Qlik

EVALUATION GUIDE

Transforming Your Business Through Data:

How to Choose a Modern Analytics Platform

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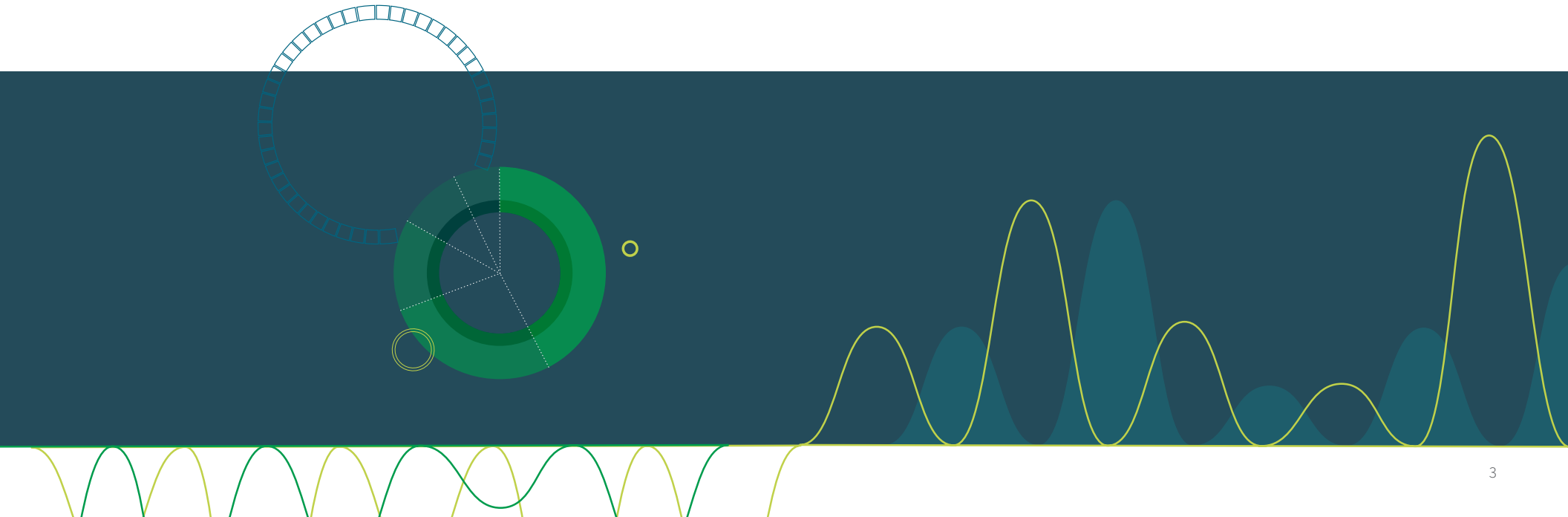
Introduction

Choosing the best analytics platform for your business

Businesses everywhere are using analytics to transform: Reinventing customer experiences. Reimagining processes. Discovering surprising revenue streams. And finding new ways to gain an edge. They understand a basic truth in today's economy: No enterprise can lead – or even survive – without analytics.

But not all platforms are created equal. And choosing the right one is essential to making discoveries that have the power to drive real change.

This guide is designed to help you choose the best analytics platform for your business. We'll start by diving into high-level considerations like value, stakeholders, and TCO. Then we'll cover the broad range of analytics use cases most businesses encounter, with the key evaluation criteria for each. Finally, we'll zoom out and look at broader platform capabilities, plus additional considerations like training, support, adoption, and pricing models.



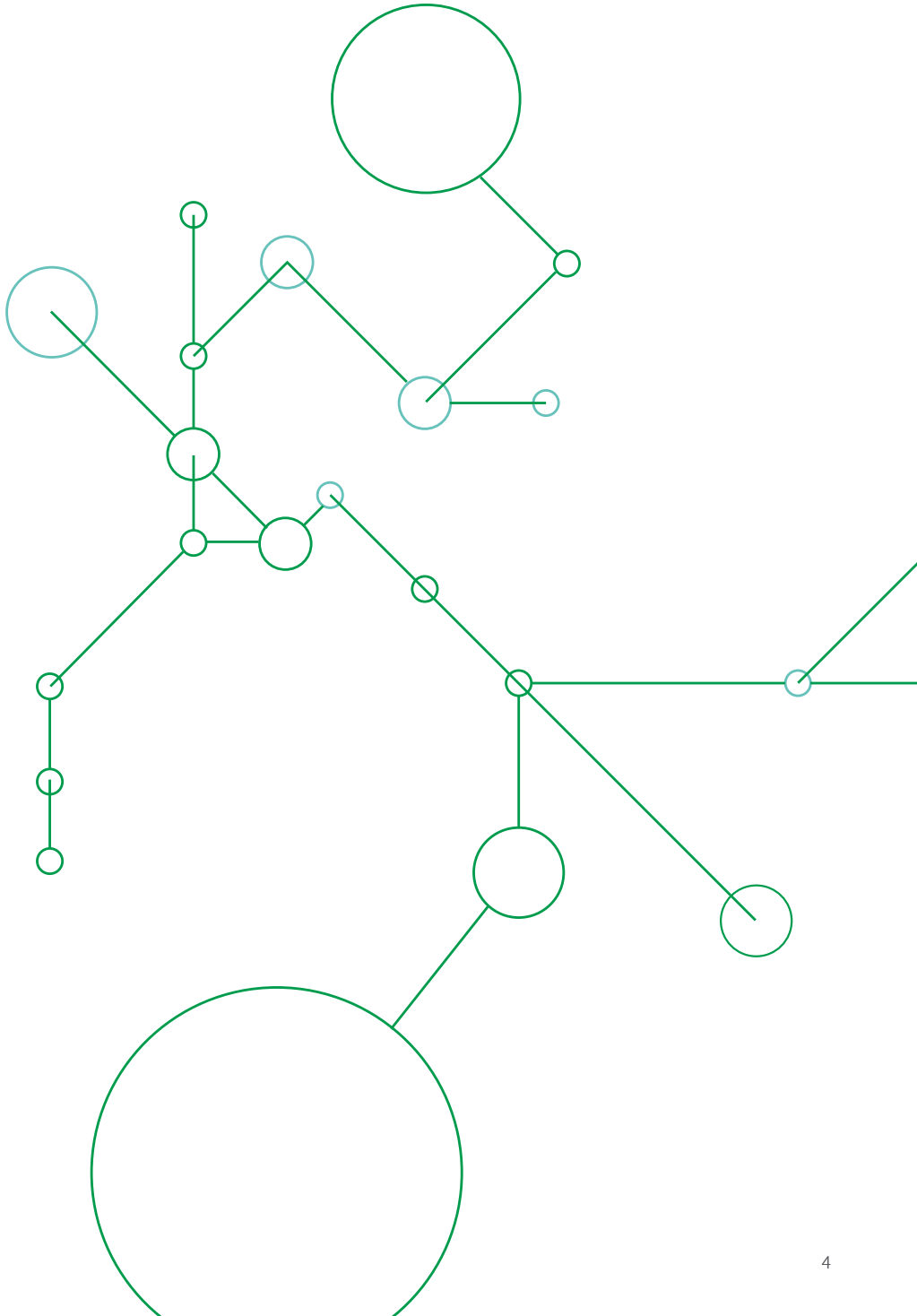
Major Considerations

The Big Picture: Getting Value, Determining Stakeholders, and Analyzing TCO

Where will the value come from?

