

# The BI & Analytics Survey 21

The voice of the BI and analytics community

Vendor Performance Summary

A summary of the headline results for

**Qlik Sense**



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## Introduction

This report is split into two main sections – The Analyst Verdict and The Customer Verdict - to give the reader a balanced overview of the product's capabilities, strengths and weaknesses from both a customer and analyst point of view.

The first section - The Analyst Verdict - is a product evaluation and vendor assessment reflecting the opinion of BARC's team of experienced BI analysts. It provides detail on the vendor and its strategy, as well as the technical and functional capabilities of the software.

The Customer Verdict is based on the results of The BI & Analytics Survey 21, the world's largest and most comprehensive survey of business intelligence end users, conducted in the spring and summer of 2020. In total, 2,591 people responded to the survey with 2,136 answering a series of detailed questions about their use of a named product. Altogether, 33 products (or groups of products) are analyzed in detail.

The BI & Analytics Survey 21 offers an unrivalled level of customer feedback on issues ranging from the purchase cycle right through to deployment. Products are assessed and compared across a broad range of 36 criteria (KPIs) - including critical measures such as business value, customer satisfaction, customer experience and competitiveness. The extent of adoption of a variety of trending technologies - including mobile BI, embedded BI and cloud BI – is also measured.

## About BARC

BARC is a leading enterprise software industry analyst and consulting firm delivering information to more than 1,000 customers each year. Major companies, government agencies and financial institutions rely on BARC's expertise in software selection, consulting and IT strategy projects.

For over twenty years, BARC has specialized in core research areas including Data Management (DM), Business Intelligence (BI), Customer Relationship Management (CRM) and Enterprise Content Management (ECM).

BARC's expertise is underpinned by a continuous program of market research, analysis and a series of product comparison studies to maintain a detailed and up-to-date understanding of the most important software vendors and products, as well as the latest market trends and developments.

BARC research focuses on helping companies find the right software solutions to align with their business goals. It includes evaluations of the leading vendors and products using methodologies that enable our clients to easily draw comparisons and reach a software selection decision with confidence. BARC also publishes insights into market trends and developments and dispenses proven best practice advice.


BARC consulting can help you find the most reliable and cost-effective products to meet your specific requirements, guaranteeing a fast return on your investment. Neutrality and competency are the two cornerstones of BARC's approach to consulting. BARC also offers technical architecture reviews and coaching and advice on developing a software strategy for your organization, as well as helping software vendors with their product and market strategy.

## The Analyst Verdict – Qlik Sense June 2020

### Product characterization

Qlik Sense is a visual analysis and dashboarding product based on Qlik's own in-memory technology. It is particularly suitable for interactive, visual and set-oriented analysis as well as dashboard and application design. In general, it addresses a mixture of use cases from self-service data visualization to building guided analytical apps to embedded analytics. It covers analysis, dashboard and report creation and is strongly focused on business analysts and casual business users.

### Vendor

Vendor profile	
Vendor	Qlik
Product	Qlik Sense
Offices	Worldwide
Employees	2,000+
Customers	50,000
Revenues (2019)	Not disclosed

Qlik, originally founded in 1993 in Lund, Sweden, moved its headquarters to the United States in 2005 after raising funds from several venture capital firms. QlikView, the company's only product at the time, was very aggressively marketed after the VC investment. This created attention and traction, and in 2010 Qlik went public on NASDAQ. In 2016, Qlik was acquired by a private equity company and delisted from the stock exchange.

Qlik was a one-product company until the general availability of Qlik Sense in 2014. Today, the vendor provides a portfolio of data management and analytics offerings. With this stack, Qlik focuses on helping customers manage their data, providing analytics to analyze the data, and features to transport insights to end users. This product review describes Qlik Sense.

### Strategy

The vendor pursues a platform approach which aims to empower data usage by providing a platform for all visual analytics needs and helping to find innovative ideas by navigating data using an 'associative' model. Qlik's front-end products use a common data engine called QIX (Qlik Indexing Engine).

Qlik's platform consists of several components including Qlik Sense, Qlik Core for developers, QlikView and Qlik NPrinting, for enhanced printing and page-based layout. Qlik DataMarket is a marketplace for sourcing external data for analyses such as weather and currency information. In 2017 Qlik acquired Idevivo, now called Qlik GeoAnalytics, to provide enhanced spatial analysis. The vendor has also strengthened its data management offering. Qlik Data Catalyst, formerly Podium Data, was acquired to broaden its feature set for data preparation and data catalogs. This was followed in 2019 by the acquisition of Attunity, a real-time data integration specialist.

The vendor's main front-end products are Qlik Sense and QlikView. QlikView was the vendor's first

analytics product and the tool it became famous with. It is a dashboard and analysis product that pioneered in-memory technology in BI to deliver exceptional performance for highly responsive analyses and interactive dashboards. It was the first tool marketed under the “data discovery” and “modern BI” terms to differentiate it from traditional BI suites. The solution was positioned as a self-service platform targeted at business users, enabling them to analyze data without having to consult developers for new reports, dashboards or analyses on new data. Qlik Sense is a visual analysis and dashboarding product providing immediate analysis results to users. It is powered by QIX and gives flexible access to data sets stored in memory. Based on the in-memory and ease-of-use heritage of QlikView, Qlik Sense is positioned as the strategic offering for new customers for most use cases. However, at least one QlikView release per year with product improvements ranging from technical to integration in its own portfolio will be provided. Qlik NPrinting is a report generation, distribution and scheduling application which can be used to compile page-oriented reports based on Qlik Sense or QlikView content.

The “land & expand” sales strategy and the business-user-oriented messaging are a decisive part of Qlik’s success. Its visual analytics products are clearly designed to appeal to business users, who can achieve results without waiting for assistance from IT. Qlik consistently emphasizes ease of use, rapid deployment, integration and high performance over more complex technical, architectural and administrative strengths.

Qlik addresses accounts of all sizes: from small business to enterprise standard deployments in large accounts. Nevertheless, a clear shift towards larger buying companies can be observed. The vendor has an extensive partner channel and it addresses mid-market accounts largely through these partners. Qlik has a web-based program for direct sales to small companies and addresses the large enterprise market jointly with large consultancy companies.

