

## WHITE PAPER

# The TCO of BI: The QlikView Customer Experience

Sponsored by: QlikTech

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## IDC OPINION

In today's volatile economy, it is more important than ever before to monitor the cost of software initiatives. Approval processes within organizations are getting longer, as management prioritizes spending on the basis of detailed business justifications. Companies are becoming strongly focused on taking a financial view of both the costs and the benefits of software projects. This means that BI projects have to take their place alongside other technology initiatives and, in order for organizations to benefit from improved information they need to demonstrate a compelling return on investment (ROI).

Luckily, the benefits provided from BI can be significant. Revenue and cash flow improvements, operating cost reductions, and productivity gains are all different ways BI projects can benefit the business. However, ROI is impacted not only by the benefits, but also by the time in which the benefits are realized, and the total cost of ownership (TCO) of the project. The faster the benefits are realized, and the lower the TCO, the higher the ROI. Assuming a BI project will deliver a certain amount of net benefit over a specific timeframe, then TCO and ROI have a direct inverse relationship. Therefore, lowering TCO is a key principle of maximizing ROI.

IDC conducted research into the TCO achieved by QlikView customers, and found that:

- ☑ **On average, QlikView is around half of the TCO of other solutions.** When asked what they had found the TCO of QlikView to be overall, survey respondents said QlikView had an average TCO of 53% of other solutions.
- ☑ **QlikView customers made the biggest savings in services.** When asked what they had found the TCO of each element of their QlikView solution to be, respondents found the TCO of QlikView to be:
  - ☐ 56% of the TCO of other solutions, for software
  - ☐ 39% of the TCO of other solutions, for services
  - ☐ 51% of the TCO of other solutions, for hardware
  - ☐ 46% of the TCO of other solutions, for the labor cost in the business of producing information
  - ☐ When the TCO for each component was aggregated, this gave an overall comparative TCO for QlikView of 46%
- ☑ **For a generic BI project, the TCO of QlikView is calculated to be 47%.** When the savings made by QlikView customers on software, services, and hardware were applied to IDC's standard pull-through rates for each cost component of a BI system, the cost of QlikView was 47% of that of other solutions.

## METHODOLOGY

The IDC analysts opinions expressed in this white paper are based on years of market research and consultations with BI technology users and vendors. This white paper also utilizes the findings from two research surveys conducted by IDC for QlikTech: 19 customer telephone interviews, and 809 customer respondents to an online survey. The survey and interviews took place between January and March 2009. See Appendix for the demographic profile of the respondent base.

Generally, gaining success with BI projects is an iterative process, as organizations learn how to make better use of technology and also learn how their organization will benefit from a fact-based approach to decision-making. Because so many organizations have challenges with their early BI projects, the costs from BI can run very high. What is coming more into focus is the need for organizations to measure the total cost of ownership (TCO) of their BI projects.

TCO analysis enables organizations to identify, project, measure, and track direct and indirect costs of a BI project. Organizations often estimate a BI project's TCO during the project planning stage to ensure alignment with budgetary constraints and then track costs throughout the project to prevent or minimize cost overruns.

Customers also measure the return on investment (ROI) of BI. The ROI is the net of the benefits of the project minus its costs. From this it is simple to see the linkage between three factors: time, ROI, and TCO. The faster the benefits are realized for a project, the higher the ROI. There is also an inverse relationship between ROI and TCO: the lower the TCO for a project, assuming the benefits remain constant, the higher the ROI.

This white paper is one of a series of four deliverables around the QlikView Customer Experience:

- ☒ **Success and Value From BI: The QlikView Customer Experience** — This paper features data and anecdotes about the customer satisfaction, ease and speed of development, and ease of use for business users of QlikView.
- ☒ **The TCO of BI: The QlikView Customer Experience** — This paper features data and anecdotes about the TCO of QlikView, relative to traditional BI approaches, categorized into software, services, and hardware costs.
- ☒ **Time to Value and ROI From BI: The QlikView Customer Experience** — This paper features data and anecdotes about the ROI of QlikView, categorized into benefits from the time-to-value of QlikView, revenue and cash flow enhancements, operating cost reductions, productivity gains, and BI and reporting overhead reductions, as reported by customers.
- ☒ **The IDC-QlikView Customer Experience: Survey Findings** — An application developed by QlikTech to analyze the results of the joint survey can be found at <http://www.qlikview.com/value>.