Take a look at your short- and long-term goals for an analytics platform. How will BI drive value? How do you expect analytics to impact your business? For example, are you looking to:

- ☐ Better understand key KPIs and what's happening in your business (and why)
- ☐ Empower your workforce to make better decisions
- ☐ Solve a specific business problem in your industry
- ☐ Uncover hidden insights in your data
- ☐ Create advanced analytics to support large strategic decisions
- ☐ Include analytics on external portals for partners and customers
- ☐ Build new types of analytics for unique challenges
- ☐ Democratize analytics by embedding them in operational apps
- ☐ All of the above

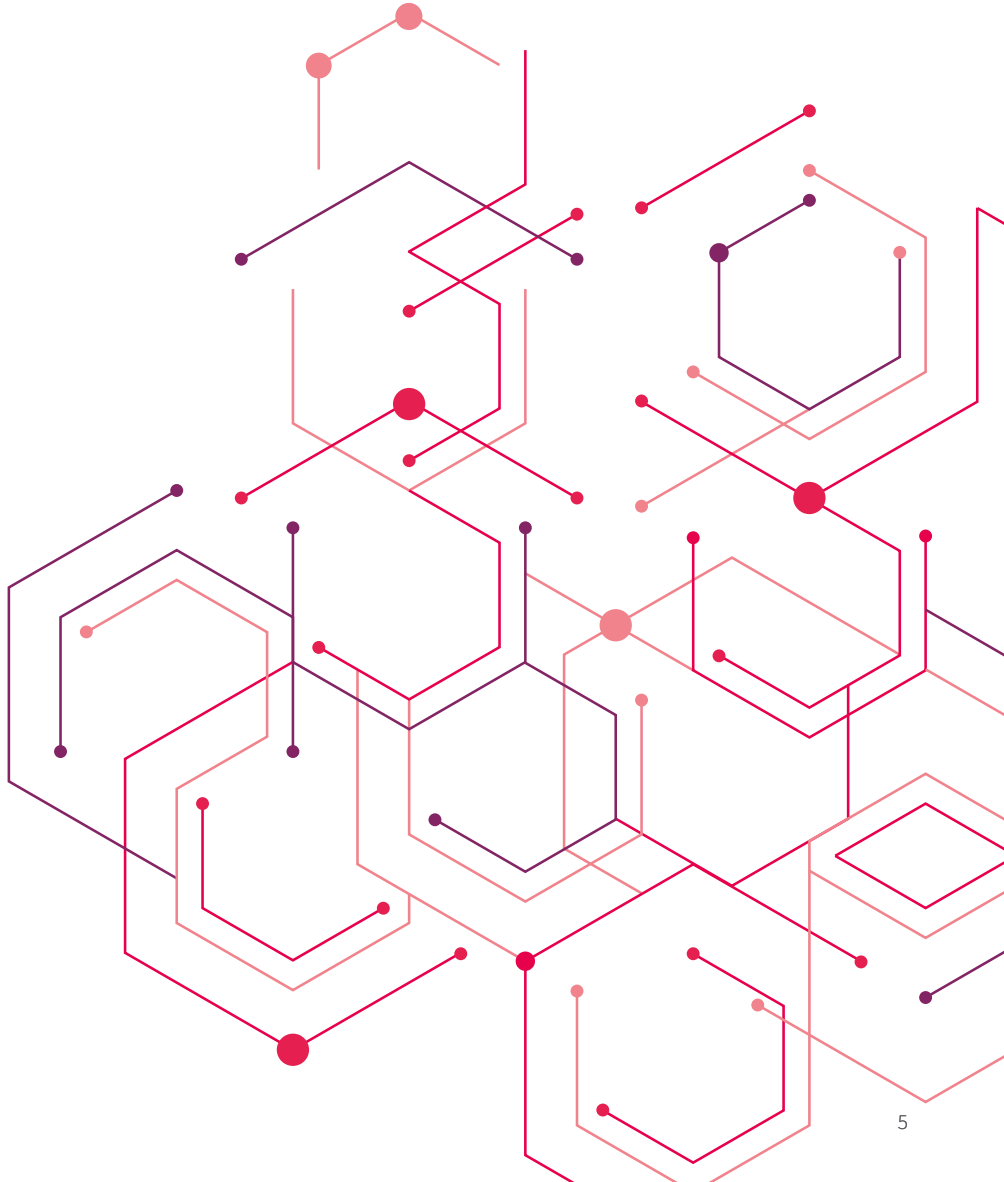


Major Considerations

Who are your stakeholders?

If you want analytics to have a widespread impact on your business in the short- and long-term, look for a platform that will help all your users become more data-literate. Ask these questions to make sure everyone will benefit:

- ☐ Are you targeting broad user communities in your organization, or a small number of more skilled analysts?
- ☐ Are you thinking about analytics in the context of reports and dashboards, or data visualizations?
- ☐ Will the solution be limited to a specific business line or function, or is there a broader strategy?
- ☐ Is your workforce mobile?
- ☐ Are you looking to embed analytics in operational applications and workflows?
- ☐ Who will be responsible for implementing and managing the solution?
- ☐ Is there an executive sponsor or advisory board to guide the process and eliminate roadblocks?

