

January 10, 2012

The Future Of BI

Top 10 Business Intelligence Predictions For 2012

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EXECUTIVE SUMMARY

Demands by users of business intelligence (BI) applications to “just get it done” are turning typical BI relationships, such as business/IT alignment and the roles that traditional and next-generation BI technologies play, upside down. As business users demand more control over BI applications, IT is losing its once-exclusive control over BI platforms, tools, and applications. It’s no longer business as usual: For example, organizations are supplementing previously unshakable pillars of BI, such as tightly controlled relational databases, with alternative platforms. Forrester recommends that business and IT professionals responsible for BI understand and start embracing some of the latest BI trends — or risk falling behind.

TRADITIONAL BI APPROACHES OFTEN FALL SHORT

Forrester continues to see increasing levels of interest in and adoption of BI platforms, applications, and processes. Half of the companies that responded to our most recent Forrsights Software Survey have concrete plans to implement or expand their use of BI software within the next 24 months.¹ Despite these high levels of adoption and interest, few organizations have mature BI implementations. Anecdotal evidence indicates that less than 30% of information workers use enterprise BI solutions; this number is often even as low as 10%.² BI is seemingly a simple proposition — just take raw data and turn it into information — so why are the maturity and penetration levels of BI so low, given the amount of money firms spend on it (see Figure 1)?

- **BI hasn’t fully empowered information workers, who still largely depend on IT.** In order to stay ahead of competitors, businesses have no choice but to make business decisions quickly and efficiently. Information workers demand BI tools that allow them to get things done whenever, wherever, and however possible.³ But many traditional BI environments don’t do a good job of empowering information workers. Why? Two reasons. First, IT tends to gravitate toward centralized planning, insists on standards, and overemphasizes a single version of the truth that doesn’t leave much room for agility and flexibility. Second, IT often emphasizes an end-to-end BI platform instead of embracing a realistic “use the best tool for each job” approach, as the continued proliferation of spreadsheet-based BI applications — Excel continues to be a very flexible and powerful BI tool — repeatedly demonstrates.

- **BI platforms, tools, and applications aren't agile enough.** Many traditional BI technologies have not kept pace with ever-changing business and regulatory requirements. For example, it's nearly impossible to react to the lightning speed of change if a BI platform is based on rigid relational or multidimensional data models that take a long time to update and tune. Also, such data models generally support predefined reports and queries, not the freeform exploration or information discovery that many modern BI use cases require. The result? To overcome such limitations, IT builds data marts, OLAP cubes, and canned reports for each BI requirement — and then watches them multiply like rabbits as new requirements pop up.

Figure 1 BI Is All About Turning Raw Data Into Information



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Source: Forrester Research, Inc.

BI TRENDS ON THE HORIZON FOR 2012 AND BEYOND: WE'RE NOT IN KANSAS ANYMORE

2012 will bring a new set of trends that BI and business process professionals will need to stay on top of. Despite the recession of 2007 to 2009 and continued economic uncertainty in 2010 and 2011, Forrester has not seen any decline in BI efforts among its clients. Actually, businesses have no choice but to act and react quickly in the face of financial volatility and rapidly changing business and regulatory conditions. Therefore, “getting things done quickly” often takes priority over “getting things done in an approved way.” These changes force IT to give up some control over BI in favor of working more closely with business users. This forms the basis of most of the trends Forrester sees in how organizations will use BI and what new technologies will go mainstream (see Figure 2):

1. **Individualized BI tools trump standards.** BI has traditionally been ruled by overinsistence on enterprisewide standards and a single version of the truth. These will continue to be important, but they won't be the Holy Grail. A purely standards-based approach to addressing most current business requirements is neither flexible nor agile enough to react and adapt to ever-changing information requirements. In 2012, expect IT to start embracing agile BI tools, such as ones based on flexible in-memory models, in addition to enterprise-grade BI tools and standards. For information workers who need information anytime and anywhere, agility concerns will trump standards.

