Evaluation Guide

Nine Things to Consider When Choosing a Cloud Analytics Platform

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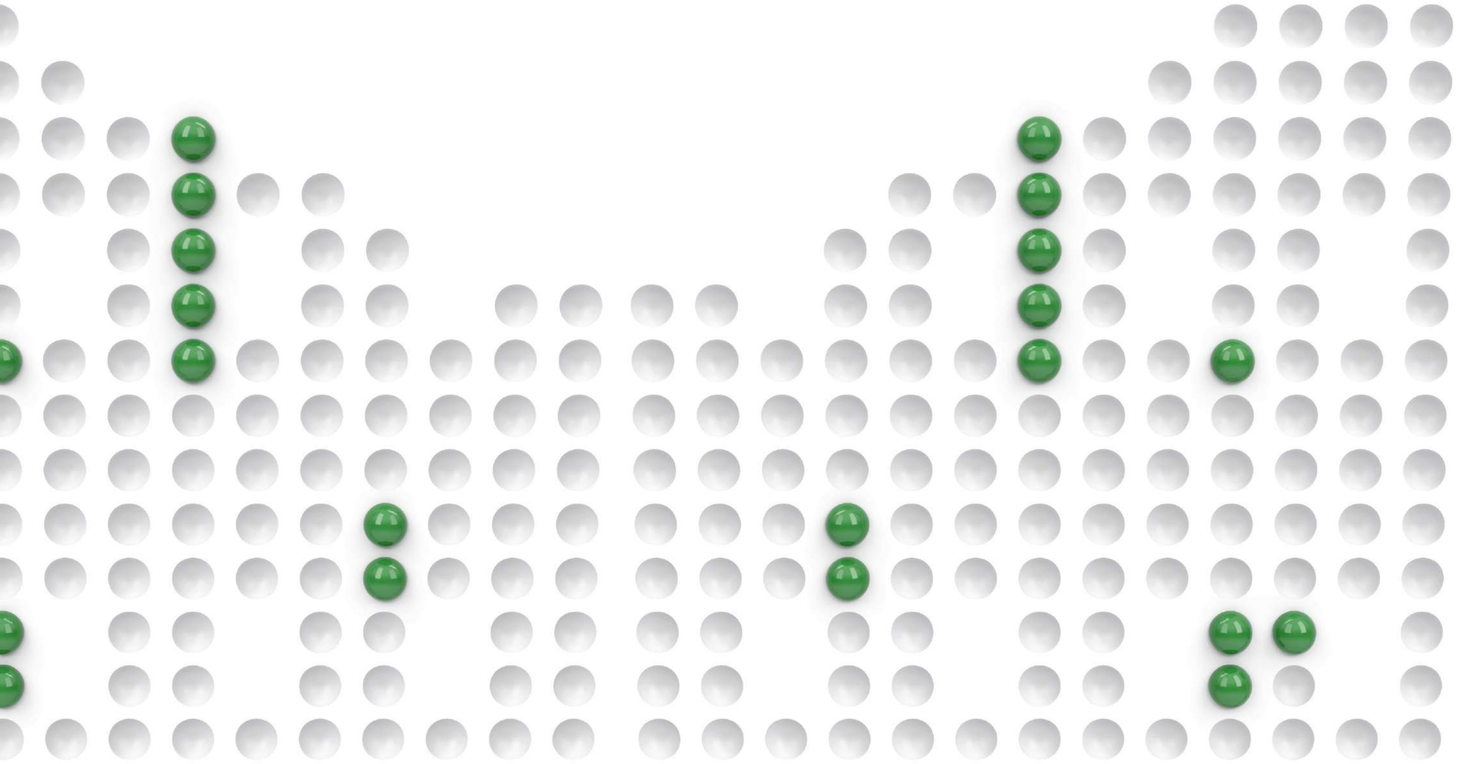


Introduction

Qlik Sense® Enterprise SaaS is our premium cloud solution and provides businesses world-class analytics without the complexities of installing and managing their own deployment.

In this analytics platform guide, we explore the criteria for the modern analytics technology platform that can best benefit your business – high-level considerations, 9 specific categories often overlooked, and guiding questions to include in your technical evaluation.