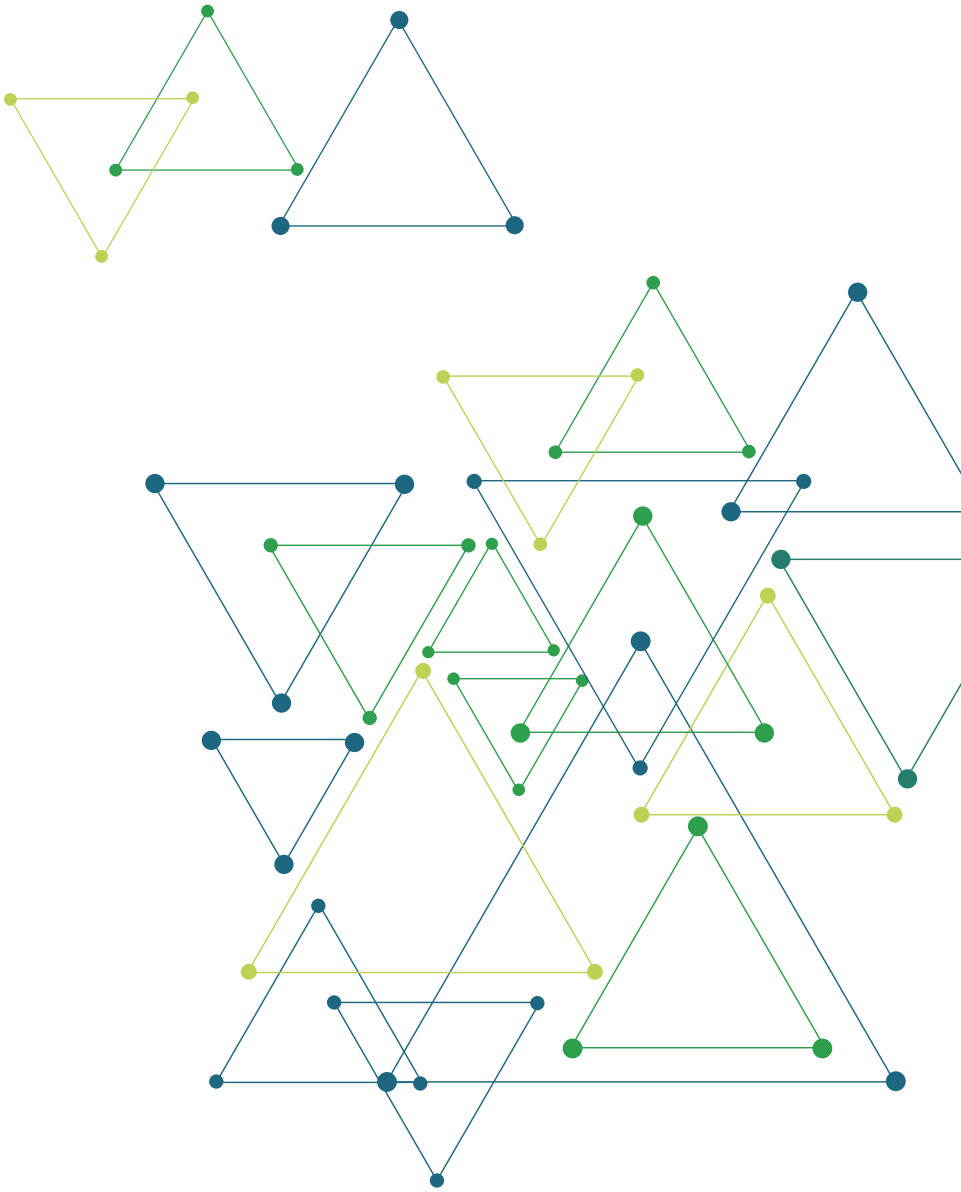


Major Considerations

What will it really cost?

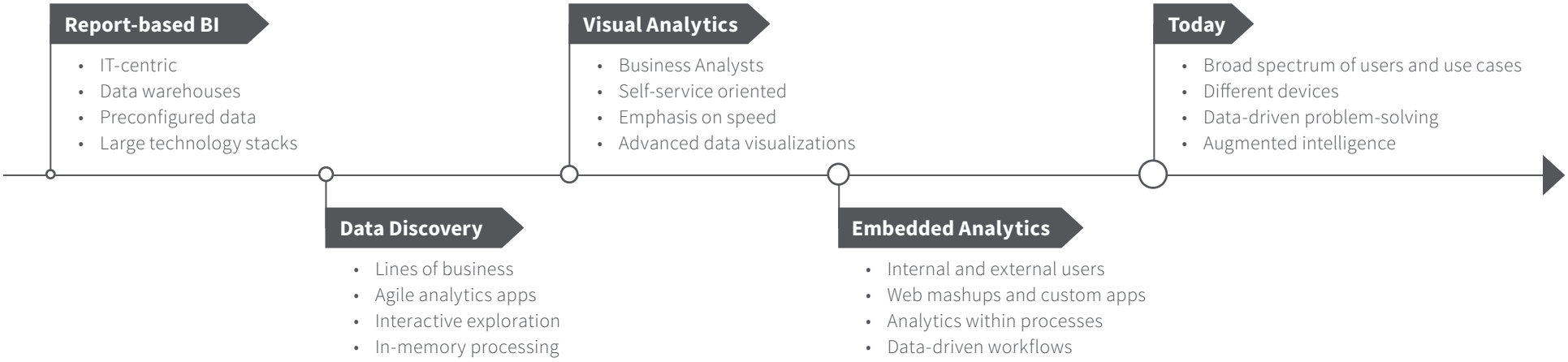
For an analytics platform, TCO can include a number of factors on top of the initial licensing fees. Look for competitive pricing, but make sure you compare apples to apples. And beware of hidden costs, including:

- Software license and maintenance, for the core analytics product, third-party products, and required underlying technologies
- Hardware costs, including servers for production and development, and maintenance
- Internal ongoing support costs, such as IT, vendor management, implementation costs, and professional services
- Ongoing costs of Software-as-a-Service (SaaS) offerings
- User training and enablement



Analytics Use Cases

BI and data analytics have evolved:



Keep more than one use case in mind

Look for an analytics platform that can accommodate all your use cases within a unified, governed framework. For example, reporting is just as important as it was decades ago, so you shouldn't need separate architecture to support it. And if self-service data visualization is high on your priority list, you'll also want to think about how your business users – who need more than just read-only capabilities – will consume visualizations and dashboards that analysts produce. Finally, with even more innovative use cases like immersive and conversational analytics on the horizon, you'll want a fully open platform that can be customized and extended to support every possibility.

And take users into account, too

Business analysts who build visualizations and analytics. Business users who want to interactively explore. Upper-level management and executives, external clients, partners, and beyond. You have a broad range of users, all with different skill sets. And of course, you need to consider data scientists, data managers, developers, and IT administrators, too. Your analytics platform should give everyone – regardless of their skill set – the power to make discoveries in your data.

Self-Service Visualization: Questions to Ask

In the best self-service visualization environments, users – and teams – can analyze all their data and make discoveries in a meaningful, trusted way. Self-service capabilities are usually most important to power users like business analysts and analytics creators.

2019

When the analytics output of self-service business users will surpass that of data scientists, as predicted by Gartner.

Source: Gartner Press Release, Gartner Says Self-Service Analytics and BI Users Will Produce More Analysis Than Data Scientists Will by 2019, January 25, 2018

https://www.gartner.com/newsroom/id/3848671

Data preparation

- ☐ Can users bring together many different data sources for analysis using a visual interface?
- ☐ When combining sources, can users be confident there is no data loss or inaccuracy?
- ☐ Is there data profiling to suggest the best relationships among sources?
- ☐ Is there additional profiling to handle various data types automatically?
- ☐ Can users load “dirty” data without having to perfectly model and clean it in advance?
- ☐ Is there a full suite of data transformation capabilities such as data manipulation, derived fields, table concatenation, binning, etc.?
- ☐ Are there broad connectivity options for file-based, on-premises, and cloud/web sources?
- ☐ Are there smart data prep capabilities, such as smart suggestions and descriptive statistics, to assist and automate the process?
- ☐ Is a central repository of trusted data sources available for users?
- ☐ Is there a single enterprise-wide catalog that allows users to search, preview, select, and publish data sets directly into their analytics tool?
- ☐ Is Data-as-a-Service (DaaS) available to broaden analysis?