Figure 2 BI Trends For 2012 And Beyond

Usage trends	1. Individualized BI tools will trump standards.
	2. A “multiple BI tool” strategy is here to stay for the foreseeable future.
	3. Ready or not, information workers will demand more BI control.
Technology trends	4. BI tools that support just the right amount of managed end user self-service will become popular.
	5. Mobility is no longer a “nice to have” — it will become the new BI mantra.
	6. Cloud BI will slowly and steadily chip away at on-premises implementations.
	7. BI-specific DBMSes will gain popularity.
	8. Big data will move out of silos and into enterprise IT.
	9. Exploration will become the new bread and butter of BI suites.
	10. BI will integrate with the Information Workplace (IW).

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Source: Forrester Research, Inc.

2. **A “multiple BI tool” strategy is here to stay for the foreseeable future.** Multiple BI tools have been spreading like wildfire, especially in large enterprises, over the past 10 years. But rather than fighting that trend, organizations now realize that consolidation and centralization are no panacea. Currently, Forrester client inquiries about how to live with multiple BI tools far exceed inquiries about platform consolidation. Why? There is simply no one vendor that provides all of the key agile BI capabilities.⁴ And this is unlikely to happen in the near future, so the need for multiple BI tools will be a pragmatic reality well into 2012.
3. **Ready or not, information workers will demand more BI control.** The current BI approach — a never-ending stream of business requests that IT cannot keep up with — has become unsustainable. Information workers get frustrated with the time lag between when they make requests and when IT fulfills those requests, so they demand more control over BI. End user self-service features of BI tools, such as semantic layers and search capabilities, will become increasingly critical when selecting and deploying BI tools and solutions.
4. **BI tools that support the right amount of managed end user self-service will become popular.** Self-service BI allows casual and power BI users to fulfill the majority of their own requirements, such as ad hoc queries and exploration of entity relationships, without IT hindering business processes.⁵ But it’s not that simple. It’s like the story of Goldilocks and the three bears: No

management or control is unacceptable, but too much control will also become less and less popular. Organizations need to find just the right amount of control that balances the needs of end users and IT. The winning solution will combine the flexibility and agility that self-service brings with behind-the-scenes monitoring and adjustments that improve performance.

5. **Mobility is no longer a “nice to have” — it will become the new BI mantra.** Currently, mobile BI adoption is behind the curve compared with other enterprise mobile applications.⁶ This is mainly due to the perceived lack of specific business use cases and tangible ROI. But mobile BI will catch up in 2012 and eventually become the norm. Why? Information workers can no longer wait to make decisions until they “get back to the office” — that may be too late. Forrester expects that, as BI goes mobile, certain robust mobile features will become the norm: multiple visual query methods, leverage of GPS signals for geolocation and geospatial analytics, animated displays, sensor-based queries, and integration with other enterprise mobile ERP applications.
6. **Cloud BI will slowly and steadily chip away at on-premises implementations.** Cloud BI solutions remain immature, and heavy integration and customization of enterprise BI platforms, tools, and applications will not go away anytime soon. But the story of cloud BI isn't all bad news. Interest in cloud BI solutions certainly exists, due in part to the need to lessen the burden on internal IT resources and the desire for elasticity and low initial investment cost. This won't happen overnight, but in the coming years Forrester expects the cloud BI market to continue expanding as leading BI vendors get in the game, blurring the lines between on-premises and cloud deployments.
7. **BI-specific DBMSes will gain popularity.** Alternative database management system (DBMS) engines architected specifically for agile BI will emerge as one of the key fundamental agile BI technologies that BI pros should closely evaluate and consider.⁷ These specialized, BI-specific DBMS databases — those that are designed specifically for BI reporting and analysis — currently have lower adoption rates when compared with their bigger, older, more versatile, jack-of-all-trades RDBMS cousins. But don't expect these low adoption rates to continue; BI-specific DBMSes will become mainstream in 2012. Forrester expects that more than 20% of all BI applications will be based on this technology within the next two years.
8. **Big data will move out of silos and into enterprise IT.** The amount of data available is growing faster than enterprises' ability to deal with it. But big data approaches — techniques and technologies that make handling data at extreme scales affordable — can transform this data into insights.⁸ Big data will disrupt the data management landscape by changing fundamental notions about data governance and IT delivery, where a single version of the truth ceases to be absolute and becomes relative and contextual. While big data remains for many an unrealized ideal, expect IT to start taking big data initiatives more seriously in 2012. Why? Business is going to demand that data be better harnessed in more cost-effective ways, as traditional BI is often costly and without a clearly tangible ROI. As the idea catches on, big data will start to move out of silos and into enterprise IT, which will need to learn how to manage it.