An analytics platform provides the underlying compute, storage security and governance features to provide services to our customers and supports a broad spectrum of use cases including self-service analytics, dashboards, augmented analytics/machine learning, custom and embedded analytics, reporting and alerting as examples.

Dive into the features of Qlik Sense

Major Considerations

Before embarking on a major analytics project, an organization typically outlines a series of business goals to support and achieve across multiple lines of business. This guide does not consider business users or functional use cases, but you can learn more in our companion guide found here.

Where will the technical value come from?

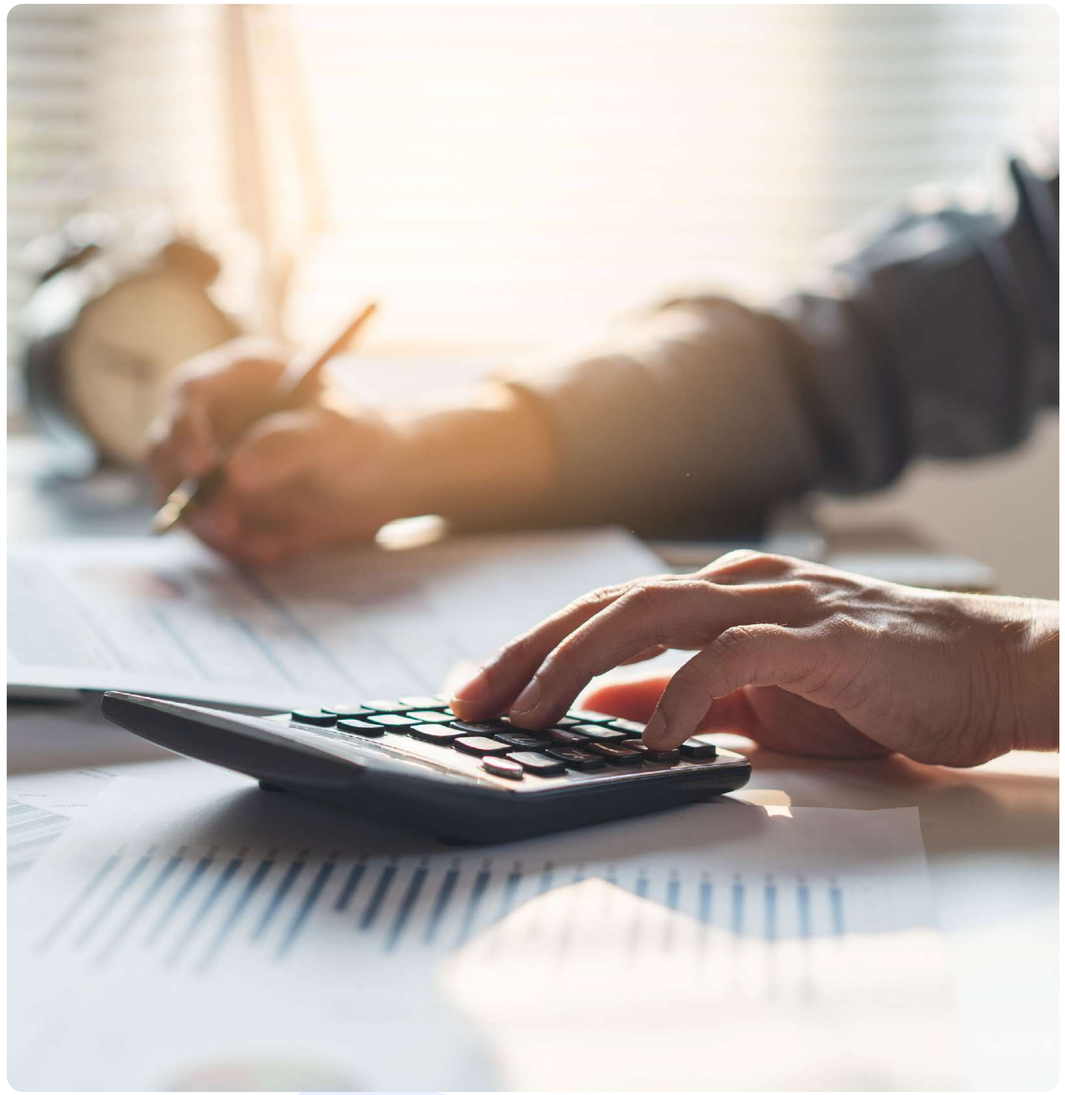
At the outset of an evaluation in addition to stated business goals, how else do you expect an analytics platform to deliver value to your stakeholders? For example, are you looking to:

- Reduce TCO and time to market while improving resourcing?
- Embed analytics wherever needed—in applications, portals, workflows, or within an ecosystem—for partners, suppliers, distributors, and customers?
- Extend analytic insight across to external business stakeholders to support alignment, better decision-making, and speeding up response/action-cycle time?
- Provide more predictability and reliability with less risk, i.e. fewer failure points, zero downtime, greater efficiencies?
- As an OEM/ISV, gain the ability to monetize unique capability sets for your end customers across your tenant estate?
- A market-leading cloud analytics platform that provides options for deployment, embedding/integration, and how to scale to meet your business model's needs?
- An analytics platform that delivers an exceptional customer experience with reduced development costs, maintenance, and overall TCO?

Who Are Your Stakeholders?

If you want analytics to have a widespread impact on your business both today and tomorrow, look for a platform that will empower all users, from BI architects to software engineers to the business user who might need analytics to better understand the business and their role in it.

- Will the platform be limited to a specific business line or function or is this an enterprise-wide initiative?
- Who will be responsible for implementing and managing the platform?
- Has a cost-avoidance assessment been completed for cloud analytics?
- Is there an executive sponsor and lead technical evaluator who will guide the funding, evaluation, and implementation, identifying project goals and eliminating roadblocks?



What Will It Really Cost?

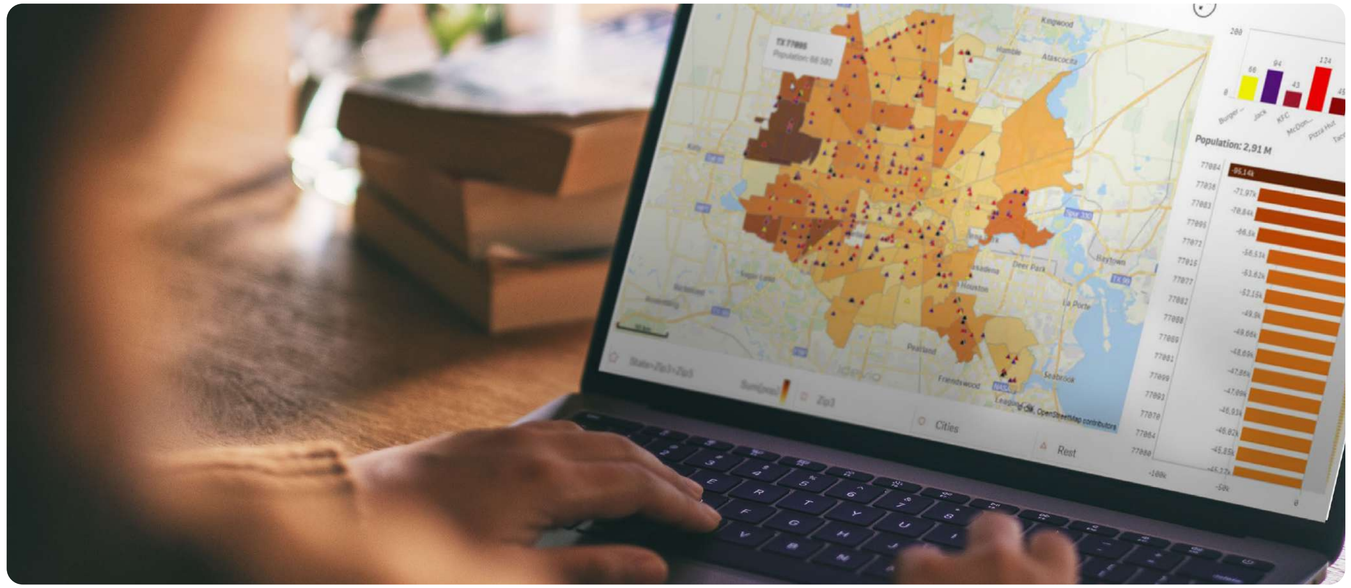
Model, calculate, and understand your total cost of ownership for a cloud analytics solution over a period no less than three to five years. Your team should understand the following:

- Does the organization only require a cloud analytics SaaS offering? Does the organization also require an on-premises solution?
- If you have an existing on-premises solution, what are the current software licensing and maintenance costs for core analytics, third-party, and any additional underlying technologies?
- What are the on-premises hardware costs for servers for development, testing, and production? The resources to maintain?
- What will you need to spend on ongoing support including IT, vendor management, implementation costs, and professional services?
- What are the network, computer, and storage costs?

1 Analytics Engine Considerations

Though it's usually overlooked in favor of the flashiness of the UI, it's the analytics engine that determines your analytics success.

- Is the platform driven by a high-performance, in-memory analytics engine?
- Does the engine perform dynamic calculation or rely on pre-aggregation?
- Does the engine allow for significant data compression and more data in RAM, enabling faster response time for users?
- Can the engine scale to support extremely large data volumes and the demands of high numbers of concurrent users?
- Can the engine understand context (selection state) and maintain it across an application?
- How does the engine manage relationships between data sets and tables?
- Can it fully combine all your data including imperfect data from a large number of disparate sources? All without suffering data loss or inaccuracies?



2 Scalability

Data-reliant companies can’t afford to stand still. Will your cloud analytics solution be able to keep up with your growth?

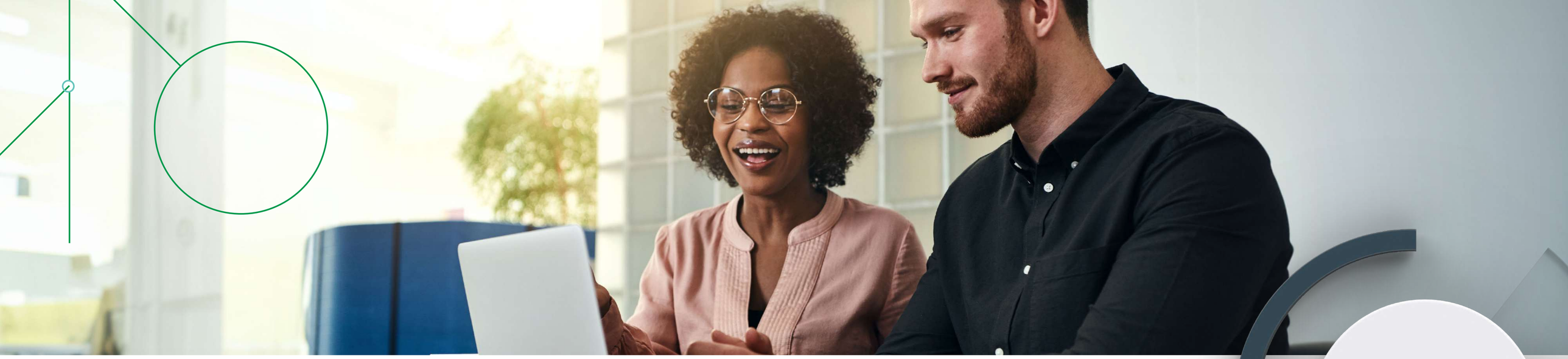
- Does the platform scale to large numbers of concurrent users? Scale to large data volumes? Can it avoid time-outs?
- Does the platform scale across geographies?
- Can the platform scale to massive data sets without sacrificing speed or flexibility of analysis?
- Does the platform scale across multiple sites including SaaS and privately managed sites (private cloud and on-premises)?
- Does the analytics platform support horizontal scaling through auto-scaling or similar concept?
- For compliance and validation, is the platform’s performance monitored and tested on an ongoing basis at an individual tenant level? If so, what types of parameters are tested?

3

Security, Authentication, and Authorization

Security should be a top priority. You know this, and your cloud analytics provider should too.

