



WHAT MAKES QLIKVIEW UNIQUE

A QlikView White Paper

August, 2011

qlikview.com

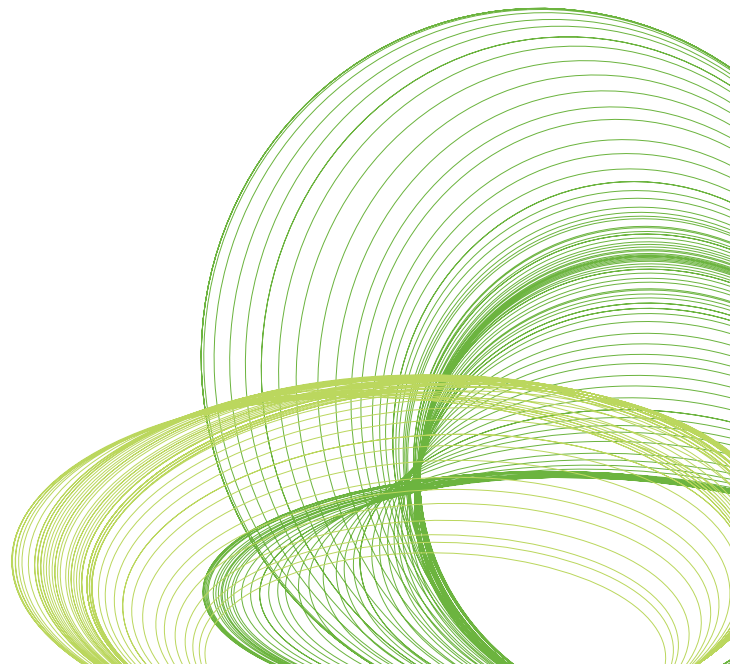
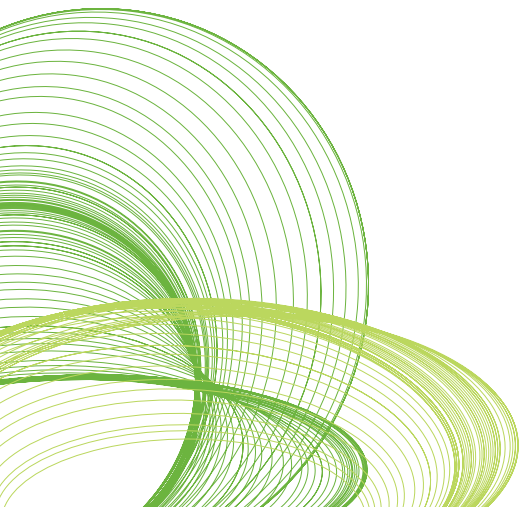


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WHAT IS BUSINESS DISCOVERY?

Business Discovery is user-driven BI that helps people make decisions based on multiple sources of insight: data, people, and the environment. Users can create and share knowledge and analysis in groups and across organizations. Business Discovery platforms help people ask and answer their own stream of questions and follow their own path to insight — on their own and in formal or informal groups. Business Discovery platforms deliver insight everywhere, an app model, mobility, remixability and reassembly, and a social and collaborative experience.

The First Questions People Ask About QlikView

“What is special about QlikView? How is it different from other business software?” These are the first questions someone new to QlikView typically asks. Some people have experience with traditional BI (business intelligence) solutions, so they want to understand QlikView in that context. Others are curious about Business Discovery. Still others know of QlikView because of QlikTech's rapid growth and successful IPO (initial public offering) in 2010.¹

People want to understand how QlikView fits into the competitive landscape and the broader market context. This *QlikView White Paper* discusses the combination of three factors that makes QlikView unique: an associative user experience, our core technology, and the Business Discovery adoption path.