## Architecture

Qlik Sense is a platform built on the associative, columnar, in-memory engine QIX. End users access the complete breadth of analytics functionality (from data preparation to visualization, and dashboard and app creation to data storytelling) through a unified web or desktop client. Applications built are hosted on the Qlik Sense hub and can be organized by streams based on workgroup or function to apply security. Two administration front ends are used to manage the server: Management Console and Deployment Console. The Qlik Management Console (QMC) is designed to control and manage all server components such as the QIX engine, the scheduler for data loads, the repository for user and rights management and a repository for storing the application (QVF) files, as well as monitoring the environment. Qlik Sense can be deployed in a distributed and scalable architecture where several servers are used as nodes, each performing different tasks, or even in a multi-cloud environment.

Data extraction, transformation and loading (ETL) processes are performed using ‘Visual Data Preparation’. Qlik offers algorithms based on machine learning to detect join candidates based on the content of all fields in all tables. Most data preparation functions can be used in a business-user-friendly and visual environment. This environment offers decent data profiling and creates a script for automated execution. A script editor is available for more complex transformation tasks, which usually need to be carried out by developers or trained power users. Although the integration is still ongoing, Qlik’s acquisition of Attunity offers additional data integration and management functionality. Attunity’s products are branded with different names such as Qlik Replicate, Qlik Compose and Qlik Enterprise Manager.

Qlik Sense adds most value when combining and preparing data from multiple sources, because it offers data profiling and comprehensive suggestions for join candidates, effectively reducing manual effort and increasing quality by circumventing typical pitfalls when joining data sets. Data is stored in a set of tables,

which are compressed and loaded into memory. The data, the data model and visualizations are stored in QVF files in Qlik Sense. In addition, the product supports QVD and QVW files, the files used by QlikView to leverage and reuse these models. In the case of QlikView application files (QVWs), only the data and data models are reusable, not the visualizations created in QlikView. For data that should reside at the source, Qlik Sense offers a hybrid approach using a capability called 'Direct Discovery'. This allows some data elements to not be loaded into the Qlik Sense data model, but still be available for query purposes. In order to handle more data, Qlik has introduced the Big Data Index, which indexes and presents the most important aggregated data from large volume data sources and offers the possibility to drill into detailed data in a detailed application if needed.

Qlik Sense can create centralized libraries of reusable definitions, analytics and visualizations. However, these libraries are currently part of a QVF file and therefore only available in a single Qlik Sense application, or they have to be reused in other applications.

To support further use cases, the solution provides APIs for web mashups, JavaScript applications, .NET applications and access to low level engine functionality based on REST and JSON. Customers and partners can use them to develop applications and integrate custom applications with web applications or desktop applications based on the .NET framework, as well as to extend Qlik Sense with new visualizations, controls and data sources.

### Front-end functionality

Qlik Sense offers a web client for enterprise use and a functionally equivalent desktop client for personal use. Both clients offer data preparation, creation of visualizations and applications, data discovery, analysis, collaboration and data storytelling. While data preparation in complicated cases requires scripting, Qlik Sense increasingly offers visual data preparation for business users with data profiling features to load data sets.

Analytical applications can be created by business users via a modern drag-and-drop interface. The main data display objects are interactive visualizations including a comprehensive selection of charts, multi-layer maps and tables (including pivot tables). Qlik also offers chart suggestions that deliver the best-fit visualizations when users drag and drop fields onto the canvas. The solution automatically links all objects and sheets, so dashboards can provide a highly aggregated view of the data with the ability to jump to detailed analysis within the same application. External content can be included in dashboards via widgets. The 'Bookmark' function stores a data context and can contain user comments, thus adding to the collaboration and storytelling capabilities of Qlik Sense.

The associative functionality provided by the QIX engine offers interactive exploration for users consuming applications and freely analyzing large data sets. Users can make selections in any chart or object and all charts in the app will update immediately to reflect the new context. Qlik Sense highlights the user's current selection and shows associated data in white as well as unrelated data in gray. It also provides a strong search feature that exposes field values, associations and thumbnails of objects that meet the criteria. In general, the whole tool is well optimized for an interactive user experience.

Qlik Sense provides dedicated features for data storytelling besides its capabilities for creating visual analyses and applications. Data stories resemble presentation slides and can either be consumed independently or interactively presented and analyzed during business meetings. They are created using multiple visualization objects or whole application pages. Visualizations and tables are pinned to a story with the option to preserve not only the applied filters, but also the complete state of the objects in a snapshot even if the underlying data changes. Objects can be enhanced by highlighting relevant values and adding comments when compiling data stories. Qlik Sense offers an integrated approach to

data storytelling, allowing users to jump directly into the live analytics application for further detail analysis. In addition, the developer can add comments, text or other graphical objects to the slides. Stories can be exported to PowerPoint or PDF if needed.

The solution is strongly oriented towards interactive data analysis and visualization. Nevertheless, reports and printing can be compiled centrally or by users. Qlik NPrinting allows organizations to create and distribute Microsoft Office, pixel-perfect and web reports based on visualizations from Qlik Sense for standard reporting and report books. While Qlik Sense is clearly built for business users, building reports with Qlik NPrinting is rather developer-oriented. Reports can be distributed by email or to the Qlik Sense hub, with data specific to each recipient.