- For security, what are the individual approaches of the cloud analytics provider and cloud infrastructure provider?
- Does the provider have network and endpoint monitoring available?
- Does the platform provide secure access to on-premise and private cloud data?
- Does the platform support open industry standards such as OpenID Connect (OIDC), oAuth, and JWT (JSON web token)?
- Does access to the vendor's cloud platform require multi-factor authentication? Does it also include role-based access control, i.e. ensuring users view only permitted models and, if an OEM/ISV, prevent Customer A from viewing Customer B's analytics/data?
- Does the provider utilize ongoing vulnerability testing?
- Do you use a security model to manage access and integration with other apps, providing single sign on? And do those secure access options include Active Directory, JWT (JSON web token), IdPs (identity providers)?
- Does this include all of the major IdPs including Okta, Auth0, Azure AD and ADFS (Active Directory Federation Services)?



4

Governance

Governance is relevant for tooling to assist with tenant management—from automation to monitoring and insight delivery—API policy, and reliability.

For tooling that helps manage tenants and to understand system or user-initiated activities, see Topic Nine: Instrumentation, also expands on this visibility and behavior through the use of monitoring applications.

- Does the platform tenant console provide tooling to assist with governance? What type of event visibility is provided?
- Does the tenant's management interface provide access to all configurations, including tasks, security, governance, deployment, and entitlements?
- Is this information or audit trail also accessible via APIs, and can it be integrated with an existing security system?
- Is there an API governance policy in place allowing for guidance to customers?
- Is information regarding the platform uptime and incident information available externally (publicly accessible?)