The BI Software Market Is Crowded and in Flux

The answer to the “What makes QlikView unique?” question is more important now than ever before because the BI software market is:

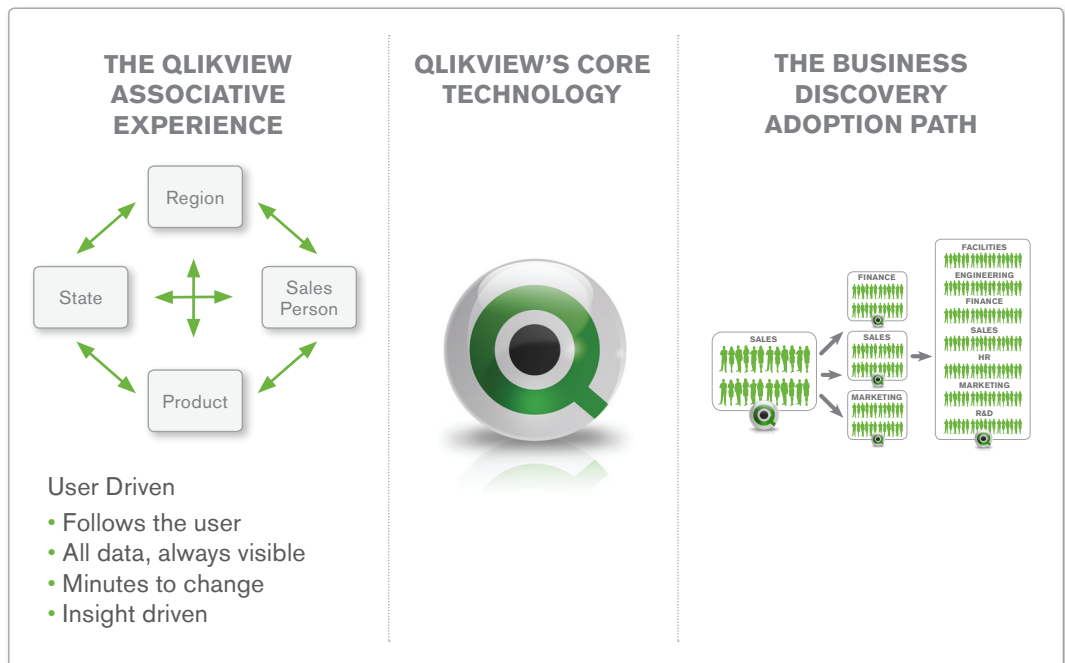
- **Big and growing, even during tough economic times.** According to market research firm IDC, in 2010 the BI tools market reached \$8.9 billion USD in software license and maintenance revenue, including subscriptions — up from \$8.0 billion in 2009. Analyst firm Gartner found that it's even bigger than that, sizing what it calls the BI, analytics, and performance management market at \$10.5 billion in 2010 — up from \$9.3 billion in 2009². Growth in the BI software market illuminates the need for tools that help people leverage data for business advantage — that enable them to explore data and draw insights and meaningful conclusions from it.
- **Crowded with literally hundreds of vendors.** Analyst firm Aberdeen Group tracks close to 150 vendors in the category it calls business analytics. Gartner covers nearly 200 vendors that sell BI, analytics, and performance management software.³ Aberdeen and Gartner, and the other analysts who cover BI, segment the vendors into various buckets. Gartner calls QlikTech's segment “data discovery tools.” We call it Business Discovery to highlight the way business people use our software, and the value it delivers.

- **Bifurcating based on who chooses the software.** Gartner is tracking a growing bifurcation in the BI platforms market based on who the buyer is, and expects to see the market for data discovery tools outgrow the overall market by a factor of three until 2015.⁴ According to Gartner, IT tends to favor traditional BI vendors and a report-centric architecture, whereas business users and departmental buyers are turning to data discovery vendors.⁵ And, increasingly, it is business users – not IT professionals – who are making decisions about BI software.⁶

Why Is the Market Choosing QlikView?

Although the BI platforms market is in flux and is crowded with hundreds of vendors, business and technology decision makers are choosing the QlikView Business Discovery platform.⁷ They choose QlikView for three primary reasons, and it is a combination of these factors that makes QlikView stand out in the market (see Figure 1).

Figure 1: What Make QlikView Unique?