Self-Service Visualization: Questions to Ask

Visualization and creation

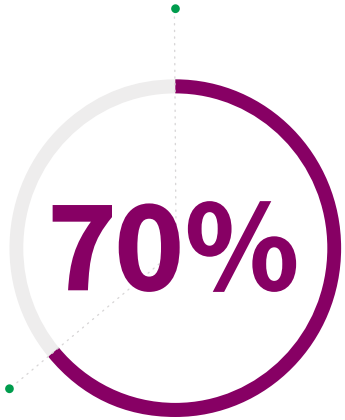
- ☐ Is there a broad set of visualizations such as bar/line charts, scatterplots, heat maps, histograms, etc.?
- ☐ Do visualizations inherently summarize the overall shape of the data set and help pinpoint outliers?
- ☐ How do visualizations represent data-density (millions of data points)?
- ☐ Are visualizations responsive, adapting data and visual representations to different layouts automatically?
- ☐ Is the creation interface intuitive, with drag-and-drop capabilities and simple properties/menus?
- ☐ Does the creation experience use machine intelligence to suggest the right charts and analytics based on the data?
- ☐ Are repositories of visualizations, measures, and dimensions available for reuse?
- ☐ How are hierarchies and rollups created?
- ☐ Is there a robust expression language for complex calculations?
- ☐ Is there a diverse library of statistical functions, forecasting, trends, and clustering?
- ☐ Can users create data subsets, variables, and conditions for analysis?
- ☐ What are the geographic mapping and analysis capabilities of the product?

Collaboration and sharing

- ☐ Can users easily access relevant (governed) content for their groups and teams?
- ☐ Can users publish and share content within and across teams?
- ☐ Can users search for relevant content from other users?
- ☐ Is there interactive data storytelling? Is it driven by live analytics or static in nature?
- ☐ Are comments, annotations, and discussion threads available?
- ☐ Can users follow content and authors, and provide feedback?

Analytics Apps and Dashboards: Questions to Ask

Large communities of less skilled users need more than static reports. They need a way to search and explore data – uncovering patterns, connnections, and insights that drive meaningful decisions. Interactive dashboards and guided analytics apps let you do just that, benefitting a wide variety of business users, managers, and executives.



Amount of all BI users who are casual or standard users.

Source: https://bi-survey.com/self-service-bi

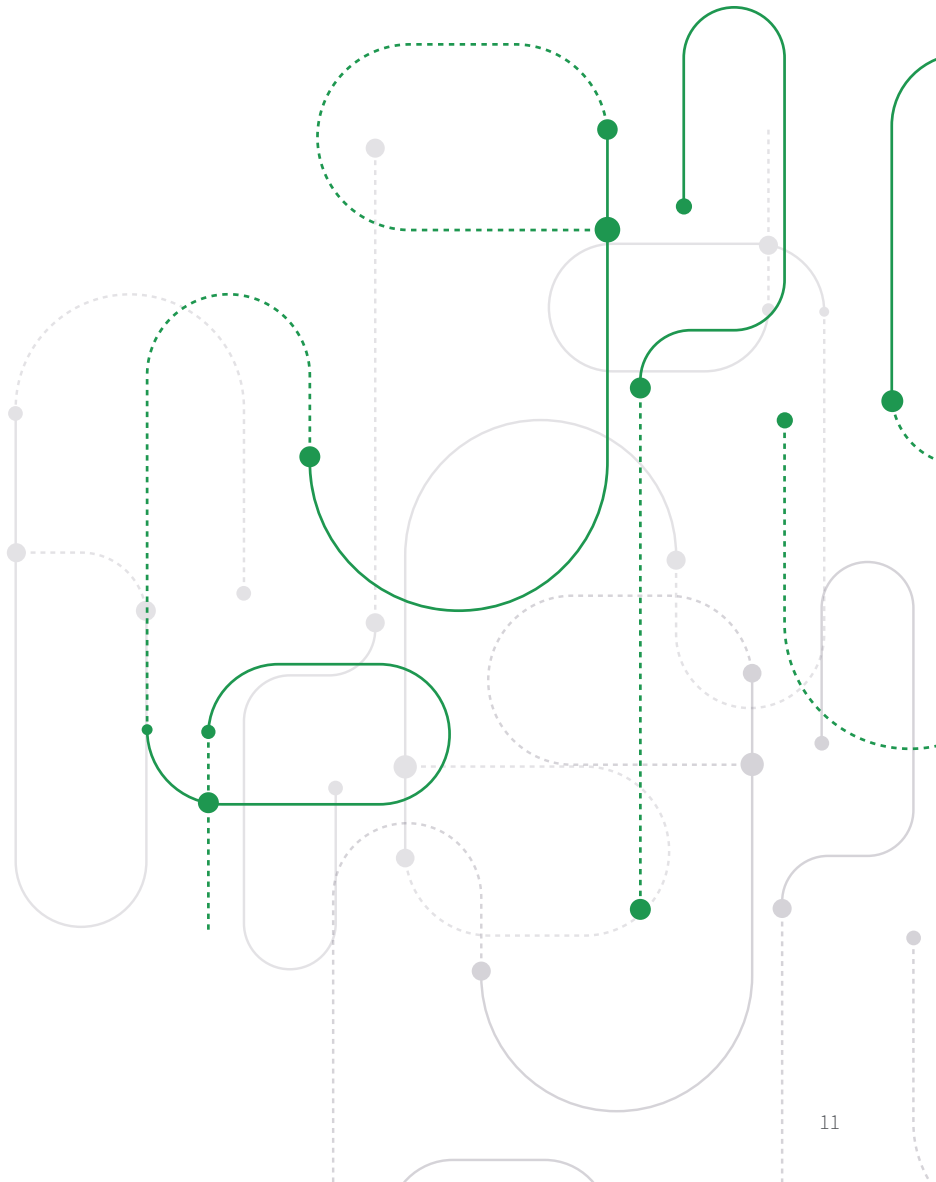
Centrally deployed apps

- ☐ Are there intuitive authoring tools for rapid development of dashboards and analytics applications?
- ☐ Are there application-level controls and functionality for creating an interactive experience, including sliders, buttons, layout options, etc.?
- ☐ Can an application guide a user through a linear process of exploration?
- ☐ Can data be reduced dynamically, allowing the same applications to be deployed with different subsets of data for users based on entitlements?
- ☐ Can data and visualizations be packaged and deployed together within applications?
- ☐ Can apps be deployed broadly, to large communities of users, across geographies, without performance loss?

Analytics Apps and Dashboards: Questions to Ask

Interactive exploration

- ☐ Are simple, natural interactive selections available in all visualizations, charts, and objects?
- ☐ Can users explore without restrictions, in a nonlinear, free-form fashion vs. restricted to a linear path?
- ☐ Can users ask unanticipated questions, without having to rebuild content (visualizations or queries)?
- ☐ Does the application understand context (selection state), and do all visualizations update together to the new context after each selection?
- ☐ Are data associations (values related or unrelated to selections) highlighted after each selection?
- ☐ Are unrelated values retained in the analysis or filtered out?
- ☐ Is there panning/zooming/navigation in scatterplots, maps, and other types of charts?
- ☐ Can users perform comparative analysis (compare multiple sets)?
- ☐ Can users run what-if scenarios?
- ☐ Can users access transaction-level details at any time in the exploratory process?
- ☐ Are there bookmarks for saving context/selection state?
- ☐ Does the system respond instantly to selections/interactions?