The TCO-related survey questions asked users various questions about the TCO of QlikView relative to the TCO of other solutions they had evaluated. The answers were expressed as a range of percentages. So 1%–9% (lowest) indicates the TCO of QlikView was between 1% and 9% of the other solution evaluated, while 100% (about the same) indicates that the QlikView system had about the same TCO as the other solution evaluated.

The **average comparative TCO** uses the median of the percentage range of the response and uses this in a calculation to give a weighted average of the TCO of QlikView compared to other solutions. See Appendix for the exact values used.

## IN THIS WHITE PAPER

In this white paper, IDC discusses the TCO of BI solutions, referencing a Web-survey and a series of in-depth interviews with QlikTech customers (see Appendix for full methodology). The white paper emphasizes the need for flexibility, power, and simplicity as key variables for ensuring adoption of a BI solution, and analyzes the experiences of a broad range of QlikView customers to understand their answers to the following key questions:

- ☒ Why is TCO important as an element in solution evaluations
- ☒ How is TCO linked to business value and resulting ROI
- ☒ What are the key elements of a TCO calculation for a BI solution
- ☒ How did QlikView perform on the key elements of a TCO calculation

## SITUATION OVERVIEW

Since the shift to a more turbulent and less predictable economy, organizations are more highly focused on keeping costs low than ever before. Spend is becoming more tactical as opposed to strategic, and organizations want quick wins and a tangible business benefit from every project. Managing TCO to ensure costs are kept relatively low is relevant to any technology investment, but particularly to BI solutions. IDC believes that measuring ROI and time-to-value helps organizations justify their BI budgets of which a focus on lowering an initiative's TCO will only yield a higher ROI and accelerated payback. Controlling TCO helps to lower the investment hurdle and justify projects in the vital early stages when both IT and business users are learning about the business information requirements and exposing unexpected costs.

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## Definition of Total Cost of Ownership for BI Systems

IDC defines the total cost of ownership (TCO) of an information system as the entire cost of the system including upfront costs and ongoing running costs. TCO is usually expressed as a figure that incorporates initial and ongoing costs over a three to five year period.

The TCO of an information system comprises the following elements:

- ☒ **Software:** license and maintenance
- ☒ **Services:** implementation services, training and education services, and ongoing annual consulting services
- ☒ **Hardware:** servers, storage, and peripherals for processing and interfacing with end users

Note that TCO in isolation is only part of the financial profile of an information system. The return on investment (ROI) is defined as the net financial benefit of the system — the financial benefits minus the TCO. Additionally, payback period is defined as the time it takes for an investment to make back its costs in benefits to break even.

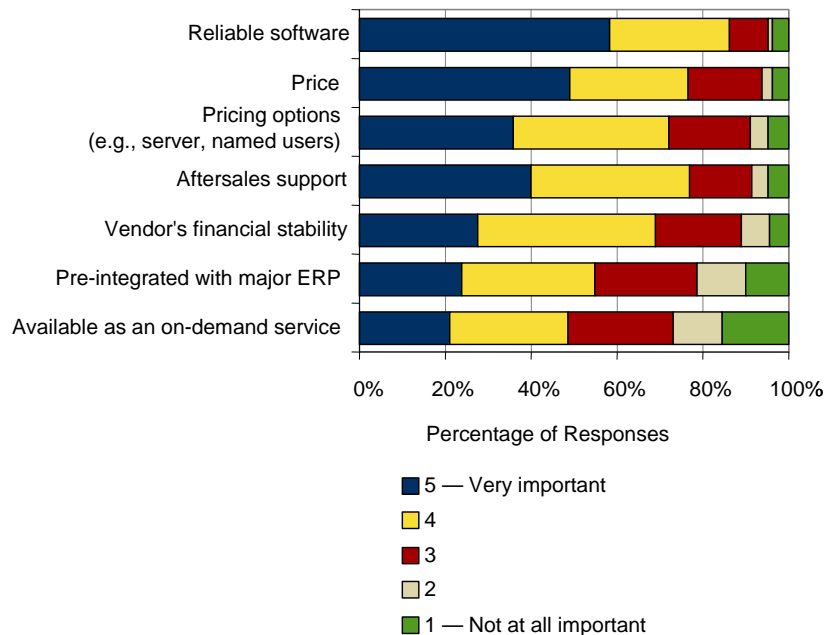
**How Important is TCO**

IDC research indicates that cost is of vital importance to organizations when acquiring and implementing BI solutions. Figure 1 is from a survey conducted by IDC and DM Review in 2008. The figure shows that software price was the second most important consideration for BI buyers when selecting tools.