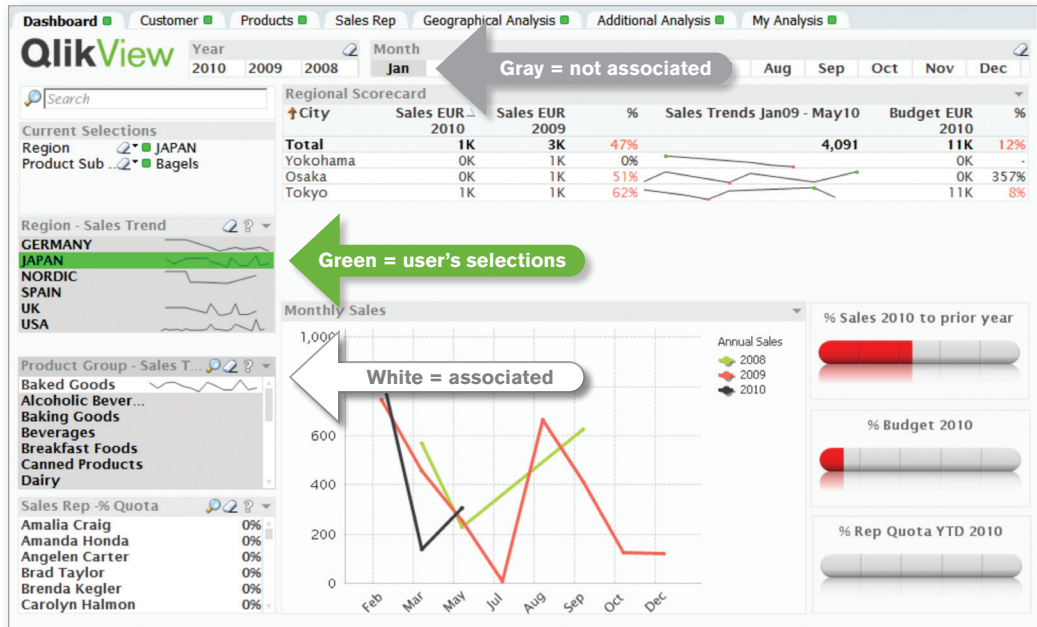
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THE QLIKVIEW ASSOCIATIVE EXPERIENCE

The QlikView Business Discovery platform enables users to explore data, make discoveries, and uncover insights that can be used to help them solve business problems in new ways. One of QlikView's primary differentiators is the associative experience it delivers to users. Business users conduct searches and interact with dynamic dashboards and analytics from any device. Users can gain unexpected insights because QlikView:

- **Works the way peoples' minds work.** With QlikView, discovery is flexible. Users can navigate and interact with data any way they want to — they are not limited to just following predefined drill paths or using preconfigured dashboards. Users ask and answer streams of questions on their own and in groups and teams, forging new paths to insight and decision. With QlikView, business users can see hidden trends and make discoveries like with no other BI platform on the market.
- **Illuminates the power of gray.** With QlikView, users can literally see relationships in the data. They can see not just which data is associated with their selections — they can just as easily see which data is not associated (see Figure 2). How? The user's selections are highlighted in green. Field values related to the selection are highlighted in white. Unrelated data is highlighted in gray. As an example, when a user clicks on a product sub-category (say, bagels) and a region (e.g., Japan), QlikView instantly shows everything in the entire data set that is associated with these selections — as well as the data that is not associated. The result is new insights and unexpected discoveries. In this example, the user might see that no bagels were sold in Japan in January, April, or June, and begin an investigation into why.
- **Delivers direct – and indirect – search.** With QlikView search, users type relevant words or phrases in any order and get instant, associative results. With a global search bar, users can search across the entire data set. With search boxes on individual list boxes, users can confine the search to just that field. Users can conduct both direct and indirect searches. For example, if a user wanted to identify a sales rep but couldn't remember the sales rep's name — just details about the person, such as that he sells fish to customers in the Nordic region — the user could search on the sales rep list box for “Nordic” and “fish” to narrow the search results to just sellers who meet those criteria.
- **Delivers answers as fast as users can think of questions.** Users can ask a question in many ways such as lassoing data in charts and graphs and maps, clicking on field values in list boxes, manipulating sliders, and selecting dates in calendars. Instantly, all the data in the entire app filters itself around these selections. They can continue to click on field values in the app, further filtering the data based on additional questions that come to mind. With QlikView, users can quickly and easily see relationships and find meaning in the data, for a quick path to insight.