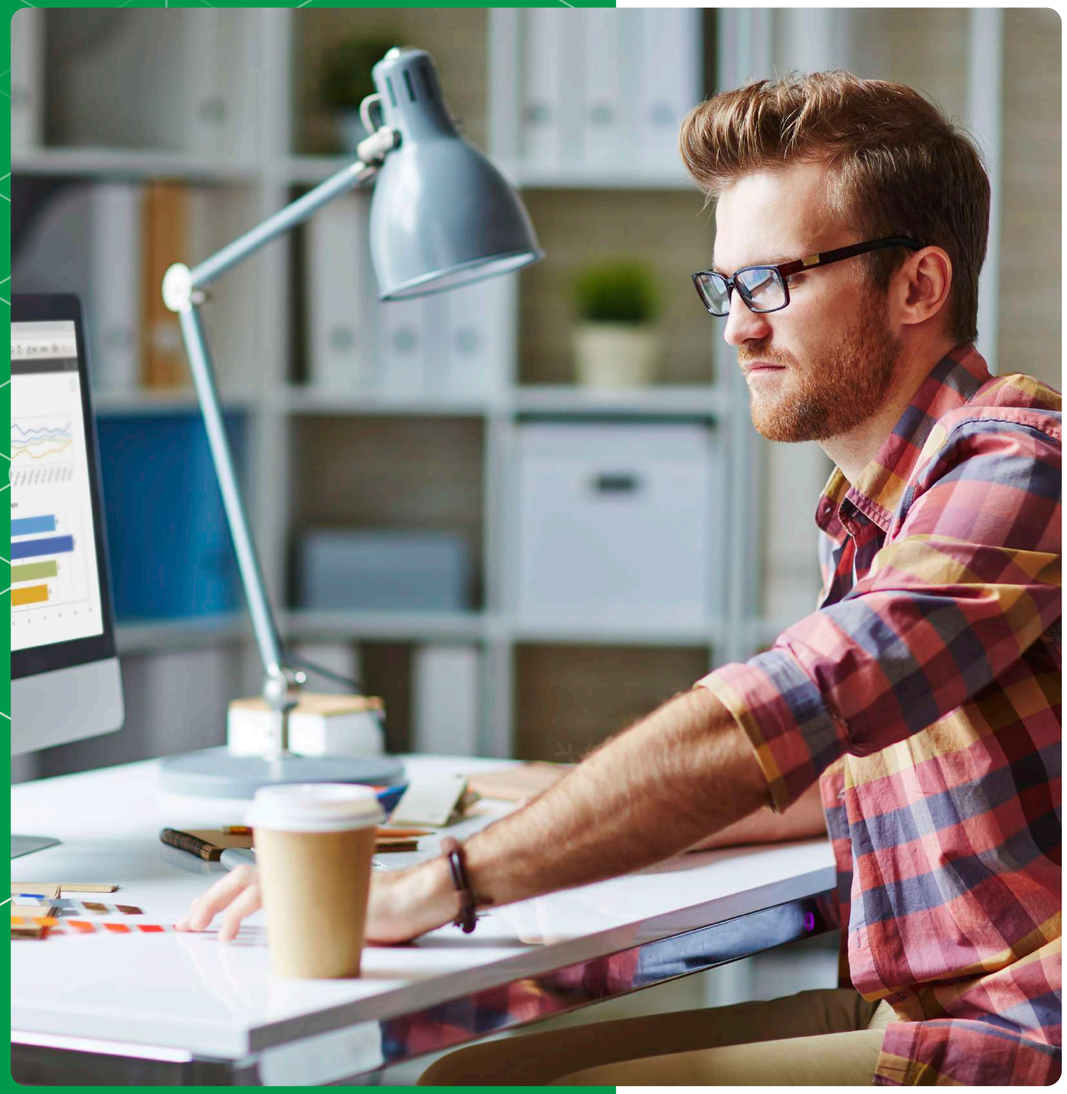
5

Custom and Embedded Analytics

Embedded analytics is the integration of analytical capabilities directly into business applications and workflows, allowing users to access relevant data and insights without having to switch between different applications

Systems integrators, OEM/ISVs, partners, and enterprise customers want to build solutions and portals for their internal stakeholders, business ecosystems, and/or customers leveraging cloud analytics technologies. When evaluating a solution, you need to understand the options for embedding—pro code, low code, and no code—that align with your requirements.

- Define your embedded analytics use case and stakeholder needs. Are you working with a business portal, an internal application, a simple web page, or something else entirely?
- Are the platform APIs proven and public, and do they have documentation to support full customizations?
- Do the APIs allow for a full range of access to key capabilities including down to the engine level and administrative/management access?
- Do the APIs support a broad spectrum of orchestration and embedding needs?
- Are your needs more complex, requiring embedding analytics capabilities within your product or solution?
- Can an organization embed analytics in internal business applications and existing workflows, and maintain full interactivity and update in context with applied filters?
- Does the platform support the embedding and/or building of specific visualizations?
- Does the platform include an SDK? In what languages?
- What approaches and techniques support this within the analytics platform, including a multitenant deployment?
- How does the platform support the development of mashups?
- Are there readily available developer resources: documentation, code snippets, tutorials, etc.?



6 Customization

Customizing your analytics apps means heightened adoption and user satisfaction. If you can present a single user interface, where the analytic components are indistinguishable from the business application, your users will be happy.

- Understand how the analytics platform allows for a change in branding and the ability to customize certain styling elements. Can this be accomplished without building another unique user interface?
- How does the platform allow an organization or OEM/ISV to customize the end user or customer experience? Does the platform support theming and custom visualization extensions?
- Is it possible to apply a different custom brand on each and every tenant within an organization's tenant estate?
- How is theming applied—manually or programmatically using APIs? Or through a no code option?

7

Deployment in the Cloud – Multiple Tenant Approach/ Administration

Deployment in a cloud environment is typically via a single tenant. However, when there is a requirement to provide solutions to one or multiple users from distinct companies (i.e. OEM/ISV), a multiple tenant deployment option is the answer.

For an OEM/ISV, a multiple tenant approach offers an ability to allow unlimited customizations, full flexibility to enable and disable features and place security at the tenant level.

- As an OEM/ISV, will I have the equivalent of a service account that bridges all of my tenants regionally and supports in the orchestration, management, and governance of my tenants?
- As an OEM/ISV, will a single set of credentials provide access to all my customer tenants, via regional IdP clients, such as OAuth?
- As an OEM/ISV, will the management console interface provide access to all configurations, security, governance, deployment, and entitlements for the tenant estate?
- For my implementation, does the multiple tenant deployment include a programmatic ability through platform APIs to automatically create, hydrate, and configure tenants?
- How can developers interact with those APIs?
- Are there other options for implementing if my development team wants direct access with the platform, such as through an SDK?
- Is it possible to assign different user roles within each of my customer tenants?
- Are there additional low-code/no-code automation opportunities for tenant hydration and management?
- Are all the platform's analytics capabilities multitenant enabled at the tenant level?