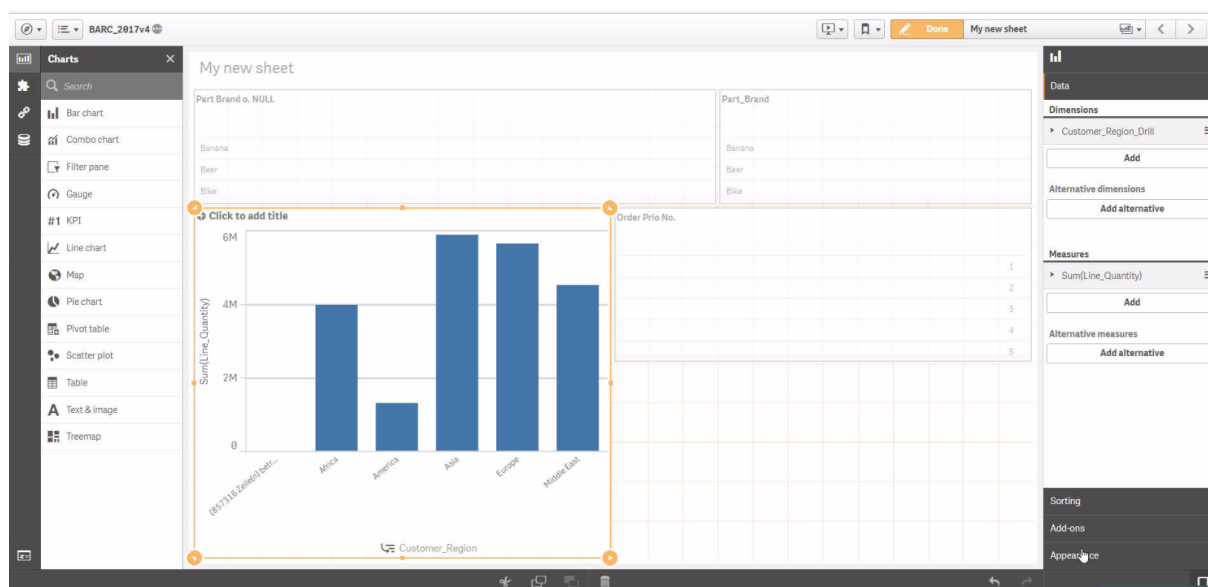


Figure 1: Visual analysis and dashboard development in Qlik Sense

## Overall product scores

### Functional evaluation

Criteria	Score
Formatted reporting	6
Dashboards	7
Ad hoc reporting	4
Analysis	7
Advanced analytics	3
Planning	N/A

10-point rating scale: 0 (not supported) to 10 (best)

### Use case analysis

Criteria	Score
Self-service analytics	★★★★★
Data discovery & visualization	★★★★☆
Data preparation	★★★★☆
Deployment options	★★★★☆

5-point rating scale: 0 (not supported) to 5 (best)

### Tool evaluation

Criteria	Score
Maturity	★★★★★
Pace of development	★★★★☆
Integration in overall analytics portfolio	★★★☆☆

5-point rating scale: 0 (worst) to 5 (best supported)

### Strengths and weaknesses

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Easy to use for consuming interactive dashboards and creating visual analysis</li> <li>• Good 'associative' and interactive navigation in data, highly responsive in-memory processing</li> <li>• Visual and guided data preparation with profiling and join suggestions</li> <li>• Good visual analysis capabilities through chart suggestions</li> <li>• Good performance in data preparation and analysis through mature in-memory engine</li> </ul>	<ul style="list-style-type: none"> <li>• Distributed creation of data assets poses threat to data consistency and quality</li> <li>• No overarching semantic model to effectively govern KPI definitions</li> <li>• Support for advanced analytics through integrations (R and Python)</li> <li>• Planning not covered by vendor</li> <li>• Advanced data preparation tasks still require scripting</li> </ul>



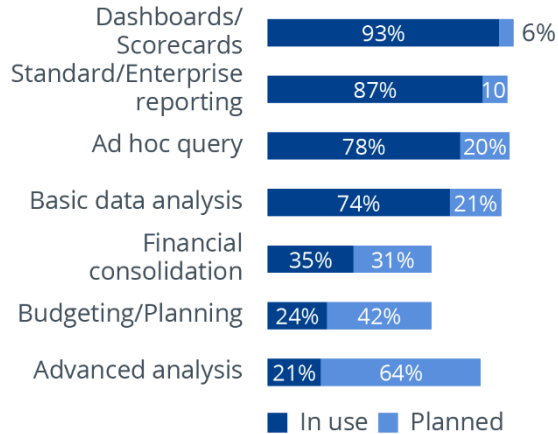
## The Customer Verdict – Qlik Sense

This year we had 121 responses from Qlik Sense Cloud users.

### User and use case demographics

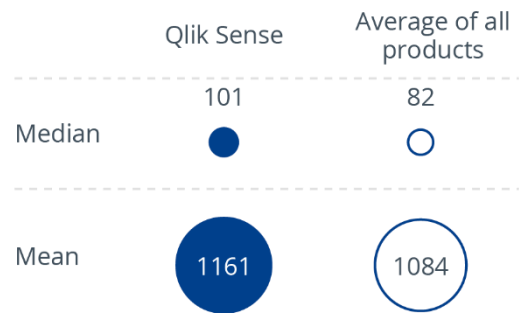
#### Current vs. planned use

n=116



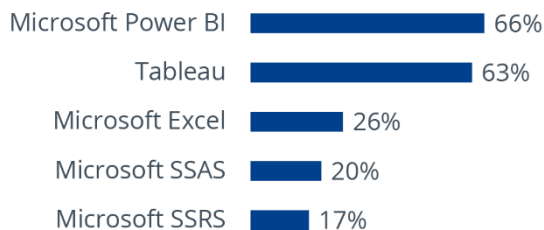
#### Number of users using Qlik Sense

n=118



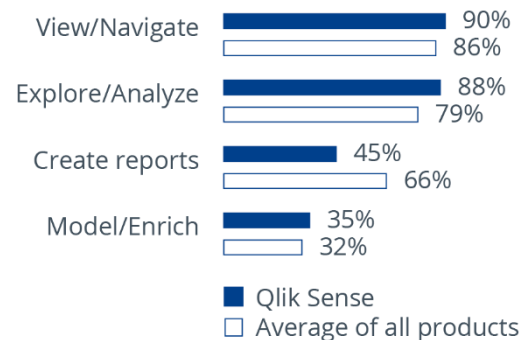
#### 5 products most often evaluated in competition with Qlik Sense

n=115



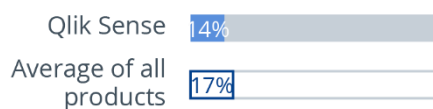
#### Tasks carried out with Qlik Sense by business users

n=121



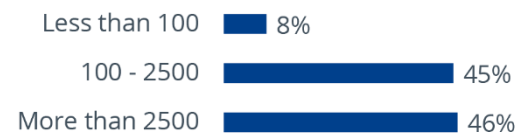
#### Percentage of employees using Qlik Sense

n=118



#### Company size (employees)

n=119



Qlik Sense is used quite broadly by customers. Most respondents (93 percent) use the software for its core strength: creating interactive dashboards. In addition, 87 percent of customers use it for enterprise reporting and 78 percent for ad hoc query. 74 percent of customers use the solution for analysis.