Analytics Apps and Dashboards: Questions to Ask

Search-based analysis

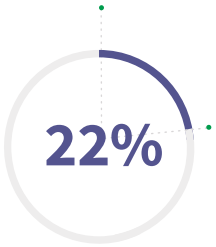
- ☐ Can users search across an entire app to expose matching data?
- ☐ Is multi-keyword search possible to expose relationships in the data?
- ☐ Is search-based navigation possible, to display relevant charts and graphs?
- ☐ Is there intelligent ranking of search results?
- ☐ Is expression-based search offered?
- ☐ Can the system automatically generate new charts and insights based on search criteria, if they do not exist in the app?
- ☐ Is natural-language interaction offered?

Custom and Embedded Analytics: Questions to Ask

With open and standard APIs, you can create fully tailored apps for just about any situation or purpose. And with embedded analytics, you can weave dashboards and visualizations into your operational apps, so even more users can make discoveries in your data. Software and application developers will build custom and embedded analytics, but everyone in your business will benefit.

Open APIs

- ☐ Is a complete set of open and standard APIs available for developing applications?
- ☐ Do these APIs include a full range of access (high level down to engine level) and administration/management access?
- ☐ Are the same APIs used to build the product exposed for developers to use?
- ☐ Are the APIs easy to use for developers with standard skill sets (HTML5, JavaScript, .NET)?
- ☐ Are supporting API documentation and examples available?



Improvement in the speed of decision-making by companies using embedded analytics.

Source: http://embedded.qlik.com/media/Aberdeen-Research-Report-EA.pdf

Custom and embedded analytics

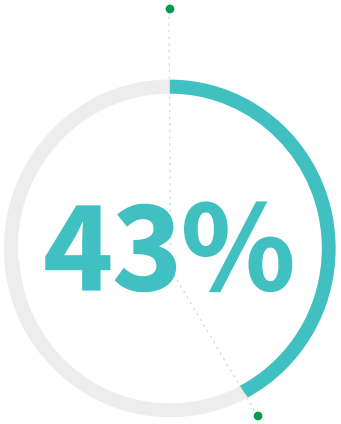
- ☐ Can developers easily create scalable web applications and mashups?
- ☐ Can users build fully custom analytics applications?
- ☐ Can users embed analytics in operational apps and existing workflows?
- ☐ When analytics are embedded, is there full interactivity, and do all analytics update in context together after selections?
- ☐ Can externally facing web apps be created and exposed for customer or partner access, with full interactivity?
- ☐ Can the platform support integration with ISV offerings in an OEM framework?
- ☐ Are supporting API documentation and examples available?
- ☐ Does the platform offer white-labeling support?

Platform extension

- ☐ Can developers build new types of data visualizations for specialized analytics use cases?
- ☐ Can developers extend product functionality via new types of application components?
- ☐ Can custom connectors be built for third-party engines and data sources?
- ☐ Are easily accessible catalogs of extended solutions available?
- ☐ Is there a developer-supported community for customization and extensions?

Mobile Analytics: Questions to Ask

Mobile analytics extend the value of BI beyond the office walls, making it possible for any member of your workforce to explore your data on nearly any device. Mobile capabilities tend to be most important to salespeople, field business users, and executives.



Projected amount of the global workforce that will be mobile/ remote by 2022.

Source: https://www.techrepublic.com/article/the-mobile-workforce-is-here-and-enterprises-better-have-a-plan-to-meet-their-needs/

Analytics capabilities

- ☐ Does the mobile app offer a different client/user interface or the same UI as the desktop version?
- ☐ Is the full set of analytical capabilities available on mobile (exploration, analysis, creation, collaboration)?
- ☐ Is mobile analysis based on live data and calculation, or pre-aggregated data sets and snapshots?
- ☐ Is full interactivity available on mobile devices, including search and selection, allowing users to answer unanticipated questions?
- ☐ Can users fully navigate objects, including scroll, zoom, and pan, and access all menus?
- ☐ Is the solution secure and governed, with data and user security, and support for Enterprise Mobility Management (EMM) tools?
- ☐ Are mobile analytics an additional cost?