8

Compliance and Privacy

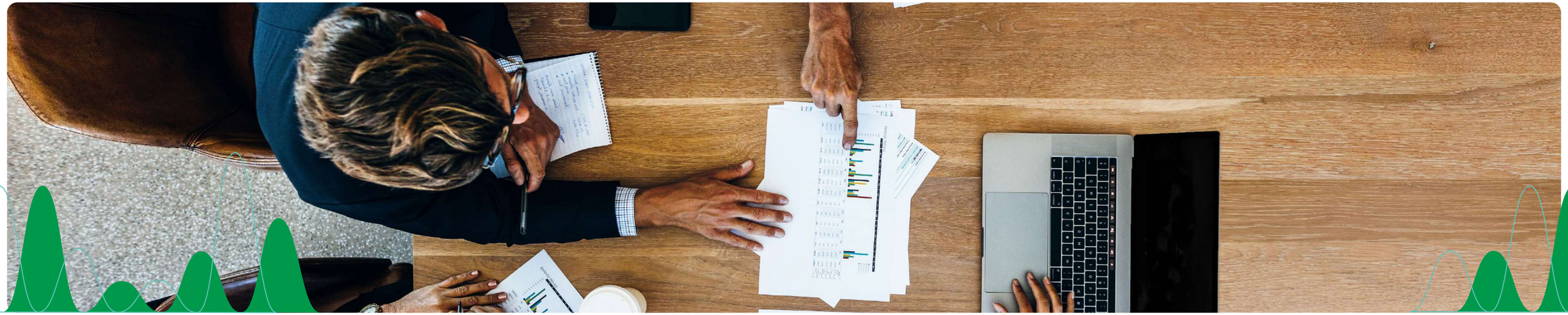
Compliance and privacy are critical as you move workloads to a cloud platform.

- Does the analytics provider follow open and audited processes for security?
- Is the platform ISO 27001 certified, meeting the international standards for implementing an information security management system (ISMS)?
- Does the analytics platform work with third parties to meet the applicable industry standards or best practice controls?
- Is the vendor compliant with key privacy requirements such as GDPR?
- Can the analytics vendor support customers with their HIPAA regulatory requirements via the HITRUST CSF certification?