Figure 2: QlikView delivers an associative user experience



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QLIKVIEW'S CORE TECHNOLOGY

The second major factor that differentiates QlikView is our core technology. QlikView is known as a pioneer in in-memory BI. In-memory technology is important for BI, for performance reasons. But just being in-memory isn't all it takes to deliver a Business Discovery platform. Some vendors that offer traditional BI solutions based on queries and cubes are working to re-engineer their offerings to run in memory. These solutions may improve user response time. But as long as they are query- and cube-based, maintaining associations in the data requires hand coding – and therefore lots of time and money.

It's what QlikView *does* with in-memory technology that really makes a difference. The QlikView Business Discovery platform:

- Holds data in memory for multiple users, for a super-fast user experience.**
 QlikView holds all the data needed for analysis in memory, where it is available for immediate exploration by users. Users experience zero wait time as QlikView performs the calculations needed to deliver the aggregations users request. The “rocket science” is in getting the calculations done quickly. QlikView is a multi-user, distributed environment; it stores common calculations and shares them among users, so the calculations don't have to be redone every time someone needs them.
- Maintains associations in the data automatically.** QlikView's inference engine enables the green / white / gray associative experience. This engine automatically maintains the associations among every piece of data in the entire data set used in an application – neither developers nor end users have to maintain the associations.

As a result, users aren't limited to static reports, pre-determined drill paths, or pre-configured dashboards. Instead, they can navigate their data up, down, and sideways, exploring it any way they want to.

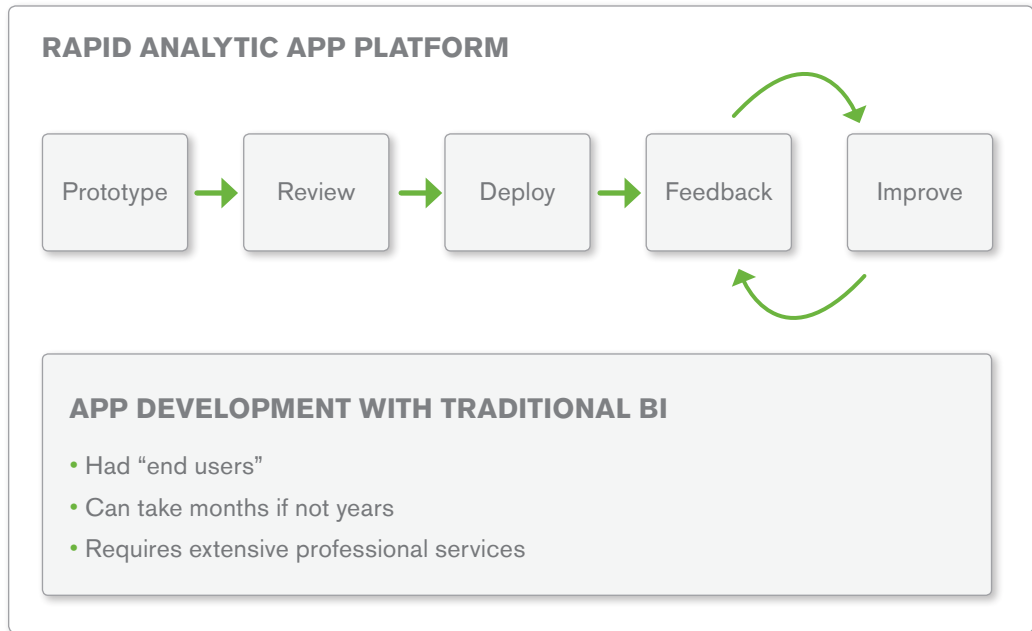
- **Calculates aggregations on the fly as needed.** QlikView's inference engine calculates aggregations on the fly based on selections the user makes (which we call the "state" of the app). As a result, users aren't limited to predefined calculations (and hence preconceived insights based on data joins made by IT). Users can define whatever view or type of insight they want and QlikView dynamically calculates the answer. QlikView only calculates the aggregations the user asks for; it does not pre-calculate aggregations the old queries-and-cubes way. It processes calculations instantaneously, as they are needed.
- **Compresses data to 10% of its original size.** QlikView achieves a significant reduction in the size of the data used for analysis using a data dictionary (a hash table) and by using only the number of bits required. For example, the "day of the week" field has only seven possible field values, and these values are stored only once in memory, regardless of how many records contain each value. As a result, QlikView can scale to handle very large data sets without driving up hardware investment costs just to move an entire data set into memory.
- **Optimizes the power of the processor.** QlikView distributes calculations across all available cores to maximize the performance experienced by the user. Unlike technologies that simply "support" multi-processor hardware, QlikView is optimized to take full advantage of all the power of multi-processor hardware, thereby maximizing performance and the hardware investment.