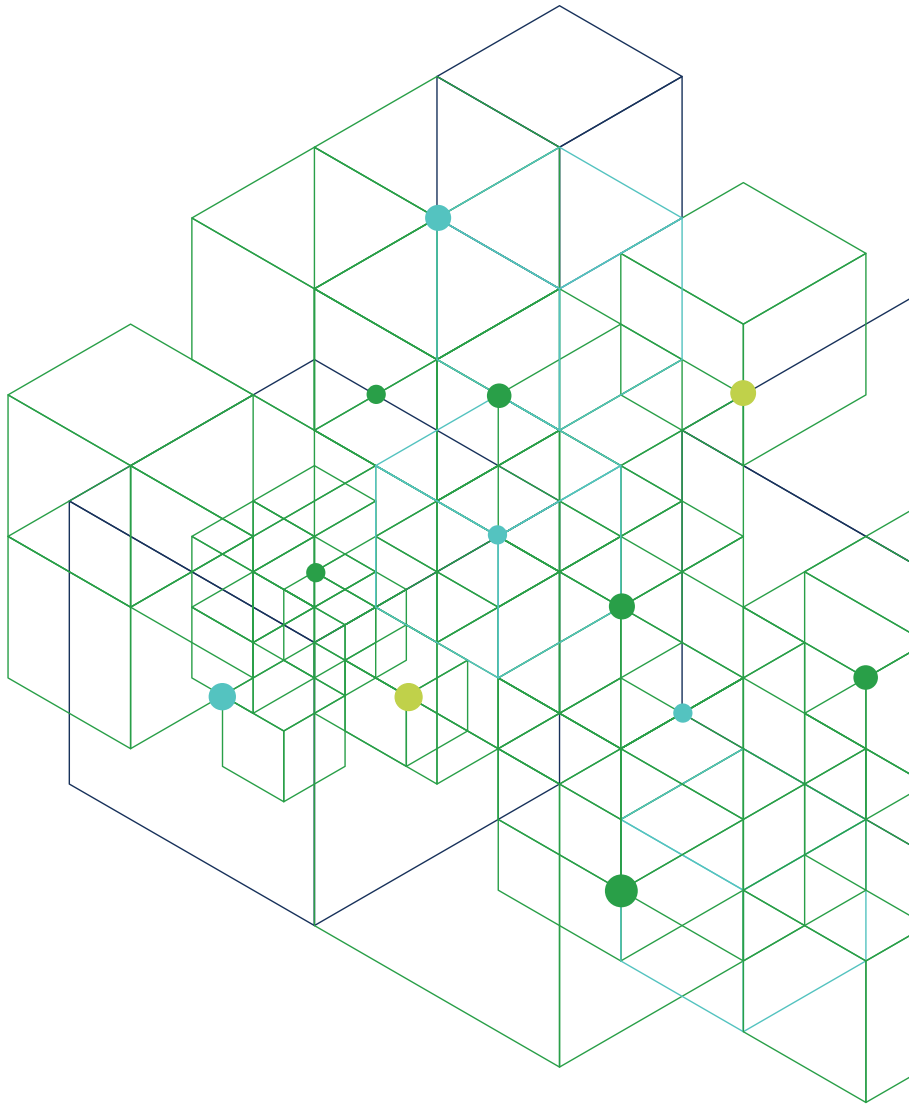
Mobile Analytics: Questions to Ask

Mobile devices

- ☐ Is there support for all devices and form factors, including iOS, Android, and Windows devices?
- ☐ Is the user interface touch-based, with a full range of intuitive interactions?
- ☐ Is the user interface designed/sized appropriately for touch?
- ☐ Are analytics and UX design responsive, adapting visuals, data, and functionality for the best experience on any device?
- ☐ Is there an optimized experience for handheld devices?

Online and offline

- ☐ Is there support for both online and offline use?
- ☐ Can users conduct full exploration and analysis when offline, including search and selection, allowing for unanticipated questions to be answered?
- ☐ Is there an analytics engine running locally on devices, or just static views of data?
- ☐ Can users choose applications and subsets of data they want to download for offline use?
- ☐ How are offline apps and data refreshed when updates occur?



Reporting and Alerting: Questions to Ask

Monitoring business performance, creating reports, and distributing them are basic business necessities, so any analytics platform you choose should make these tasks intuitive and easy. Reporting and alerting tend to be most important to more passive users, like executives and operational teams.

Creation and format

- ☐ Is there support for a variety of report formats, including MS Office documents, pixel-perfect PDF, web-based reports, email reports, mobile formats, and more?
- ☐ Is there an intuitive report development environment with a full range of authoring features?
- ☐ Are advanced report features available, such as banding, scripting, and advanced formatting?
- ☐ Does the reporting environment leverage analytics and objects already built in the core platform applications?
- ☐ Can analytics from multiple analytics apps be combined in a single report?

Centralized distribution

- ☐ Can the platform centrally produce and distribute reports, with data specific to each recipient?
- ☐ Can reports be scheduled or run conditionally based on the data?
- ☐ Can reports be delivered through a number of channels, including email, file transfer, or web?
- ☐ Are there advanced distribution features, such as cycling to produce report sets?
- ☐ Can users receive alerts/notifications based on conditions in the data set?
- ☐ Does the solution scale to high volumes of reports with secure data and distribution?
- ☐ Can the solution adequately replace legacy BI/reporting environments?

User-driven reporting

- ☐ Is there self-service access to reports through a portal or hub?
- ☐ Can users explore and subscribe to new reports themselves?
- ☐ Can users generate reports directly from analytics apps, with data based on their selections?
- ☐ Can users export data from analytics apps to spreadsheets, presentations, or PDF documents?

Platform-Wide Analytics Capabilities: Questions to Ask

After you check the boxes on use cases, think about the core set of capabilities that will set you up for success. Easy data access, broad deployment options, and centralized governance lay a solid foundation for the best modern analytics platforms.

Cloud/on-premises deployment

- ☐ Can the platform be deployed/accessed on-premises, in the cloud, or in hybrid environments?
- ☐ Are there any major functional differences between cloud and on-premises analytics?
- ☐ What data sources can be accessed from the cloud? Does all data need to be moved to the vendor's cloud?
- ☐ Can the platform be seamlessly deployed across combinations of on-premises, private cloud, and public cloud sites?
- ☐ Are hosted private cloud offerings available and managed by trusted third parties?
- ☐ Is a public cloud offering hosted by the vendor?

Data and connectivity

- ☐ Is self-service data preparation for business users available?
- ☐ Are there more powerful ETL tools or scripting for complex data integration, transformation, and modeling?
- ☐ Is there a broad set of connectors for file-based, on-premises, cloud, and web sources?
- ☐ Is there a complete and accurate catalog of metadata associated with each data source?
- ☐ Is the lineage of each dataset preserved as the data is prepared, so a user can understand its origin, evolution, and meaning?
- ☐ Is there a global mechanism for offering governed data sources to users for analysis?
- ☐ Can many different data sources be combined for analysis without data loss or inaccuracy?
- ☐ Does data need to be fully modeled and cleaned before it can be made available?
- ☐ Are there both full and incremental data reloads, scheduled or event based?
- ☐ Can the platform handle streaming data?

Platform-Wide Analytics Capabilities: Questions to Ask

Big (and small) data capabilities

- ☐ Can the platform connect to a variety of big data sources?
- ☐ Can the platform scale to massive data sets without sacrificing speed or flexibility of analysis?
- ☐ Are there facilities for user-driven, dynamic reduction of big data sets for analysis?
- ☐ Can users combine big data and "small" data, such as user-provided spreadsheets?
- ☐ Can the platform index big data, to support interactive exploration while leaving the data where it resides?

$210 Billion

Size of the Big Data analytics market by 2020, as predicted by IDC.

Source: https://www.idc.com/getdoc.jsp?containerId=prUS42371417

DaaS

- ☐ Can users access and subscribe to third-party and syndicated data sources from within the platform?
- ☐ What is the range of topic areas offered in the data service?
- ☐ Is there assistance when integrating a third-party data set with internal data?

Advanced analytics and augmented intelligence

- ☐ Can the platform integrate with advanced analytics engines (R & Python)?
- ☐ Does the integration support both batch and real-time integration, updating calculations as the user explores?
- ☐ Are there onboard, engine-level capabilities for generating insights using correlation, prediction, outlier identification, etc.?
- ☐ Is there auto-suggestion of visualizations and insights based on the data?
- ☐ Are insight suggestions context-aware, taking into account selections/search critera as users explore?
- ☐ Is machine learning available to enhance suggestions and analytical processes?
- ☐ Is natural-language generation and search available?
- ☐ Is self-service data preparation augmented with machine intelligence to assist users and automate processes?

Platform-Wide Analytics Capabilities: Questions to Ask

Geospatial analytics

- ☐ Is advanced, multilayer geographic mapping available?
- ☐ Can advanced maps use a variety of shapes, symbols, and other visual representations?
- ☐ Is advanced geospatial calculation available?
- ☐ Does geospatial calculation support combining location and non-location data?
- ☐ Are geocoding services offered?

Collaboration hub

- ☐ Is there a central point of access or hub for all users?
- ☐ Can governed content be made available based on role, workgroup, or function?
- ☐ Can users publish shared content for others to use?
- ☐ Can users search globally for analytics content and data?
- ☐ Are social features supported, such as discussions, digests, following, rating, etc.?