**FIGURE 1**

**Important Features of BI Tools**

Q. How important is each of the following features to your organization when selecting business intelligence tools/solutions for purchase?



Source: IDC and DMReview, 2008

**Software Price is the Key Inhibitor of Pervasive BI**

In 2008, IDC conducted an in-depth study into pervasive BI, investigating how the use of BI is pushed further out into organizations. Figure 2 shows the importance of software price as an inhibitor of pervasive BI.

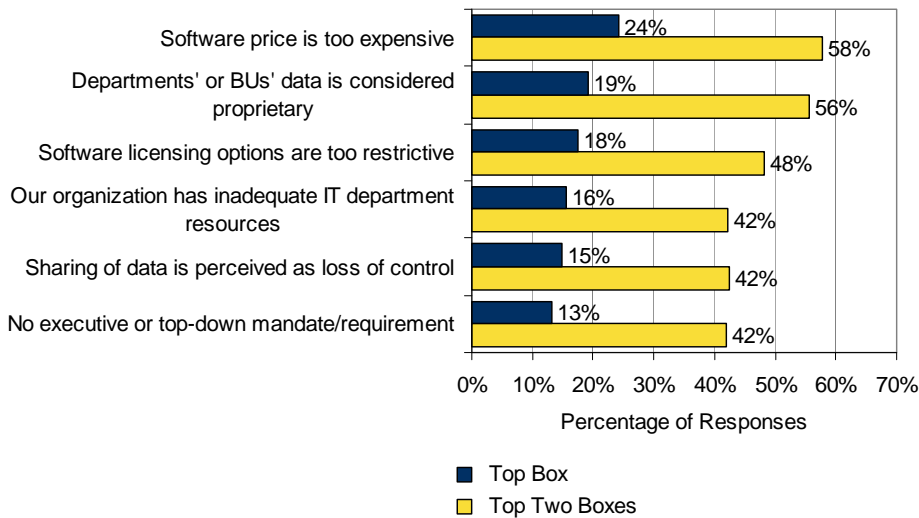
However, organizations need to make sure they take a full view of BI project costs. Software costs are only part of the whole cost (according to IDC research, around a third of the overall BI project cost) while the services and hardware elements must also be considered. Ongoing costs as well as upfront costs should be brought into any cost analysis, as ongoing costs are often higher as well as more difficult to predict.

**A European media company:** "It's quite hard to compare costs between our original BI system and this. I think the total TCO of QlikView is much lower than that of our other tool."

**FIGURE 2**

**Inhibitors of Pervasive BI**

Q. Please rate your level of agreement with the following statements regarding each as an inhibitor of broader and deeper use of BI software at your organization, on a scale of 1 (do not agree) to 5 (definitely agree).



Note: On a scale of 1–5. Top Box = 5. Top Two Boxes = 4 or 5

Source: IDC Pervasive BI study, 2008

**Customer Experiences With Total Cost of Ownership of QlikView**

IDC's research into QlikView customers indicated that sometimes QlikView is implemented without being subject to a specific cost evaluation. There are a number of possible reasons for this. Firstly, because business units have a certain amount of budget available that they do not need to justify outside their department, and secondly because the tool is made available for development and prototyping prior to purchase. Users can therefore build their own prototypes and prove the benefits of the tool before purchasing. This is a low-risk strategy compared to the more complex architectures of some other BI software tools, which require upfront planning and design, and don't necessarily provide a pricing structure that allows an organization to prototype and test drive a product prior to purchase.

**A large European organization** said, "We selected QlikView because to do a BI pilot with our ERP vendor would have cost €25k–€30k."

QlikView's associative technology and the fact that data integration is included in the tool also helps users to start small and keep costs low until the benefits of the technology are proven.

**Dave McKay, Bristow Helicopters (U.K., consumer products, retail and distribution):** "We could start on a small scale, we didn't need to spend money right at the start to extract data into a data warehouse before reporting on it."

#### *What Was the TCO of QlikView*

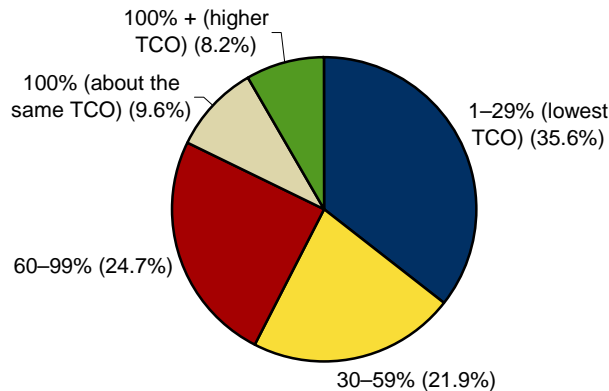
The next question to all respondents who stated they had measured the TCO of QlikView, was "What was the TCO of QlikView, as a percentage relative to other solutions that you evaluated?"