Most users navigate and explore content provided by other users because only 45 percent claim to create reports with the software. 35 percent of users model and enrich data using Qlik Sense, which is slightly above the survey average of 32 percent. The solution's characterization as a visual analysis solution geared to business users is also highlighted by the two most frequently evaluated competitors: Microsoft Power BI and Tableau.

Roughly equal shares of the Qlik Sense users in this year's survey came from mid-sized companies (45 percent) and large companies (46 percent). Qlik Sense has a mean of 1,161 users and a median of 101 users, both slightly above average.

## Peer groups

The BI & Analytics Survey 21 features a range of different types of BI tools so we use peer groups to help identify competing products. The groups are essential to allow fair and useful comparisons of products that are likely to compete.

The peer groups have been defined by BARC analysts using their experience and judgment, with segmentation based on two key factors:

- Usage scenario - functional peer groups are mainly data-driven and based on how customers say they use the product.
- Regional focus - is the vendor a large international vendor with a truly global presence or does it focus on a particular region? We also take into account the location of survey respondents.

Qlik Sense features in the following peer groups:

- Ad hoc reporting-focused products
- Self-service analytics-focused products
- Large international BI vendors
- Embedded analytics-focused products

## The KPIs

The BI & Analytics Survey 21 provides the reader with well-designed KPI dashboards packed with concise information, which can be absorbed at a glance. The KPIs all follow these simple rules:

- Only measures that have a clear good/bad trend are used as the basis for KPIs.
- KPIs may be based on one or more measures from The BI & Analytics Survey.
- Only products with samples of at least 20 - 30 (depending on the KPI) for each of the questions that feed into the KPI are included.
- For quantitative data, KPIs are converted to a scale of 1 to 10 (worst to best).
- A linear min-max transformation is applied, which preserves the order of, and the relative distance between, products' scores.

For more details on the KPIs, see the "Sample, KPIs & Methodology" document.

## Why organizations buy Qlik Sense

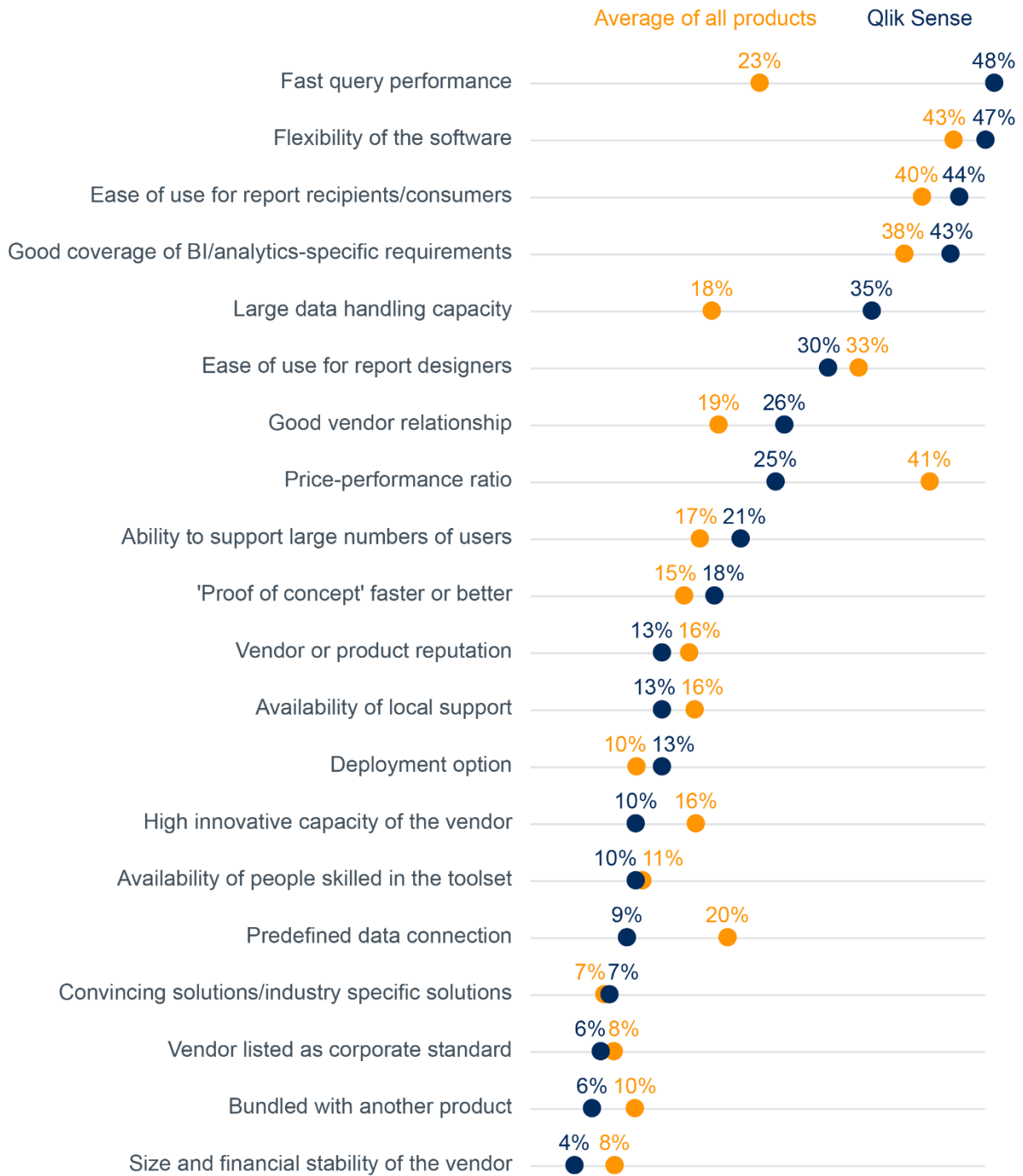


Figure 2: Reasons why Qlik Sense is purchased vs. average of all products (n=106)