Core analytics engine

- ☐ Is the platform driven by an in-memory columnar analytics engine?
- ☐ Is the engine limited by a legacy SQL/query-based architecture?
- ☐ Does the engine perform dynamic calculation or rely on pre-aggregation?
- ☐ Does the engine support free-form, nonlinear exploration and search?
- ☐ Does the engine understand context (selection state) and maintain a global context across an application?
- ☐ Does the engine understand associations in data (related and unrelated values) relative to selections?
- ☐ Are relationships between tables and data sets managed by the engine?
- ☐ Can the engine scale to support large data volumes and high numbers of concurrent users asking unanticipated questions?

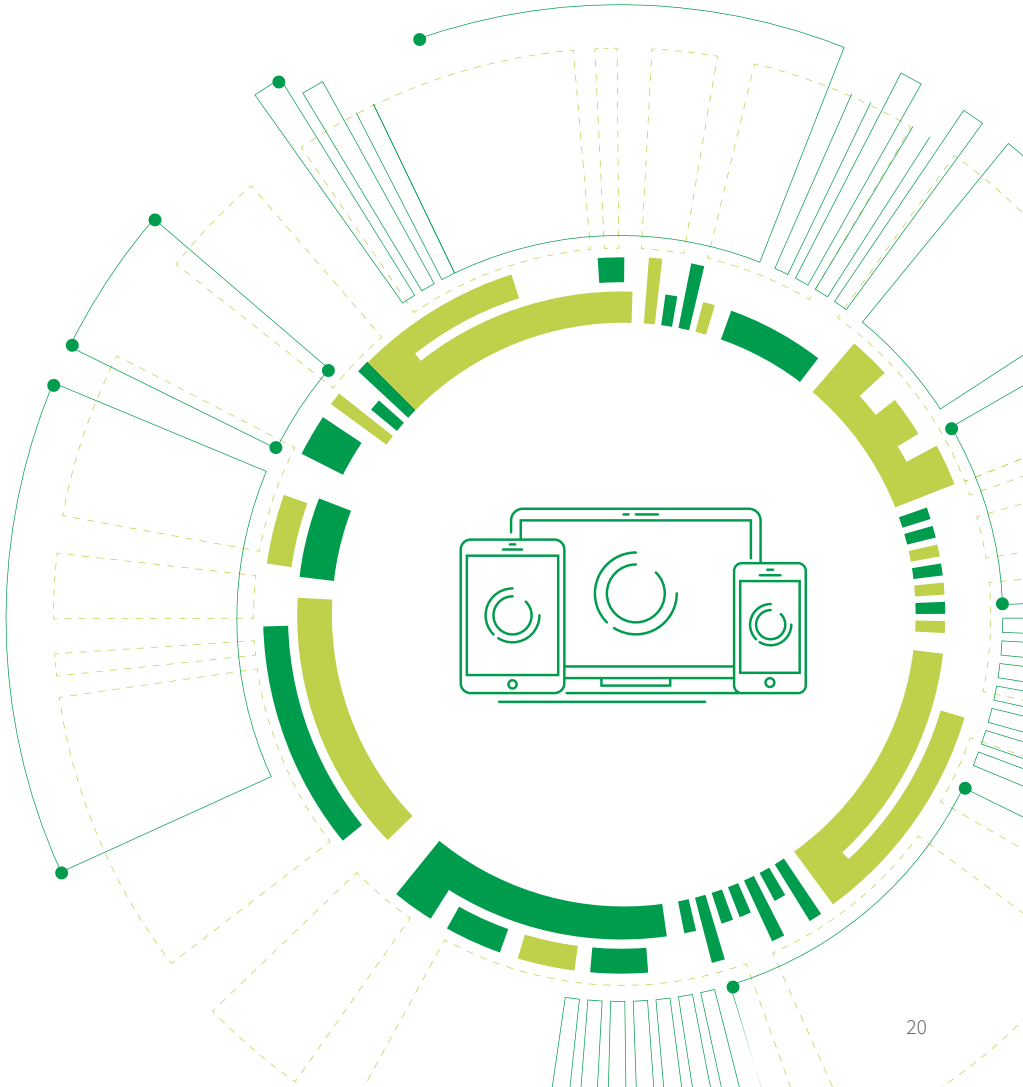
Governance and Deployment: Questions to Ask

Client and administration

- ☐ Is the core analytics client built using HTML5/web technology or native code?
- ☐ Do all clients (web, desktop, mobile) deliver the same analytics experience?
- ☐ Is there support for multiple languages and accessibility?
- ☐ Is a centralized management and administration UI available?
- ☐ Does the management UI allow for administering all assets, including apps, data sources, users, and workspaces?
- ☐ Does the management UI provide access to all configurations, including tasks/scheduling, security, governance, deployment, and licensing?

Architecture

- ☐ Is the architecture modular and workload-optimized (containerized, microservices-based, or other)?
- ☐ Is there support for high availability and failover?
- ☐ Where does data and analytics content physically reside?
- ☐ Are there import/export capabilities for moving content across environments?
- ☐ Is the platform a unified architecture without multiple/ disconnected components?



Governance and Deployment: Questions to Ask

Security and governance

- ☐ Can all analytics use cases in an organization be handled seamlessly within a unified, governed platform?
- ☐ Are there governed repositories of measures, dimensions, and analytics content?
- ☐ Are governed data sources available for analytics use?
- ☐ Are there governed workspaces for teams and business functions?
- ☐ Is there a flexible, rules-based security model for all functionality?
- ☐ Does data security/reduction extend down to the row and column level?
- ☐ Is there auditing/usage analysis for analytics apps, content, and data?
- ☐ Can the platform integrate with third-party security and management tools?
- ☐ Is app version control/integration available?

Scalability

- ☐ Does the solution scale across multiple sites, including on-premises and public/private cloud?
- ☐ Does the solution scale to large numbers of concurrent users?
- ☐ Does the solution scale to large data volumes?
- ☐ Does the solution scale across geographies?
- ☐ Does the solution offer clustering and load-balancing?
- ☐ Can the analytics engine scale and still offer dynamic calculation without impacting performance or flexibility?