Figure 3 shows the responses.

### **FIGURE 3**

#### The Comparative TCO Of QlikView

Q. *What was QlikView's TCO as a percentage relative to other solutions that you evaluated? (For TCO, please include software, services, and hardware.)*



Note: n=73

Source: IDC survey of QlikView customer base, Jan-Mar 2009

82% of respondents found the overall TCO of QlikView to be lower than that of other solutions they had evaluated. Over a third of respondents (36%) found QlikView not just lower in cost than alternative solutions, but significantly so (1%–29% of the TCO of other solutions). When calculating an average for all the responses, QlikView had a lower TCO than other solutions evaluated — 53% of the cost of other solutions.

One customer described the ballpark figure for the comparative cost of QlikView software. **Keith Edmonds, Aon Asia, (Singapore, financial services)**: "We calculated the difference between a traditional BI tool and QlikView, just for the front end (excluding any data warehouse). QlikView was cheaper by a factor of 5."

### ***The Overall Comparative TCO of QlikView by Component***

To validate survey respondents' overall TCO assessment of QlikView relative to other solutions, the survey also assessed the TCO at a component level, as well as at an aggregate level.

The aggregate level provided in the preceding question "What was the comparative TCO of QlikView overall?" delivered a result of 53%. In most surveys, respondents are likely to understate savings somewhat when giving a high level figure, out of caution. When the relative TCO of each component was aggregated, the resulting TCO was 46% of other solutions. (The components are software license, software maintenance, implementation services, ongoing consultancy services, training and education services, hardware, and labor costs to produce information in the business.) The closeness of these values demonstrates the accuracy of the survey responses. The following sections discuss each component of TCO in more detail.

### ***Software License and Maintenance***

The traditional and usual software licensing model for BI is the perpetual model, where the perpetual rights to use software are acquired upfront and ongoing upgrades and support are paid for by a monthly maintenance fee. This divides into an upfront cost and an ongoing cost, both of which contribute to the TCO of a software system.

A less common model, although gaining in popularity, is the subscription or software-as-a-service (SaaS) model, where the right to use the software is paid on an ongoing basis. There are a number of issues around SaaS for BI, and currently BI is not really an area where there has been much take-up, although applications such as CRM have seen significant uptake of the SaaS model.

Both models correspond to an initial payment without which the software cannot be installed, and a series of ongoing payments without which the software will not be supported.

The comparative software cost for QlikView was 56% of that of other systems. This average is comprised of software license and maintenance, which were 56% and 55%, respectively. QlikView delivered very similar savings from license and maintenance. **Eddo de Vries, UWV (Netherlands, public sector)** said, "We decommissioned our legacy analysis system as soon as we implemented QlikView, and that saved us 50%–70% of our data warehousing costs straight away, just on license fees."

Another factor is that QlikView started out as a software vendor targeting the midmarket, and although it has a significant enterprise customer base, it has long been focused on delivering value for money to meet the demands of the midmarket.

Maintenance is usually pegged to license, being a fixed percentage of the license fee, typically between 15% and 25%. (QlikView charges 20%.) Generally, software companies are prepared to discount the list price for the perpetual license element, but do not usually discount maintenance, because this represents their ongoing