## Problems encountered by Qlik Sense users

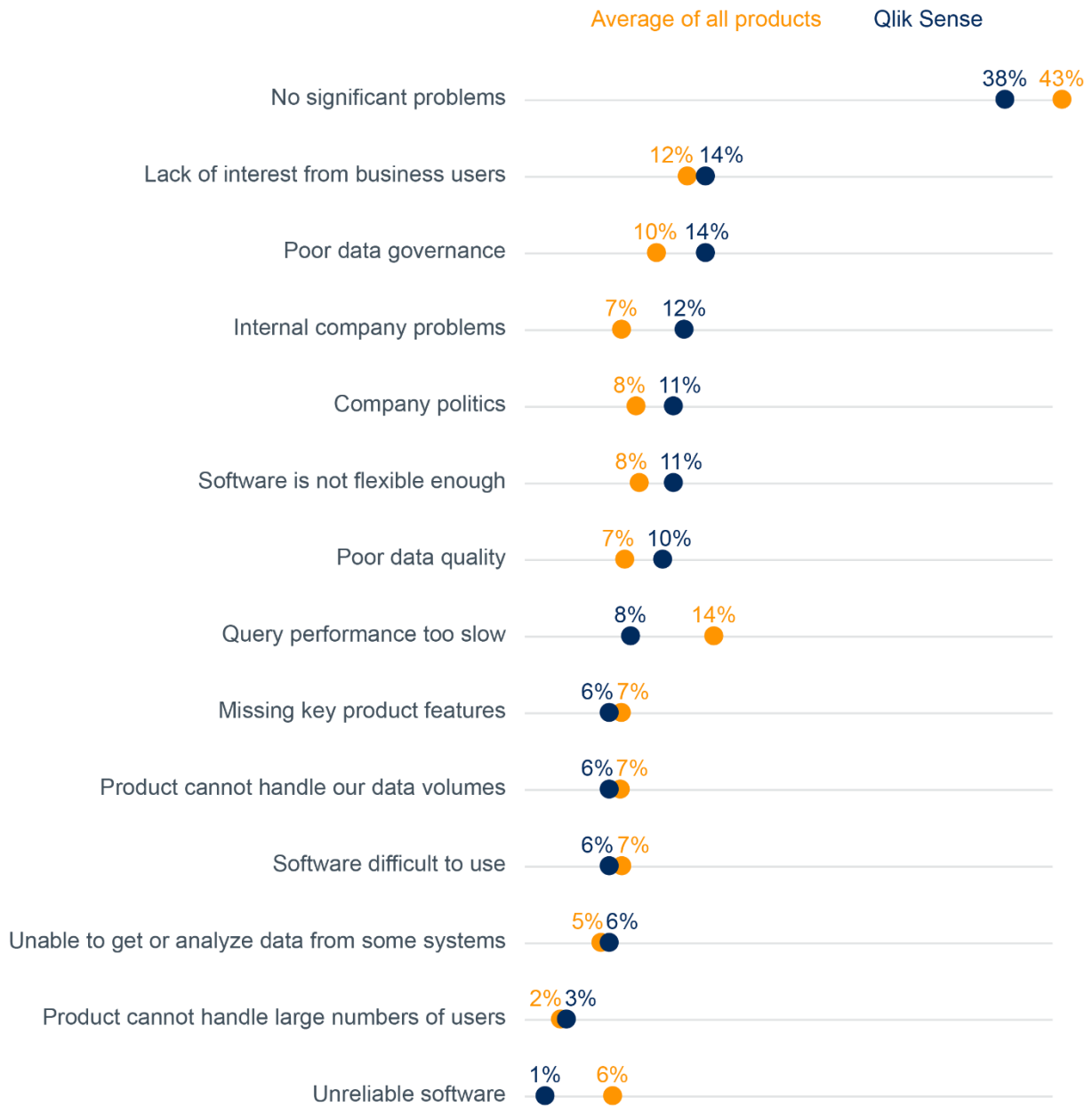


Figure 3: Problems for Qlik Sense users vs. average of all products (n=109)