MANAGING ALL NEEDED ASSOCIATIONS BY HAND IS UNTENABLE

To be clear, traditional query-based BI solutions could be used to create an analytic app that would provide an associative experience to the user — by that we mean the user would be able to click around any field in the model and lasso data in charts and graphs, instantly applying filters so associations in the data become apparent. But it would take an incredible amount of time and resources to hand-code all the associations that would be necessary for the user to truly be able to ask and answer all their own questions, without going back to IT for new queries or new views of the data. Queries are labor-intensive and brittle, and maintaining associations by hand would be a nightmare. If a user wanted to add a new data source, for example, to get deeper insight into an aspect of the business, the developer would have to go back and re-code the associations by hand all over again.

With QlikView, all the associations in the data are handled automatically. Neither users nor developers need to manage the associations. As a result, QlikView customers can go very quickly from prototyping to deployment to refinement (see Figure 3). In fact, Aberdeen found in its research that QlikView users were on average able to drive a revision to dashboards from conception to completion in a single day, as opposed to an average of 3.5 days for all survey respondents.⁸

Figure 3: Building and maintaining QlikView apps is fast and easy



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Business Discovery platforms are ideal for exploration and analysis. Traditional BI is well-suited to other types of use cases. Gartner has found that traditional BI platforms are well-suited for reports and KPI (key performance indicator) dashboards.¹⁰ Traditional BI solutions are a good fit for situations in which the approach is top-down, with IT-modeled semantic layers, and in which users can get what they need by querying existing repositories. Gartner has recommended that IT organizations back away from a single-minded pursuit of standardization on one vendor to a more pragmatic portfolio approach that includes both traditional BI and data discovery.

THE BUSINESS DISCOVERY ADOPTION PATH

The third major QlikView differentiator is our customers' Business Discovery adoption path (see Figure 4). QlikView penetrates enterprises by solving significant business problems that traditional BI can't address. Typically, with QlikView:

- **It all begins with the personal edition.** It starts this way: a business person — say, a marketing professional, supply chain manager, or member of the hospital administration staff — downloads the full version of QlikView Desktop for free from our web site (<http://www.qlikview.com/download/>). This personal edition enables users to do everything with QlikView Desktop that they can do with the full paid version — except share apps with other QlikView users.
- **The new user gets value immediately.** Quickly, the new QlikView user is able to extract data from multiple sources and immediately begin to explore it — sometimes seeing the associations in the data for the very first time. The user solves a business problem or makes a decision using insights gleaned from QlikView. He shows the

solution to colleagues, who also download and install the personal edition of QlikView. Then, so they can begin to share apps they have created, the workgroup or team purchases a handful of QlikView Desktop licenses.

- **A workgroup or team expands its deployment.** In just days or weeks, QlikView solves a workgroup’s business problem — perhaps a problem that would have taken months or years to solve with traditional BI. Sometimes, traditional BI has failed to ever deliver a solution people can actually use. Typically, QlikView users are so ecstatic with their rapid success that they become internal champions for QlikView.
- **As more departments adopt, IT supports an enterprise deployment.** Once a department is successful addressing multiple business problems, other departments take notice. More QlikView advocates emerge, and QlikView starts spreading across departments. Along the way, senior IT staff and executive team members take notice of productivity gains. With a string of successes, QlikView gets adopted throughout the enterprise. According to Gartner, the majority of QlikTech customers now consider QlikView as their BI platform standard.¹¹

The same Business Discovery app that began life as the brainchild of one person who downloaded the personal edition of QlikView can evolve into a server-based enterprise app deployed to thousands of users accessing it via multiple devices. The IT organization’s role in an enterprise QlikView deployment is to assemble data, deliver relevant data, enable self-service BI, and ensure security and scalability (see Figure 5). IT professionals are no longer tasked with creating data models, building a massive semantic layer, creating queries, and building reports.

Figure 4: The Business Discovery adoption path.