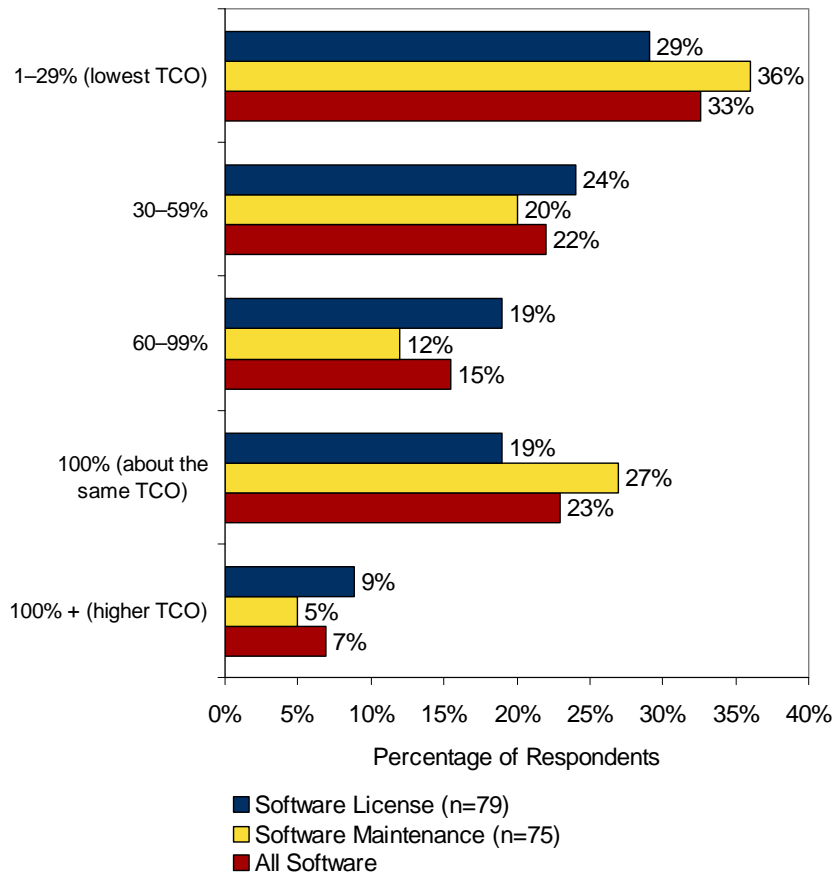
revenue stream. Maintenance cost projections are therefore somewhere companies should pay attention to over time, as they are affected by license fee increases.

The comparative TCO of the maintenance cost of QlikView was 55%. Figure 4 shows software license and maintenance TCO results.

**FIGURE 4**

The Comparative TCO of QlikView — Software

Q. *Approximately how did the TCO of QlikView compare to the TCO of other solutions evaluated? (Software license and maintenance measured as a component of TCO.)*



Source: IDC survey of QlikView customer base, Jan-Mar 2009

## **Services**

In the context of this report, we use the term "services" to mean all the human resources required for a BI system.

☒ **Initial and ongoing:** Services is comprised of two categories — the initial implementation services to get a system live and the ongoing services to maintain a system over time. This is because BI systems need to evolve as the business changes and as user requirements for information change. Ongoing services requirements are therefore a key area for companies measuring and managing the TCO of their BI project.

☒ **Internal and external:** Resources may be employed directly by the company, or from external organizations. Generally, company employees will participate in the BI project by defining the business requirements, and may also have knowledge of what data is available. External resources could also be used for either of these activities, to add knowledge of BI best practices, and for specific technical knowledge of the BI tool or data integration tools and methodologies.

This section looks at QlikView customers' TCO perspective of internal and external services, divided into implementation, ongoing consultancy and training and education.

The comparative TCO of all services for QlikView was 39%. This breaks down as follows:

- ☒ 40% for implementation services
- ☒ 38% for ongoing consultancy
- ☒ 39% for training and education

Services had the lowest comparative TCO of all the elements. For each type of service (ongoing consultancy, training and education, and implementation), over 50% of respondents found QlikView to have a TCO of between 1% and 29% of other solutions evaluated, which is impressive. See Figure 5 for the TCO of QlikView by services element.