## KPI results for Qlik Sense in the 'Ad hoc reporting-focused products' peer group

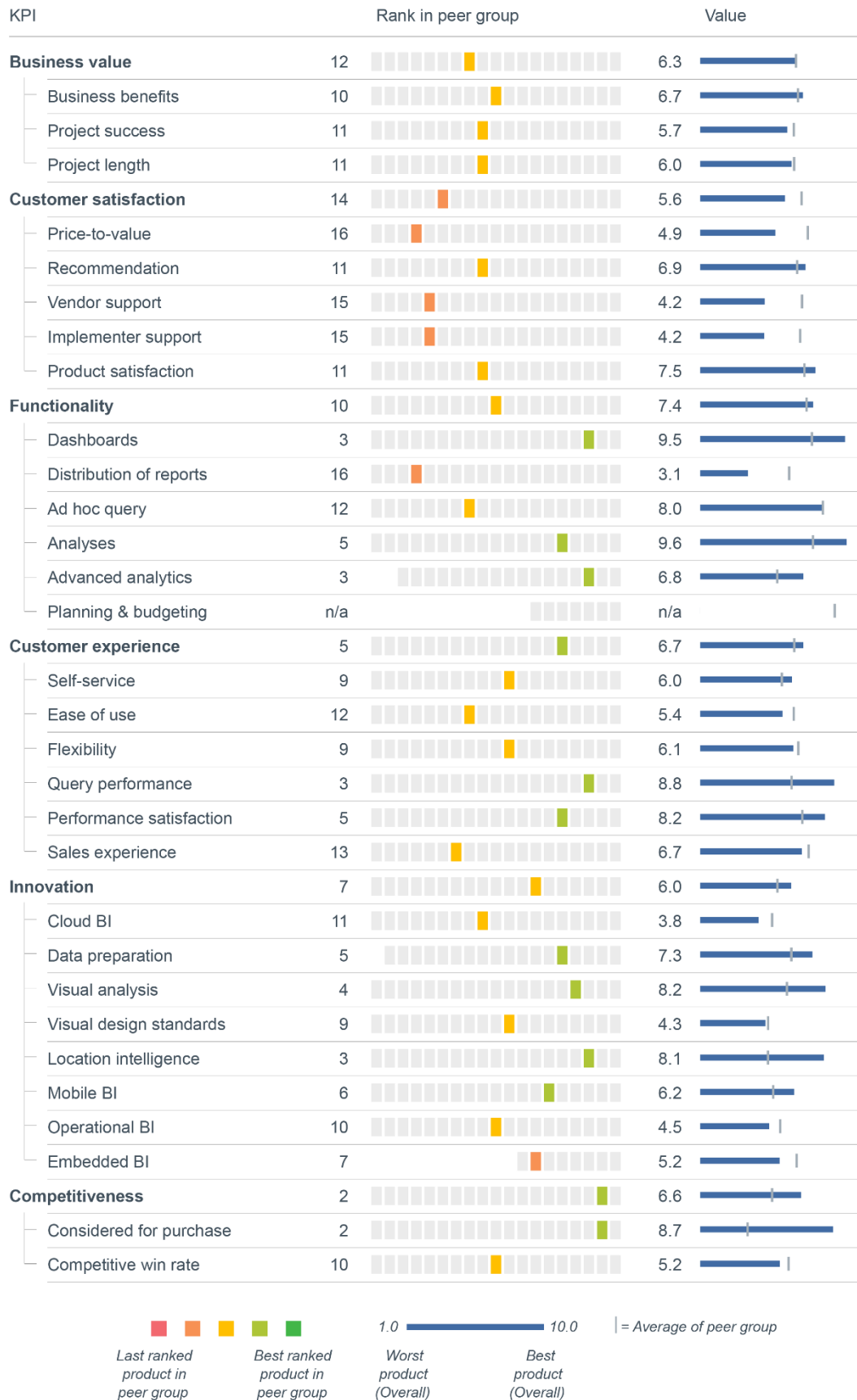


Figure 4: KPI results for Qlik Sense in the 'Ad hoc reporting-focused products' peer group

## KPI results for Qlik Sense in the 'Self-service analytics-focused products' peer group

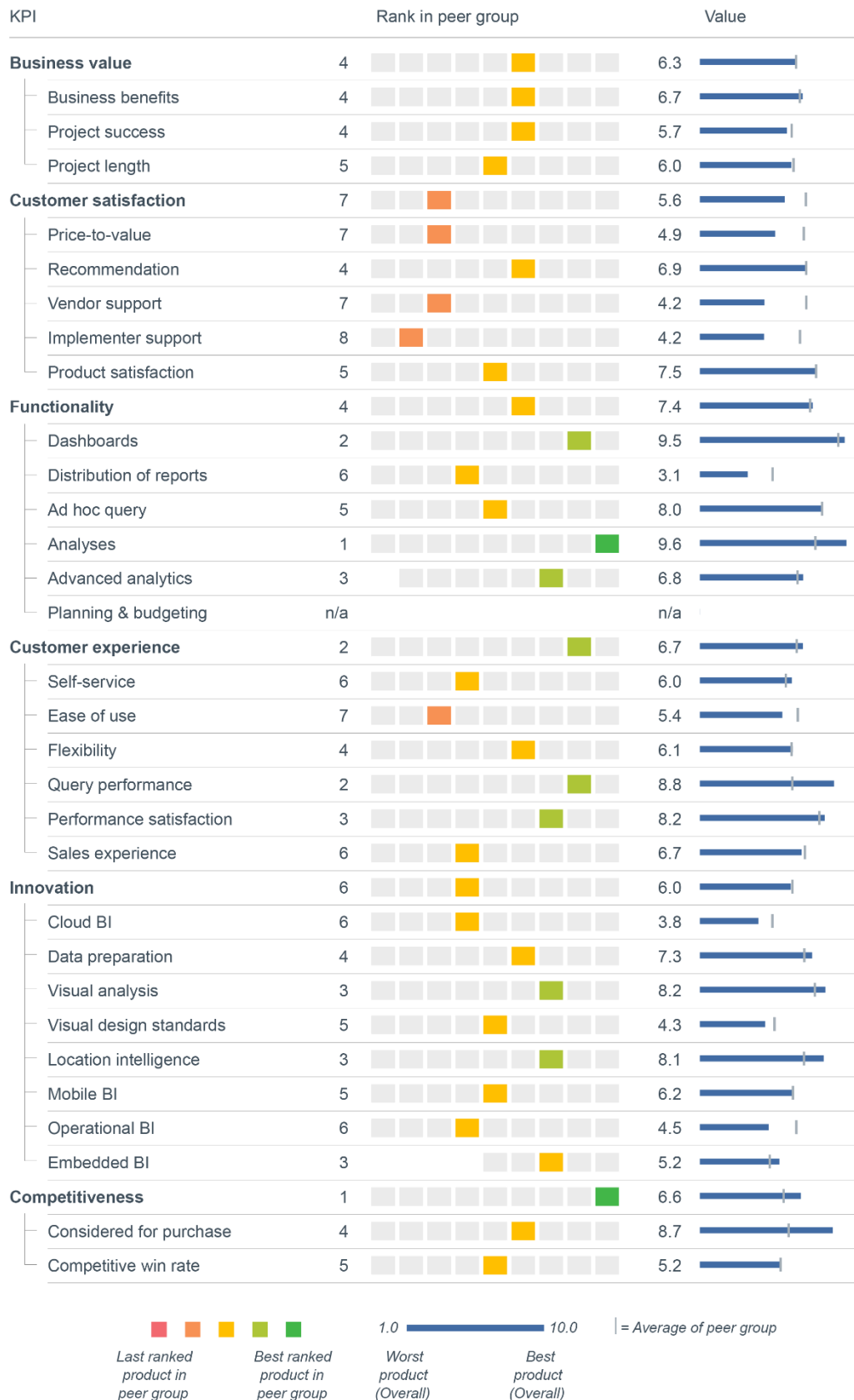


Figure 5: KPI results for Qlik Sense in the 'Self-service analytics-focused products' peer group