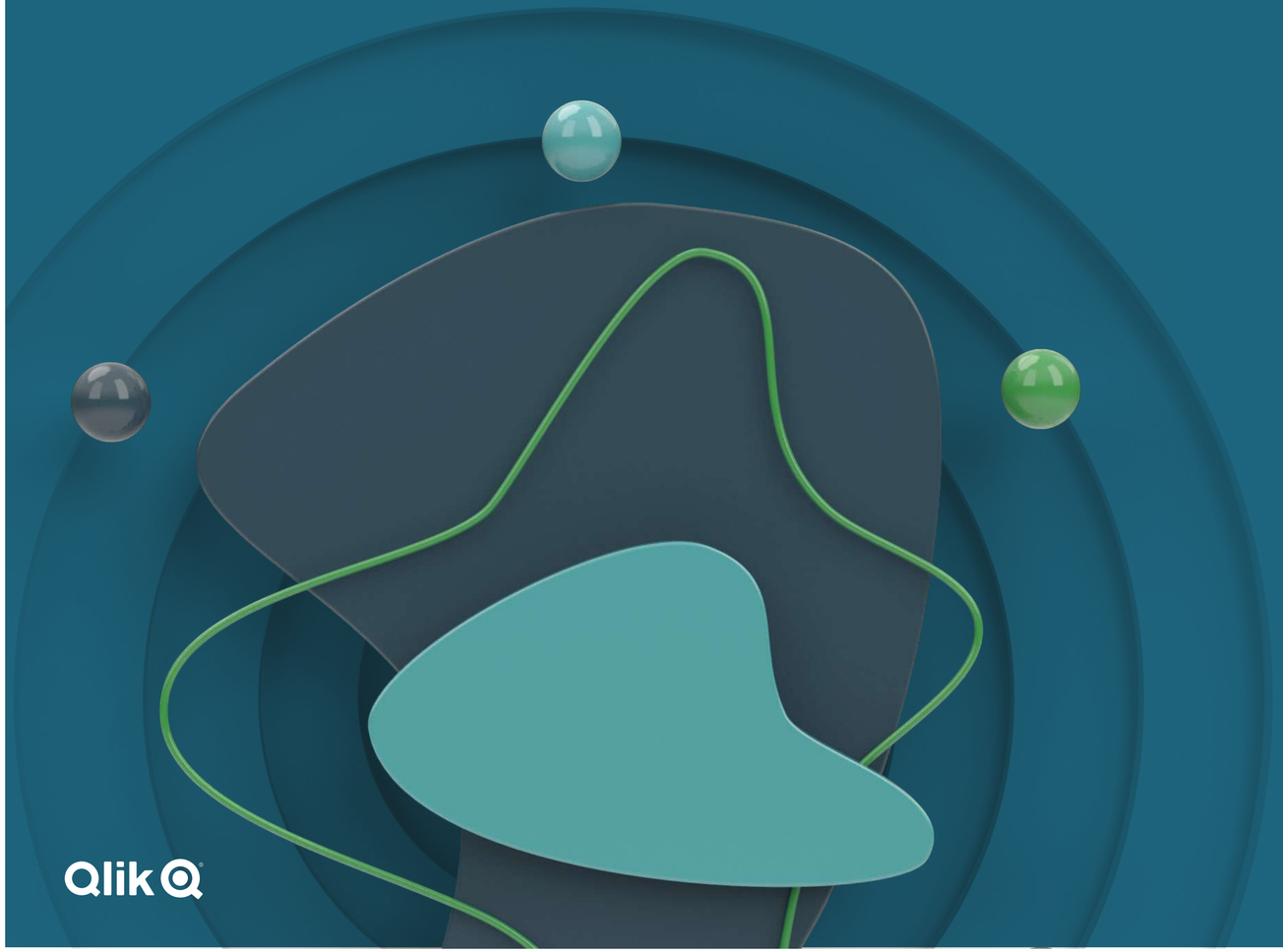
9 Instrumentation

By using instrumentation, the information gathered should allow an organization to assess performance, diagnose problems, and make decisions on the health of the applications.

- Does the tooling:
  - Provide app size vs RAM thresholds?
  - Highlight anomalies in applications/data?
  - Allow for application comparison across the tenant?
- Does the tooling monitor entitlements such as the following?
  - Existing entitlements in the tenant
  - Allocations/balance of entitlements
  - Usage of entitlements by user
- Do audit trails exist for major application/user-initiated activities including apps created, apps exported, and the reload and deletion of apps?
- Does the platform provide an ability to track how many dashboards are created, viewed, and edited etc. across their different analytics applications? If an OEM/ISV, is this ability also available across your broader end-customer tenant estate?
- Does the instrumentation allow an organization to precisely track adoption of analytics applications and identify issues across tenants?
- Does it provide a visual display to identify trends across tenants?
- Does the tooling provide the ability to monitor application distribution and versions across tenants?



Conclusion



Analytics and business intelligence remains at the forefront of IT, line of business, and OEM/ISV buying agendas. A market-leading cloud analytics platform will ensure your organization works smarter, using your data as a competitive edge. We hope this guide helps you assess and select an ideal analytics platform to address the most technical needs of your organization, and gets you where you need to go.

Additional Resources:

- TOP QUESTIONS TO ASK WHEN CHOOSING A BI TOOL
- GARTNER MAGIC QUADRANT FOR ANALYTICS AND BUSINESS INTELLIGENCE PLATFORMS
- QLIK SENSE ENTERPRISE TECHNICAL WHITEPAPER
- MULTITENANT OPPORTUNITY FOR ISVS AND DATA PROVIDERS
- QLIK DEVELOPER PORTAL

ABOUT QLIK

Qlik is the global leader in data integration, data quality, and analytics solutions. It's comprehensive cloud platform unifies data across cloud and hybrid environments, automates information pipelines and data-driven workflows and augments insights with AI. Qlik enables users to make data more available and actionable for better, faster business outcomes. With more than 40,000 active customers in over 100 countries, Qlik is committed to providing powerful data solutions to meet the evolving needs of organizations worldwide.

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