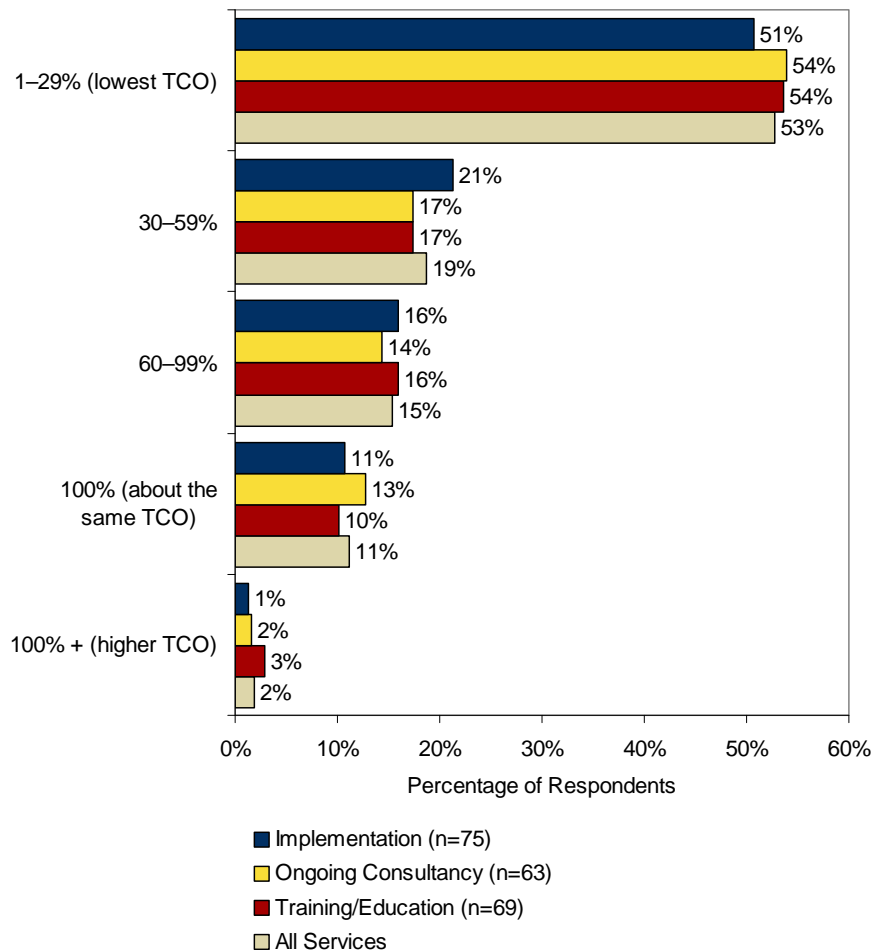
QlikView customers found the comparative TCO of services to be significantly lower than the comparative TCO of software (39% compared to 56%). This demonstrates that the build-it-yourself mentality and simplicity of installation and implementation of QlikView both have a significant effect on the TCO of the services element of BI projects. As services are usually the most significant proportion of a BI project, this indicates that QlikView customers achieved considerable savings.

**Peter Fabricius, Magasin du Nord (Denmark, consumer products, retail and distribution):** "We ran a project with a traditional BI tool. We spent a great deal on external consultants every time we needed development. With QlikView, we do the development ourselves internally."

**FIGURE 5**

The Comparative TCO of QlikView — Services

Q. Measured as a component of TCO, approximately how did the TCO of QlikView compare to the TCO of other solutions evaluated? (Implementation services, ongoing consultancy and training/education measured as a component of TCO.)



Source: IDC survey of QlikView customer base, Jan-Mar 2009

**Staffing Costs Across IT and the Business**

Internal staffing costs can be difficult to measure, because employees' time is rarely fully dedicated to developing or running reports. In some cases, once a business has a better tool to generate reports, employees will be redeployed elsewhere in the business. However, more often, employees will remain focused on providing information but work on different information-related tasks. In this case, the system has provided benefits that relate to capacity rather than cost. IDC posed questions about internal staffing costs related to BI to the survey participants.

The comparative TCO of the labor cost in the business for QlikView was 46%. See Figure 6 for a breakdown of the comparative TCO by ranges.

As the interviewed customers reported, time savings can occur in various ways and for different types of employees:

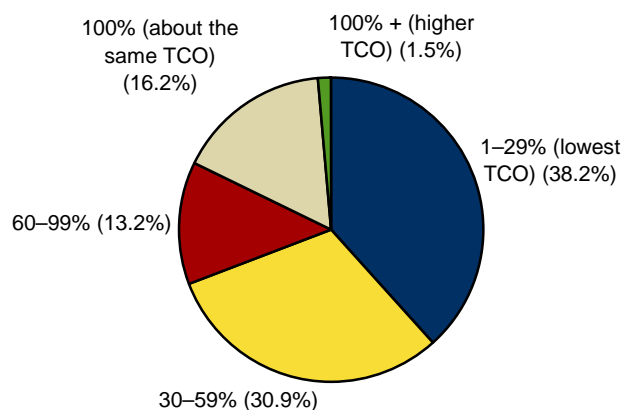
**A U.S.-based life sciences company:** "Before our process improvements, each functional area had its own BI people who were working on the Excel extracts, etc. That was 12 people in total, for whom 80% of their time was recurring activity."

**Michael Korin, Superior Graphite (U.S., manufacturing):** "We made time savings all over the place. Myself and a colleague save four hours every month preparing a report for the operating committee, now the reports take one minute in QlikView. The company founder saves about 10 hours a month of information gathering time, as everything he needs is right there in the system."