## KPI results for Qlik Sense in the 'Large international BI vendors' peer group

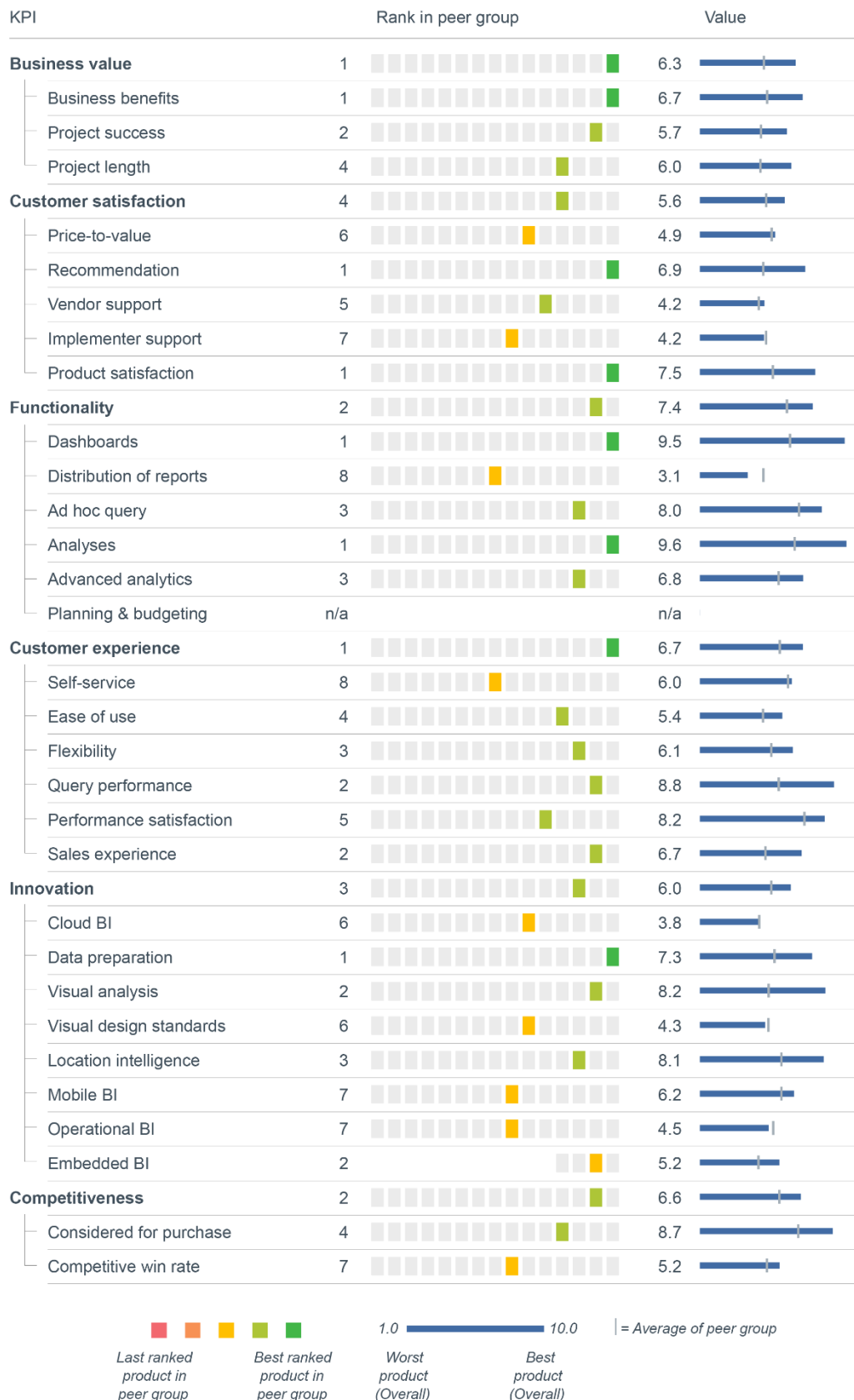


Figure 6: KPI results for Qlik Sense in the 'Large international BI vendors' peer group