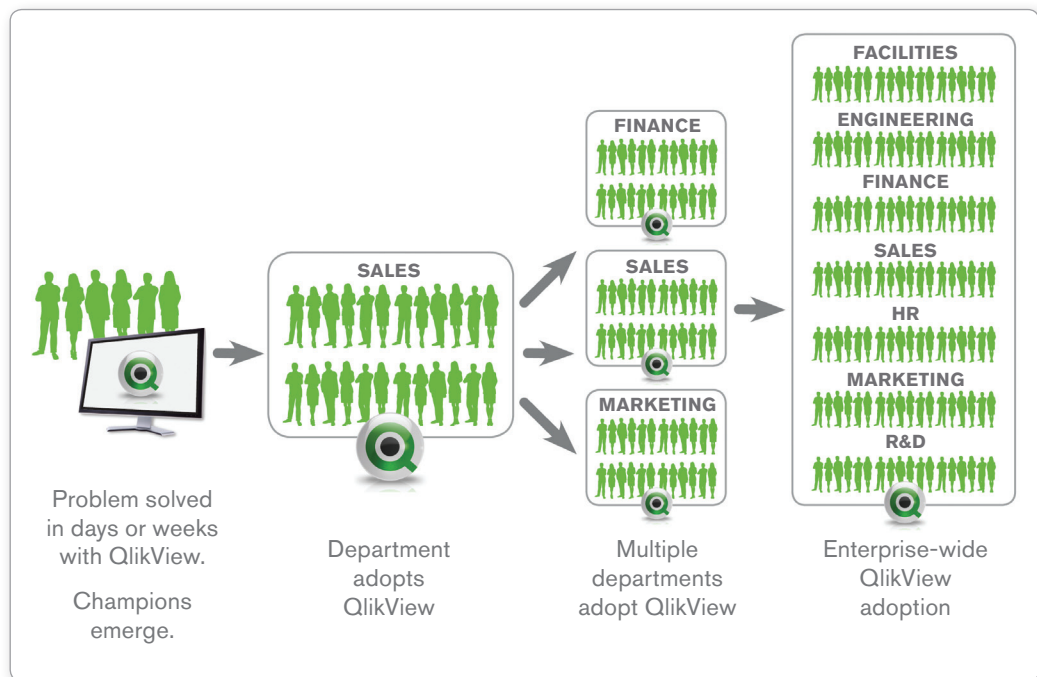
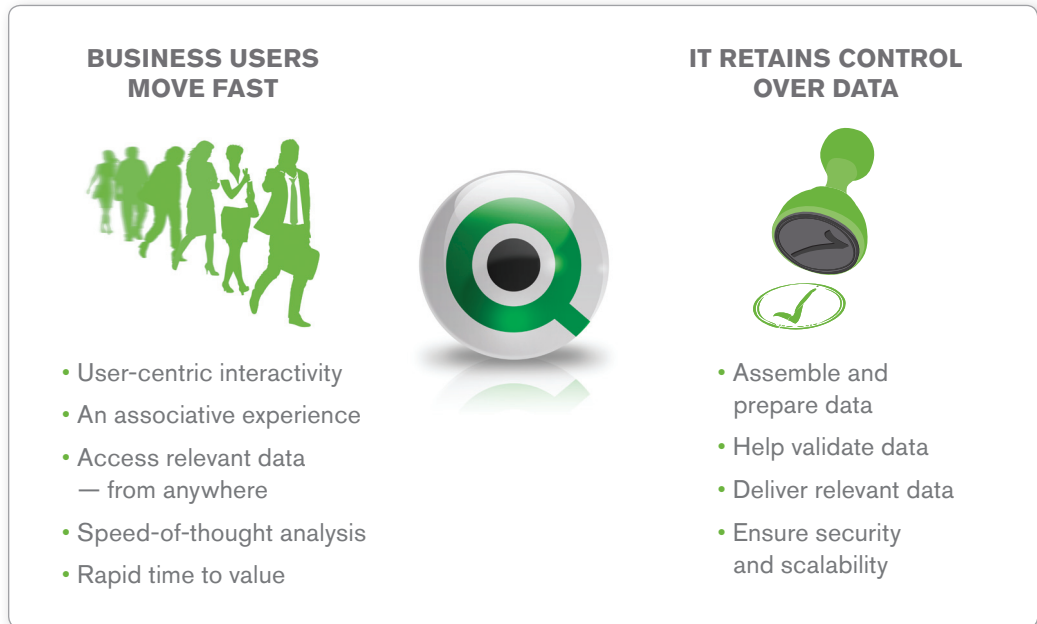


Figure 5: With QlikView, you can have both agility *and* governance.