## FIGURE 6

### The Comparative TCO of QlikView — Labor Costs in the Business

Q: *Measured as a component of TCO, approximately how did the TCO of QlikView compare to the TCO of other solutions evaluated? (Labor costs in the business to gather, aggregate, and disseminate information,)*



Note: n=68

Source: IDC survey of QlikView customer base, Jan-Mar 2009

### Hardware

Hardware for BI systems can involve multiple elements including servers for extract, transform and load (ETL), data staging, OLAP and reporting. Often the hardware element of BI projects is addressed only once in the BI project, and as systems scale up it can present unexpected costs. It can also be either addressed too early, because its part of what IT controls, or it can be addressed too late by a business-led project that focuses on the more unique requirements of BI.

Hardware should be evaluated on an ongoing basis and included in projections around increasing the BI user base. Hardware costs for QlikView were 51% of the

costs of the other systems evaluated. Survey results for hardware can be seen in Figure 7.

QlikView is deployed in memory rather than using disk-based storage as OLAP-based architectures do. Therefore, we would have expected the hardware element of TCO to show more significant cost reductions from QlikView. Of course, users should be aware that this use of memory means that 64-bit client hardware is optimal.

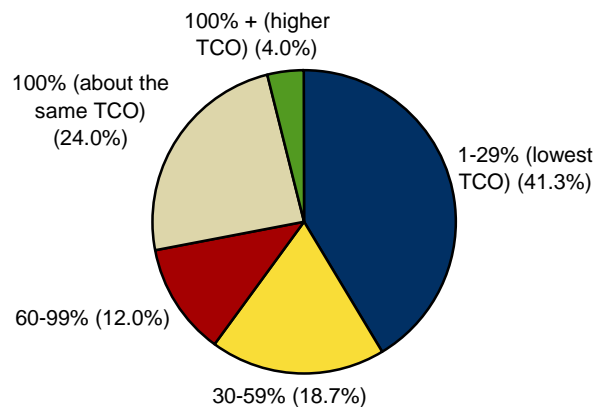
**Peter Fabricius, Magasin du Nord (Denmark, consumer products, retail and distribution):** "We had a \$50k server for our traditional BI and a \$12k server for QlikView."

**A European media company:** "The [previous] BI system duplicated the data storage, which took up a lot of space. With QlikTech we could look at the data directly in the data warehouse."

## FIGURE 7

### The Comparative TCO of QlikView — Hardware

Q: *Hardware measured as a component of TCO, approximately how did the TCO of QlikView compare to the TCO of other solutions evaluated?*



Note: n=75

Source: IDC survey of QlikView customer base, Jan-Mar 2009

### ***TCO Reduction for a Generic BI Project***

The previous sections described the TCO reduction QlikView customers measured compared to other solutions.

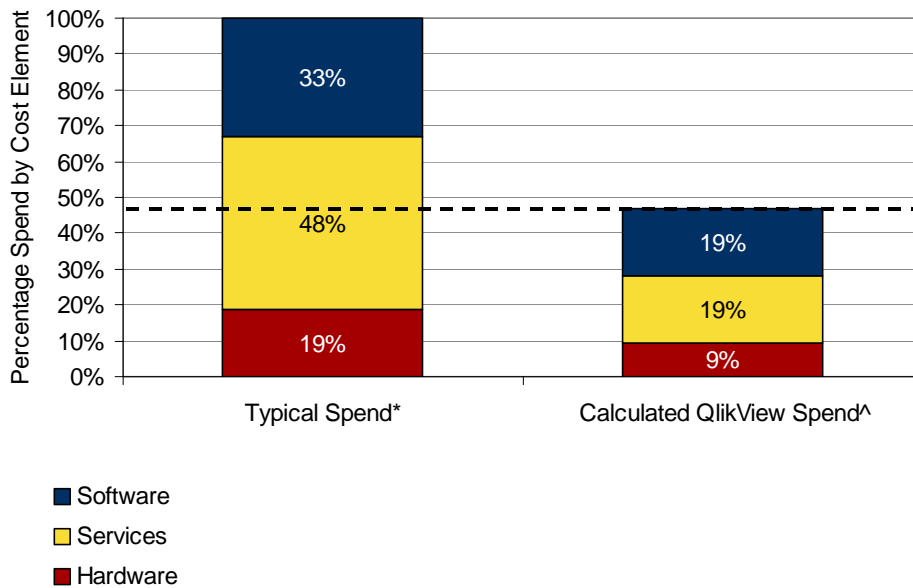
Figure 8 takes IDC's standard proportions for software, services, and hardware based on spend for BI projects, and calculates the full BI project reduction that the reported QlikView TCOs would deliver for a generic BI project. IDC calculates these pull-through rates from ongoing research. Note that they only include software, services,

and hardware, not labor costs in the business to produce information. The standard proportions are: software, 33% of total; hardware, 19% of total; services, 48% of total.