9. **Exploration will become the new bread and butter of BI suites.** Schema-driven BI applications based on a relational data model lockdown severely limit what can be analyzed and reported. Organizations must create these applications specifically for the business questions at hand in order to navigate the data effectively. This isn't sustainable, as business process pros can never foresee every single question that will ever be asked of a model-driven BI application and prebuild that logic into data models. Information workers will demand the ability to explore data without preconceived notions, specific questions, or fixed, prebuilt data models in mind. Put simply, the business demands the flexibility to explore data on its own terms — so expect solutions that support exploration and freeform information discovery to become the new bread and butter of BI suites.⁹
10. **BI will integrate with the Information Workplace (IW).** IWs bring together multiple technologies in a seamless, contextual user experience that allows your information workers easy access to the information they need.¹⁰ IWs will drive the next generation of worker efficiency, and business process pros need to consider BI within this context. Many BI vendors claim that self-service functionality is virtually guaranteed by virtue of tight integration with desktop-based office tools like spreadsheet, presentation, and word processing software. But that's not nearly enough. BI users will start demanding, and vendors will start delivering, BI tools integrated with all parts of the IW — such as email, search, portals, collaboration platforms, and social communities — rather than just Excel.

RECOMMENDATIONS

START TRAVELING DOWN THE ROAD TO AGILE BI

Business technology (BT) professionals must realize that the agile BI genie is out of the bottle! Rather than fighting the trend, Forrester recommends a much more pragmatic approach that often leads to win-win scenarios for IT and the business:

- **Broaden your perspective and vision to allow a new way of thinking.** Put BI agility and flexibility on an equal footing with risk management and the quest for a single version of the truth. Neither is right and neither is wrong on its own; there needs to be a balance of the two. For example, Forrester recommends creating a set of policies or guidelines that will let you catalog and classify your BI applications as a good fit (or not) for agile BI. Highly complex BI applications that are shared by many enterprise users and which are part of mission-critical business processes need to be surrounded by traditional “productionalized” IT controls. But firms will find that only about 20% of their applications fall into that category; for the other 80%, agility, flexibility, and end user self-service may trump production-level controls.
- **Look for experience with next-gen and agile BI when selecting a systems integrator.** But be wary: Consultants love old-fashioned BI because it usually lets them cement themselves solidly within your organization and count the profits their seemingly unending billable

hours generate. Choose a services firm that not only has next-gen and agile BI experience and expertise but is also ready, willing, and able to transfer that expertise to you — and then leave.

- **Prioritize and emphasize common metadata efforts.** Even siloed agile BI applications have a good chance of producing common results and not jeopardizing the single version of the truth if it's based on common business metadata. BI pros should work with their enterprise architecture (EA) colleagues to create a single analytical semantic layer using data federation technology that can then serve as virtual data source to all, including agile BI applications.¹¹ Or they should create and maintain a common metadata repository, using metadata repositories like ASG Software and IBM's Metadata Workbench, ETL metadata repositories from Ab Initio, IBM, and Informatica, or specialized BI metadata vendors like BI Insight, BIReady, Kalido, and WhereScape, and then sync the metadata between all BI platforms and applications. To ensure that these metadata repositories can integrate, look for the vendors to OEM standard metadata adapters from Meta Integration Technology or adhere to metadata exchange standards like XML.
- **Don't fight people from the business who want to wrest control of BI away from you.** Rather, support them by delivering integrated, clean, and secure data for their BI applications. It's a win-win.

