it turns out, BI is not your average CRM, ERP, or SCM application. For example, SaaS BI simply is not appropriate to handle all of a large enterprise's BI needs, not because it isn't functional enough (the differentiator in some other apps), but because in large-enterprise BI, customization as well as moving data to one large data store continually are more difficult to achieve in a SaaS solution. Likewise, using open-source programming for solution development and customization to the needs of the enterprise can be quite effective with other applications; with BI, the database and data-mining expertise needed is relatively lacking in the open-source community.

Nevertheless, we can make some tentative statements about the pros, cons, and best fits for each type of BI. What follows is some brief, broad-brush generalizations about enterprise-app vs. open source vs. SaaS comprehensive BI solutions.

Analysis

Let's consider the architecture, TCO, and best usage of each solution type in turn.

Enterprise BI

An enterprise BI solution such as IBM Cognos sets up data feeders from operational databases such as order entry into a common central data store, known as a data warehouse (or multiple data marts). Data comes into the data store in hourly, daily, or weekly bursts, and the periods of time not spent on "mass loads" is spent on running queries against the data store using "BI software". Today, such a store may be terabytes or more, and it is typically composed of numeric or text data records with relatively small sizes.

BI solutions cost a lot, but a large part of the cost goes to database administration. The reason is that the data warehouse has to maximize query performance, day after day, year after year, as the data-store size increases by 50% a year. Only a fine-tuned, powerful database can handle the job, and every customer believes that his or her fine-tuning is not "one size fits all" – it's very hard to outsource the tuning that the administrator performs on the database.

However, the same is not true for SMBs. Up to a certain point (in my opinion, somewhere around 500-1000 employees in the company) these companies need raw power rather than customization. Moreover, it's possible to find a cheap enterprise database that will handle all the load that an SMB can throw at it, and deliver "near-lights-out administration" as well. The result is that, according to my studies, an SMB can save more than 50% in 3-year TCO by using one of these instead of Oracle.

Open Source BI

An open source BI solution such as Jaspersoft or Pentaho replaces the license cost of a full BI solution with an open-source "free" distribution of software, plus either a fee for services or an "enterprise edition" at moderate cost. The architecture of the open-source solution is pretty much the same as that of an enterprise BI solution, although the prevalence of open source communities on the Web has led to a significant presence of open-source BI software in public clouds.

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The main attraction of open-source BI is the reduction in license costs. Note, however, that the open-source BI solution either uses an enterprise database, in which case overall costs are not reduced by much, or its own open-source database (typically MySQL), in which case the open-source solution won't scale as well and may be more appropriate for an SMB. The main possible problem with open-source BI is not the possible security vulnerability of company data (since users can always take advantage of sophisticated Web security schemes and keep the physical architecture in the company itself), but rather the relative inexperience of today's open-source community with scaling databases. It is only very recently that open-source databases like mySQL have implemented some of the basic mechanisms of enterprise databases to ensure data integrity and consistency, and Java programmers frequently betray a poor understanding of database schemas. Finally, for some SMBs, databases that offer "administration for dummies" are vital, because good database-administration personnel are just not out there to be hired, even in today's economy. All in all, open-source BI right now occupies a "middle tier" in the BI market – good for medium-to-large-scale implementations where Web knowledge is plentiful.

SaaS BI

Birst is a good example of the new breed of SaaS BI provider. The architecture is hosted and multi-tenant (multiple users can share one BI "veneer" and physical data store). Instead of flowing operational data to an in-house data store, Birst redirects the data to a Birst data center "in the cloud." To implement Birst, one simply inserts new generic ETL software that feeds the hosted hardware, and the Birst solution auto-discovers the structure of the existing data. Thus, deployment is quick, and administration is cross-customer, cutting the costs (included in the price) of database administration. Moreover, the solution itself is necessarily quite agile, being able to adapt more readily to, or be customized more quickly for, new data types and new kinds of transaction streams (with cost-saving load balancing).

However, many large-enterprise implementations do not just store new data in the data warehouse; they also store historical data. Moving massive amounts of new data to a geographically farflung SaaS data center is much slower than moving multiple smaller streams of that data to a local data center or one with dedicated communications. Things are even worse when historical data is involved, because it can increase the amount being loaded by one or two orders of magnitude. The proof of this is in the new cloud concept of "data locality": although theory says that applications can be moved quickly between geographies in a public cloud, in fact implementers keep the data where it is, and "pretend" that the data has been moved along with the code — because moving large amounts of data dynamically croaks performance.

The result is that SaaS BI is especially good for one of two situations: handling a new SMB's BI, or serving as a complement to a larger organization's BI to do quick ad-hoc deeper data mining for particular, smaller data marts or tables.

Conclusion

Users should try to pierce the veil of vendor claims and counter-claims about open-source and SaaS/cloud BI by focusing on the ability of the solution – the whole solution, not just the BI software — to scale and cut database-administration costs. There is much that is attractive about open-source and SaaS BI solutions right now – fast deployment and data-store modification for SaaS, fast custom-program modification for open-source – but that doesn't mean they are suitable for all of an enterprise's needs. On the other hand, enterprise information management no longer requires one solution for all needs; the days when Oracle could credibly recommend a one-stop data shop are pretty much over. New BI solutions don't typically provide almost all of the answers; but, separately or in combination with enterprise BI solutions, they cover more user needs than ever before.

— Wayne Kernochan, Focus expert and president of Infostructure Associates

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* Source: Visa, Inc. Commercial Consumption Expenditure Index fact sheet.