These BI project spend proportions were then multiplied against the comparative QlikView TCO of 56% for software, 39% for services, and 51% for hardware. This calculation demonstrates that for a generic BI project, QlikView would average out at 47% of the cost of other solutions evaluated by QlikView respondents.

**FIGURE 8**

The QlikView TCO Reduction For a Generic BI Project



Note: \*Uses IDC's standard BI software, services, and hardware proportions

Note: ^QlikView cost reduction applied to IDC standard pull-through rates

Source: IDC 2009

## CHALLENGES AND OPPORTUNITIES FOR QLIKTECH

### Challenges

- ☒ A key challenge for QlikTech, as a relatively small player, is that it is in competition with the newly consolidated software giants with their broad technology portfolios.
- ☒ QlikView needs to persuade its potential customers that they should focus on a three- to five-year TCO of a system across the board, not just on obtaining discounts on license. According to IDC research, as illustrated in Figure 8, license comprises 33% of the overall TCO, with services comprising 48% and hardware the remaining 19%. The challenge here is a reduction in services is in some level to be taken on trust, while a license discount is a more tangible reduction.

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## Opportunities

- ☒ QlikView offers significant savings on TCO across software, services, and hardware, according to our results, and can therefore compete across the board. In particular, it can compete in BI projects with larger and more complex product portfolios because of the savings offered by QlikView on the significant services component in such a project initiative.
- ☒ The fact that QlikView software is available for prototyping prior to acquisition is a key advantage to both QlikTech and its customers. Organizations can see how their data works, and can demonstrate this to their users and get them hands on with the technology at a very early stage. This is key to gaining acceptance and is a strong competitive advantage for QlikView.

## CONCLUSION

In today's volatile economy, organizations have been increasingly focused on tactical, quick-win technology projects at the expense of large strategic projects. The impact of technology projects on the top and bottom line of the organization is increasingly under scrutiny. The purpose of ROI is to provide a financial metric with which to measure such projects and provide a like-for-like comparison between initiatives that may have very different justifications and business benefits.

However, TCO addresses the cost elements of ROI. TCO allows organizations to provide a like-for-like comparison between various solutions for the same project. Assuming that the benefits of a project would be the same regardless of the solution, the solution with a lower TCO would therefore yield a higher ROI as well as faster payback.

A key advantage of using TCO is that it allows companies to measure annual and incremental costs as well as initial upfront costs. For BI, TCO includes software (license and maintenance), services (initial implementation, training, and ongoing development), and hardware.

IDC's research findings on QlikView's TCO proved to be consistent and accurate across the three distinct approaches taken, with the results being:

- ☒ 53% comparative TCO at overall level
- ☒ 46% comparative TCO for average of component level
- ☒ 47% comparative TCO of applying component level metrics to a generic BI project spend

This shows that a broad range of users found that QlikView delivered an extensive reduction in the TCO of their BI system.

## APPENDIX

### The Survey

The IDC survey was deployed for twelve weeks during the first quarter of 2009, in 9 languages worldwide. The survey resulted in 809 responses. The organizations and survey respondent characteristics include:

- Region: Americas (27%), EMEA (70%), and Asia Pacific (3%).
- Industry: Consumer products, retail & distribution (38%), manufacturing (28%), financial services (9%), public sector (9%), infrastructure services (7%), life sciences (5%), and healthcare (4%).
- Organization size based on the number of employees: Fewer than 20 (6%), 20–499 (34%), 500–999 (12%), 1,000–9,999 (25%), and 10,000 or more (23%).
- Individual respondents profile:
  - Senior management (23%), middle management (30%), and staff (47%).
  - Line of business (38%) and IT (62%).

### Calculations

#### *Weighted Average*

Weighted averages are calculated as follows:

Median of percentage range, as per below table, multiplied by number of respondents to give an average percentage for TCO reduction.

**TABLE 1**

Weighted Average Calculation

Percentage Reduction Range	Median Value of Range used in Calculation
1–9% (lowest TCO)	5
10–19%	14.5
20–29%	24.5
30–39%	34.5
40–49%	44.5
50–59%	54.5
60–69%	64.5
70–79%	74.5
80–89%	84.5
90–99% (lower TCO)	94.5
100% (about the same TCO)	100
100% + (higher TCO)	100

Source: IDC, 2009

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