Additional Considerations: Questions to Ask

Solutions

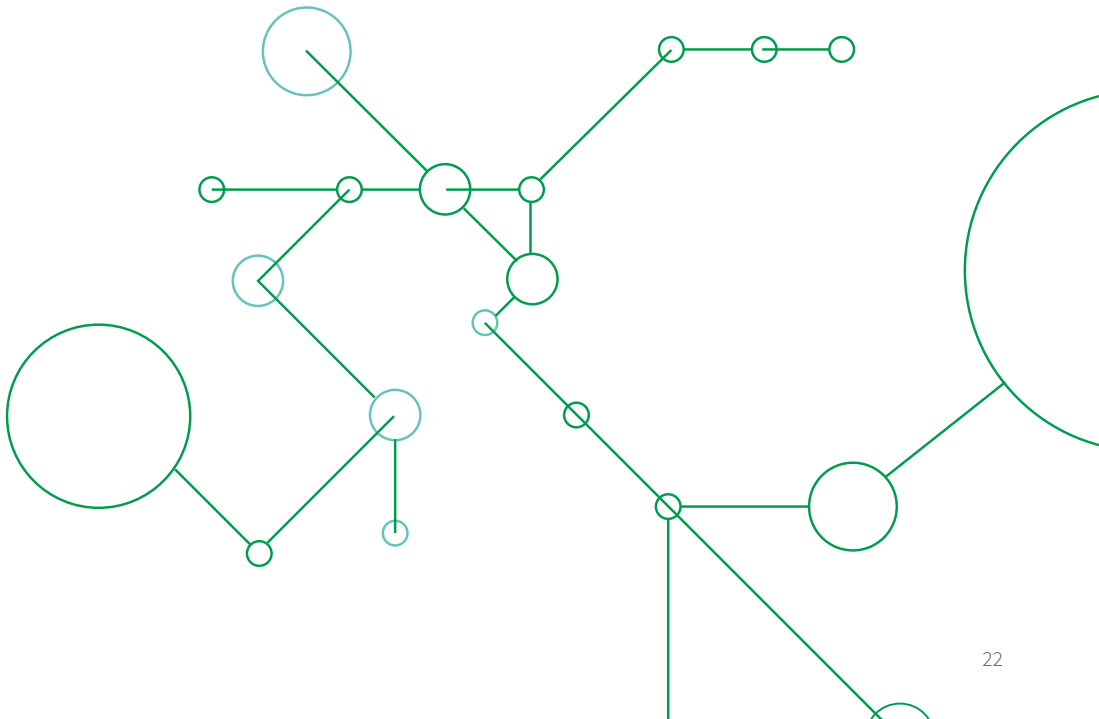
- ☐ Does the vendor offer industry expertise and solutions for specific use cases?
- ☐ Are there defined solutions/offerings for business functional areas (sales, finance, IT, etc.)?
- ☐ Does the solution offer app templates and starter apps?
- ☐ Does the vendor have industry and functional experts with deep domain experience?

Broad user community and ecosystem

- ☐ Is there an active community of users for knowledge-sharing?
- ☐ Is there a robust ecosystem of partners with industry-specific and use-case-specific skills?
- ☐ Are there online marketplaces for partner solutions and offerings?
- ☐ Are there open-source communities for developers to accelerate innovation and share ideas?

Services, training, enablement, and support

- ☐ Does the vendor have a good track record for resolving technical support issues?
- ☐ Does the vendor offer consulting services that span requirements, development, and deployment?
- ☐ Do support services offer timely, proactive support, ensuring quality and reliability?
- ☐ Is a wide variety of training and enablement available on demand and in person?
- ☐ Does the vendor offer partner and ecosystem support?



Additional Considerations: Questions to Ask

Reputation

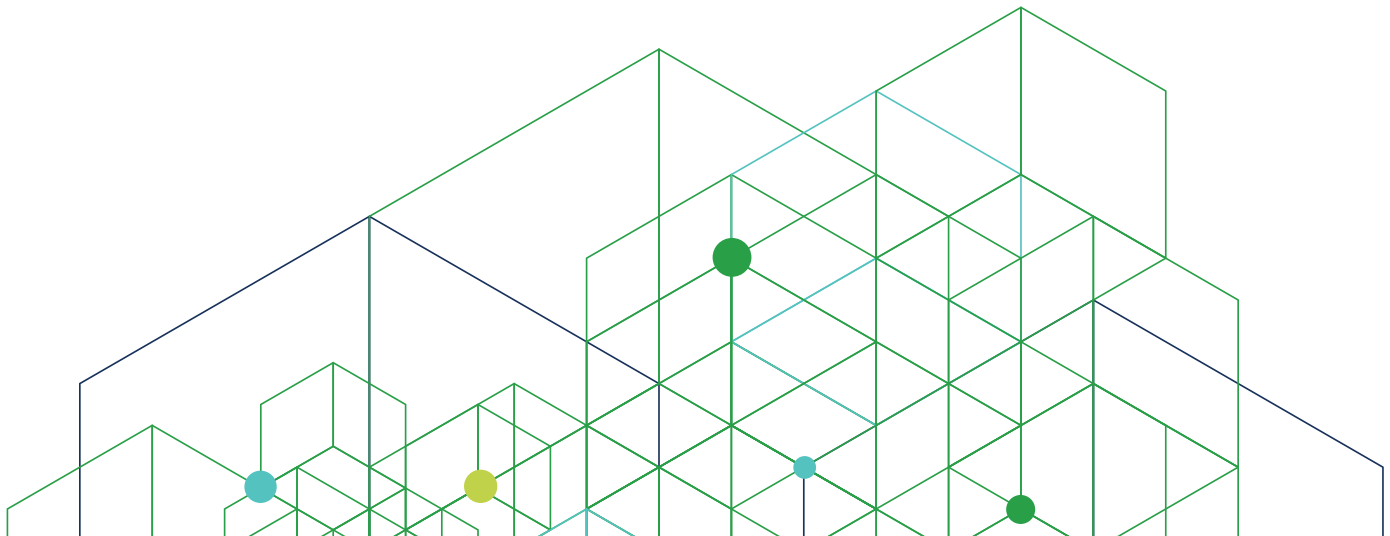
- ☐ How is the vendor regarded by major industry analysts?
- ☐ Does the vendor have a broad base of satisfied and loyal customers?
- ☐ Is the vendor known for its commitment to customer success, including ongoing engagement with customers?

Pricing and packaging

- ☐ Are pricing and packaging simple and easy to understand?
- ☐ Are there subscription-based and perpetual pricing options?
- ☐ Is there specialized pricing for specific types of customers, such as OEM?

Adoption and usability

- ☐ Is the user experience simple and intuitive across product areas?
- ☐ Is the user experience consistent across product areas?
- ☐ How well does the user interface progressively reveal complexity as users need and want it?
- ☐ Does the solution strike the right balance between being self-service-oriented, offering a full range of capabilities, and also affording IT administration and oversight?



Conclusion

The right BI solution will put you on the path to more agile business processes, new opportunities, and better customer relationships. Plus, with a platform that empowers everyone in your organization to make discoveries in your data, you can drive increased data literacy and widespread Digital Transformation. We hope this guide helps you make the best choice for your business.

For more information about Qlik's end-to-end data management and analytics platform, explore these resources:

Additional Resources

Gartner Magic Quadrant for Analytics & Business Intelligence Platforms →

What Makes Us Different →

Qlik Products →

Qlik Sense Overview →

Qlik Statement of Direction →

About Qlik

Qlik is on a mission to create a data-literate world, where everyone can use data to solve their most challenging problems. Only Qlik's end-to-end data management and analytics platform brings together all an organization's data from any source, enabling people at any skill level to use their curiosity to uncover new insights. Companies use Qlik to see more deeply into customer behavior, reinvent business processes, discover new revenue streams, and balance risk and reward. Headquartered in King of Prussia, Pennsylvania, Qlik does business in more than 100 countries with over 48,000 customers around the world.

Try Qlik for free today.