SUPPLEMENTAL MATERIAL

Companies Interviewed For This Document

Alteryx	Kyield
Cintra	Microsoft
ClusterSeven	Quiterian
Extended Results	SAP
IBM	trendslide
Intel	

ENDNOTES

¹ Source: Holger Kisker, "The Global Software Market In Transformation: Findings From The Forrsights Software Survey, Q4 2010," *Holger Kisker's Blog For Vendor Strategy Professionals*, December 20, 2010 (http://blogs.forrester.com/holger_kisker/10-12-20-the_global_software_market_in_transformation_findings_from_the_forrsights_software_survey_q4_2010).

² This set of data charts presents the findings from Forrester's Q4 2010 Global BI Maturity Online Survey. The data charts also highlight the differences and trends from our Q4 2009 survey. See the December 23, 2010, "[BI Maturity In The Enterprise: 2010 Update](#)" report.

- ³ Your customers and your employees have more power than ever before. Mobile, social, video, and cloud technologies give individuals tremendous access to information and resources. To succeed in an era of empowered customers, you must empower employees to solve customer and business problems. See the November 1, 2010, "[Welcome To The Empowered Era](#)" report.
- ⁴ Forrester continues to see ever-increasing levels of interest in and adoption of business intelligence (BI) platforms, applications, and processes. But while BI maturity in enterprises continues to grow, and BI tools have become more function-rich and robust, the promise of efficient and effective BI solutions remains challenging at best and elusive at worst. See the March 31, 2011, "[Trends 2011 And Beyond: Business Intelligence](#)" report.
- ⁵ In Forrester's recently published book, *Empowered*, Forrester Research analysts describe ways that new technologies can empower businesspeople and make them true HEROes through individual contributions to their respective company's top and bottom lines. See the October 26, 2010, "[Empower BI HEROes With Self-Service Tools](#)" report.
- ⁶ Mobile devices and mobile Internet are everywhere. Over the past few years, Forrester has tracked continuously increasing levels of adoption and maturity for mobile business applications, but not so for mobile business intelligence (BI) applications. See the March 3, 2011, "[A Practical How-To Approach To Mobile BI](#)" report.
- ⁷ We know how to address the key business intelligence (BI) challenges of the past 20 years, such as stability, robustness, and rich functionality. Agility and flexibility challenges now represent BI's next big opportunity. Business process professionals realize that earlier-generation BI technologies and architecture, while still useful for more stable BI applications, fall short in the ever-faster race of changing business requirements. See the May 27, 2011, "[It's The Dawning Of The Age Of BI DBMS](#)" report.
- ⁸ At extreme scale, traditional data management and business intelligence (BI) become impractical and your business does not get what it demands — more insight to drive greater business performance. Big data helps firms work with extremes to deliver value from data cost-effectively. See the September 30, 2011, "[Expand Your Digital Horizon With Big Data](#)" report.
- ⁹ We know how to address the key business intelligence (BI) challenges of the past 20 years, such as stability, robustness, and rich functionality. Agility and flexibility challenges now represent BI's next big opportunity. Business process professionals realize that earlier-generation BI technologies and architecture, while still useful for more stable BI applications, fall short in the ever-faster race of changing business requirements. Forrester recommends embracing agile BI methodology, best practices, and technologies to tackle agility and flexibility opportunities. Alternative database management system (DBMS) engines architected specifically for agile BI will emerge as one of the compelling agile BI technologies business process pros should closely evaluate and consider for specific use cases. See the May 27, 2011, "[It's The Dawning Of The Age Of BI DBMS](#)" report.
- ¹⁰ When Forrester introduced the concept of the Information Workplace (IW) in 2006, it was largely a vision of the future. Much has changed since then. The world economy has suffered a prolonged recession, forcing organizations to find new ways to drive information worker productivity. Technology populism has resulted

in workers self-provisioning consumer-grade tools to solve business problems. See the October 29, 2010, “The Information Workplace Light Burns Brighter” report.

- ¹¹ In Forrester’s 123-criteria evaluation of information-as-a-service (IaaS) — also known as data services — vendors, we found that IBM, Informatica, Composite Software, and Denodo Technologies led the pack because of strong data services features and capabilities such as data services modeling, real-time integration, data quality, and transformation, to support most use case scenarios. See the February 10, 2010, “The Forrester Wave™: Information-As-A-Service, Q1 2010” report.