## KPI results for Qlik Sense in the 'Embedded analytics-focused products' peer group

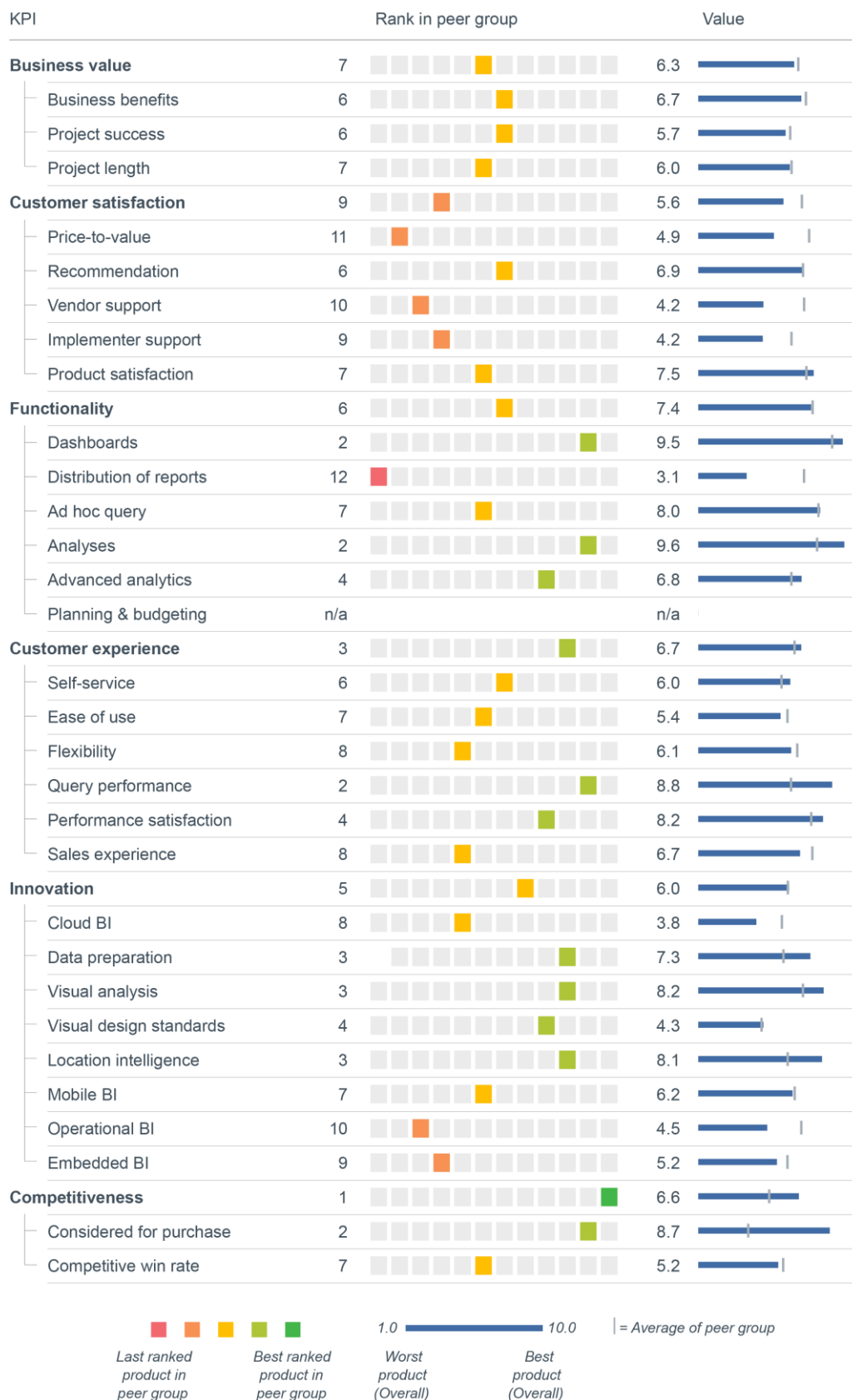


Figure 7: KPI results for Qlik Sense in the 'Embedded analytics-focused products' peer group



## Customer feedback summary for Qlik Sense

### Above-average customer feedback

- Providing excellent query response through its in-memory engine is Qlik's number one sales promise and Qlik Sense continuously delivers on it: Only 8 percent of surveyed users had any complaints about the product's query performance compared to The BI & Analytics Survey average of 14 percent. Most customers use Qlik Sense's integrated in-memory data store even though live access to selected data sources already exists. 'Query performance' is influenced by numerous aspects such as data volume, query engine, data model, front end design and more. This makes real-world peer response even more relevant to inform buying decisions. Qlik Sense queries respond in 3 seconds on average, making it one of the five fastest responding products in this year's survey.
- 'Dashboards' is one of the most mature usage scenarios in analytics and BI. It is a highly competitive space as almost every BI vendor provides its own flavor of dashboarding capabilities. Qlik Sense was conceived from early on to support interactive dashboards and analytical applications together with visual analyses. This year, most customers gave the software a favorable rating, positioning it on the top of the podium in the 'Large international BI vendors' peer group and in the top three of several other peer groups.
- Qlik Sense is designed to support intuitive and powerful visual analyses together with interactive dashboards and analytical applications. It was developed with a strong focus on business users, who can work with data ad hoc by choosing different types of interactive visualizations and analysis capabilities. Qlik Sense offers point-and-click interfaces for data navigation. Users can create new calculations via drag-and-drop or use predefined measures and dimensions from the master library. Qlik's clear vision and thorough execution combine to deliver customers with the flexibility and performance they need to analyze data in depth. This year, Qlik Sense scored extraordinarily well in the 'Analyses' KPI, which takes into account support for various forms of data analysis.
- Data preparation comprises connecting to data sources, ingesting, enhancing and enriching data to publish it for use in analytics. Helping business users to integrate new data for analyses quickly drives positive outcomes from analytics and BI. Qlik Sense has data preparation deeply integrated in its core, delivering a modern and versatile end-to-end platform for analytics and BI. It also offers data profiling and sophisticated automated join recommendations that speed up data preparation. The 'Data preparation' KPI is based on the proportion of respondents that use the product for preparing data for analytics. Qlik Sense ranks number one in the 'Large international BI vendors' peer group and is among the leaders in a number of other peer groups.

### Below-average customer feedback

- Currently, 38 percent of Qlik Sense users claim to have no significant problems with the software, which is lower than The BI & Analytics Survey average of 43 percent. Qlik Sense users complain about 'poor data governance' more frequently than most users of other software products (14 percent vs. 10 percent on average), which is a result of a lack of features for harmonizing data across applications. However, when looking at the other reported problems in detail, many customers struggle with issues that are strongly influenced by factors other than the software itself such as 'company politics'. These tend to have less impact on business

benefits achieved than technical problems such as 'cannot handle our data volumes', where Qlik Sense scores very well.

- Customers are not enamored with the 'Price-to-value' Qlik Sense delivers despite all the successful projects and benefits achieved. 'Price performance ratio' is not usually a major driver for customers buying Qlik Sense, but many still seem to expect more for their money.
- Qlik Sense receives a low rating in the 'Distribution of reports' KPI. Qlik NPrinting supports distributing page-oriented standard reports based on Qlik Sense and QlikView content. While Qlik Sense is clearly made for business users, NPrinting is presented via a distinct interface that is much less intuitive and easy-to-use for business users, which curbs end-to-end self-service analytics capabilities.
- Many customers are not satisfied with the implementer support offered. In the 'Self-service analytics focused products' peer group, Qlik Sense ranks well below the average. The quality of support a BI customer receives can make or break a project and heavily affect satisfaction. Therefore, excellent support from the implementer and the vendor itself is invaluable for customer and vendor alike.

## Customer quotes for Qlik Sense

### Favorable user reviews

- The best business intelligence solution I have used. You can get used to the software and create the necessary dashboards within a very short time. Add your own data sources and the insights gained through the software are ingenious.\*
- Love it! I have been in Business Improvement and used multiple BI products to produce my business reporting - this is the most agile and cost-effective product available.
- It's an analyst/developer's best friend because you can use it for anything: analyzing data, transforming data, pushing data, mining and so forth...it is constantly being updated and improved. As a company they lead the way in data literacy.
- The best visual analytics software right now. No other tool makes it so easy to find hidden insights and answer questions that you didn't even know you had.
- I think it is a great tool that gives a company the ability to satisfy all of their analytical needs.
- Fantastic software enabling users access to powerful and insightful analysis with minimal effort.

### Critical user reviews

- A good tool that needs some improvements: 1. Mobile platform - requires major improvements to provide useful insights; and 2. Better training for users to make them inclined to explore more insights.
- More features should be inbuilt in one application rather than creating different applications. For instance, NPrinting should be part of enterprise software rather than making companies purchase an additional product.
- We are satisfied with Qlik Sense, even if the coding is complicated at first.\*
- It's a great solution, but I don't understand why they're blocking access to training by making courses fee-paying.\*

\* Translated by BARC

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