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QlikView Customers Achieve Rapid Time to Value

QlikView customers' Business Discovery adoption path contrasts sharply with that of traditional BI solutions (see Figure 6). With traditional BI solutions, IT spends months or even years building out dashboards and reports based on user requirements. Users get their hands on the dashboards and reports and immediately request changes based on what they see. IT then spends more weeks or months implementing those changes. Users spend time with the new dashboards and reports, and then come up with more requirements as new questions come to mind. It's a long, painful cycle.

Figure 6: QlikView deployments are short and sweet

	The QlikView Business Discovery Platform	Traditional BI Solutions
Time to initial deployment	QlikView customers measure time to value in weeks, days — even hours.	A massive effort is involved (months if not years) in building dashboards, queries, and reports; populating a metadata layer; and hand-coding associations in the data.
Effort required to change applications	Business analysts / BI app developers can add new data sources or create new visualizations in days or even hours. Sometimes, business users can modify apps themselves on the fly.	More months and years go by due to extensive effort required to maintain associations and change queries and reports based on changing business and user requirements.
Cost of deployment	Lower	Higher
Primary buyer	Business function	IT
Primary user	Faster	Slower
Speed of accessing correct information	Faster	Slower

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With the combination of these three factors — the associative user experience, our core technology, and our customers' Business Discovery adoption path — QlikView customers achieve rapid time to value at lower cost of deployment than with traditional BI solutions. Aberdeen Group conducted a 400-person survey about BI dashboards and found that organizations that deployed QlikView were able to deliver dashboards to business users at a one-year cost per user that was the lowest of all the Best-in-Class vendors. Gartner also characterized QlikTech as having the lowest cost per user of all the data discovery vendors, along with below-average implementation costs per user.

QlikView delivers all the needed capabilities in one comprehensive product. This is part of the reason why Gartner describes the benefits of QlikView to include short time to value and low cost of implementation. QlikView costs are lower than those of BI solutions that require customers to purchase, integrate, and deploy multiple modules (e.g., separate modules for application development, ETL (extract/transform/load), metadata management, and specific vertical or functional applications).

QlikView: The Business Discovery Platform

The QlikView Business Discovery platform is a whole new way of doing BI. It's about helping people share knowledge and analysis across individuals, groups, and organizations. It provides information and analysis precisely focused on the business problems people are trying to solve.

QlikView delivers a user experience that works the way the human mind works — associatively, with technology that is highly differentiated in the market, and with an unusual customer adoption model for enterprise software. Just as Salesforce.com has done with CRM, Google has done with search, and Apple has done with tablets — QlikTech is transforming a market with technology that is highly sophisticated under the hood yet delivers an intuitive, fun experience for users.

Want to try QlikView for yourself? Visit www.qlikview.com.

Appendix

RELATED QLIKVIEW WHITE PAPERS

Business Discovery: Powerful, User-Driven BI, July 2011

<http://qlik.to/qbA9wv>

The Associative Experience: QlikView's Overwhelming Advantage, October 2010

<http://qlik.to/eC8aKP>

QlikView Product Roadmap, December 2010

<http://qlik.to/fkf0Cv>

RELATED QLIKVIEW BLOG ARTICLES

"How Business Discovery Software Can Score You Points with Your Spouse," August 11, 2011

<http://qlik.to/qyo4rx>

"Gartner: Business Users Are Choosing BI Tools," July 28, 2011

<http://qlik.to/pXFuV1>

"'I Want This Song' — An Analogy for Business Discovery," July 7, 2011

<http://qlik.to/rmOAaQ>

"User Experience Is More than Just a Pretty (Inter)Face," June 30, 2011

<http://qlik.to/IWHNeB>

"The Consumerization of BI," June 28, 2011

<http://qlik.to/kjvjdZ>

"Where Did I Leave My Keys . . . ?" June 17, 2011

<http://qlik.to/iesJsb>

"Self-Service BI: Power to ALL the People," May 26, 2011

<http://qlik.to/l3WYtv>

End Notes

- ¹ QlikTech's financial filings are online at <http://investor.qlikview.com/financials.cfm>.
- ² For more detail about the size of the BI market, see the April 18, 2011 Gartner report, "Market Share Analysis: Business Intelligence, Analytics, and Performance Management, Worldwide, 2010" and the June 2011 IDC report, "Worldwide Business Intelligence Tools 2010 Vendor Shares."
- ³ In the April 18, 2011 Gartner report, "Market Share Analysis: Business Intelligence, Analytics, and Performance Management, Worldwide, 2010," the analyst firm broke out about 50 vendors that have more than \$10 million in BI revenues, not including professional services. Gartner covers another 140+ smaller vendors.
- ⁴ Data discovery will be a \$1 billion market in its own right as soon as 2013. See the June, 2011 Gartner report, "Emerging Technology Analysis: Visualization-Based Data Discovery Tools" (available only to Gartner subscribers).
- ⁵ According to Gartner, in 2010, business users had greater influence over BI buying, often choosing data discovery vendors as an alternative to traditional BI tools. For more information, see the January 27, 2011 Gartner report, "Magic Quadrant for Business Intelligence Platforms." You can download the report in its entirety here: <http://qlik.to/eUtiXT>.
- ⁶ According to Gartner, QlikTech's sales strategy is working. Based on Gartner's survey for the "Magic Quadrant for Business Intelligence Platforms" report, QlikView deployments are growing, both in terms of their reach across their customers (most QlikView implementations are now regional or national, the third widest scope of any vendor on the Magic Quadrant — only trailing Oracle and SAP) and in terms of average number of users per customer respondent (up from 380 in 2010 to 1,019 this year). For more information, see the January 27, 2011 Gartner report, "Magic Quadrant for Business Intelligence Platforms." You can download the report in its entirety here: <http://qlik.to/eUtiXT>.
- ⁷ Aberdeen found that QlikView users have achieved such a swift turnaround time due in part to QlikView's support for rapid prototyping; one IT pro can sit next to a line of business professional and create multiple drafts of a dashboard in a few hours. See the August, 2010 Aberdeen research brief, "QlikView Customers Outperform the Best-in-Class with Dashboards." You can download the report in its entirety here: <http://qlik.to/mQ3IYu>.
- ⁸ Because they are light in infrastructure and fast to deploy with short sales cycles, data discovery tools are spreading to where traditional BI tools find it hard reach. See the June 17, 2011 Gartner report, "Emerging Technology Analysis: Visualization-Based Data Discovery Tools" (available only to Gartner subscribers).
- ⁹ Greater success in the enterprise is the major reason why QlikTech moved into the Leaders quadrant for the first time with larger and more complex deployments. For more information, see the January 27, 2011 Gartner report, "Magic Quadrant for Business Intelligence Platforms." You can download the report in its entirety here: <http://qlik.to/eUtiXT>.
- ¹⁰ Aberdeen found that QlikView customers were able to deliver dashboards at a per-user cost that was roughly three quarters that of the best in class. See the August, 2010 Aberdeen research brief, "QlikView Customers Outperform the Best-in-Class with Dashboards." You can download the report in its entirety here: <http://qlik.to/mQ3IYu>.
- ¹¹ Gartner found that QlikTech was among the data discovery vendors that most often supported interactive dashboards and ad hoc analysis, sometimes with complex types of queries. See the March 29, 2011 Gartner report, "BI Platforms User Survey, 2011: Customers Rate Their BI Platform Vendor Cost of Ownership" (available only to Gartner subscribers).
- ¹² Gartner cited examples of QlikTech going into an organization and creating proof-of-concept applications (which we call "Seeing Is Believing" events) with the customer's own data within four hours — much quicker than competing platforms with heavier architectures. See the October 11, 2010 Gartner report, "SWOT: QlikTech, Business Intelligence Platforms, Worldwide" (available only to Gartner subscribers — but we wrote about it in this QlikView blog post, "QlikTech Comes out Strong in Gartner SWOT Analysis," at <http://qlik.to/r2rmEc>.)