Agile Analytic Applications in the Cloud

Expanding the Reach and Value of Data

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Expanding the Reach and Value of Analytics

Analytics are vital to an organization's ability to communicate, operate efficiently and gain a competitive advantage. And yet, 77% of organizations report that just one-half or less of their workforce use analytics. Why is this? For many, the analytics process can be cumbersome, inefficient and can require too many resources unless it is streamlined. Embedding analytics into every-day applications addresses some of these challenges by connecting all systems— from pricing to recruiting and beyond—so changes can be implemented efficiently and automatically. This clearly adds value for organizations: according to our Analytics and Data Benchmark Research, three-quarters of organizations (73%) consider embedded analytics important to their analytics and data efforts. Embedded analytics should be deployed as part of an approach that includes investments into technologies that make analytics easier to use.

The next significant leap forward in analytics technology is the integration of artificial intelligent and machine learning (AI/ML) and natural language capabilities. However, AI/ML skills are lacking in many organizations, with only 23% of organizations citing that they have skilled resources in place, so help is needed to take advantage of these capabilities. AI/ML-assisted analyses can guide individuals as they examine the data in their organizations, and no special expertise is required to use these tools. This is leading to growing adoption of AI/ML and natural language presentation, with more than 80% of organizations using or considering using those technologies.

Importance of Embedded Analytics
Nearly three-quarters consider important

31% Very important
42% Important
19% Somewhat important
8% Not important

Source: Ventana Research
Analytics and Data Benchmark Research
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Automating key steps of embedded analytics deployments is another significant way to expand the value of analytics in an organization while also increasing agility and decreasing errors. One-third of organizations (35%) report that their current analytics and BI technologies are not flexible and hard to integrate in business processes. To address these issues, organizations need an agile, easy-to-use process that collects information across sources, reduces ad hoc work within applications and utilizes repeatable data pipelines. Adopting a DevOps approach to application development has connected the dots between processes, allowing organizations to deploy new and revised applications more quickly. Everything must be in code that can be managed in source code repositories, build-tools and developer frameworks. This continuous-integration/continuous-deployment approach builds automated, repeated processes that eliminate error-prone and slow manual processes.
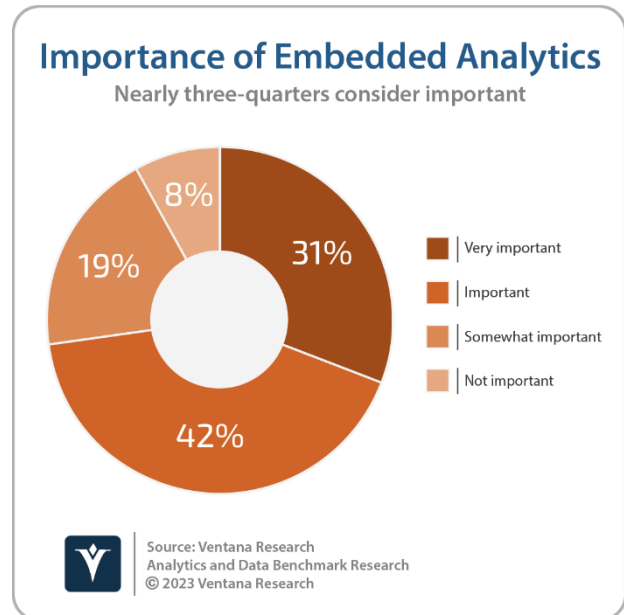
Agile Analytics in the Cloud

The migration to cloud and hybrid platforms is changing the way organizations handle analytics. There is value, ease and sensibility to a cloud implementation, which explains why nearly three-quarters (74%) of organizations currently use or plan to use the cloud for analytics and data. In addition to enhancing agility, running analytics in the cloud can reduce an organization's systems management needs. Deploying analytics in the cloud allows data applications to be accessed from the office, in the field or at home, and from a variety of devices. Organizations can also offload some of the systems management and administration to the service provider, allowing for more focus on the organization's core business activities.

Use of Cloud for Analytics and Data
49% currently use

- Currently use
- Plan to use
- Do not plan to use
- Don't know

49%
16%
10%
25%

Source: Ventana Research
Analytics and Data Benchmark Research
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A multitenant approach allows for greater access and easier, more cost-effective analytics scaling across the organization, and enables a full realization of cloud benefits. Organizations large and small have access to the same functionalities, features and innovations released within a multitenant cloud environment, leveling the playing field. Utilizing a multitenant architecture makes it easy to start a new account or instance—a child tenant—because the building blocks are already in place, whereas with a single-tenant architecture, processes must start from scratch. The concept of parent and child tenants within a multitenant architecture is valuable for organizations that want multiple departments to use the same application without overlap while still funneling all billing and infrastructure requirements through a single infrastructure. Alternatively, it can enable scenarios in which multiple customers use the same integrated product. The multitenant approach also allows for a single source of truth that allows for better data governance within an organization while providing the same analysis to all users.
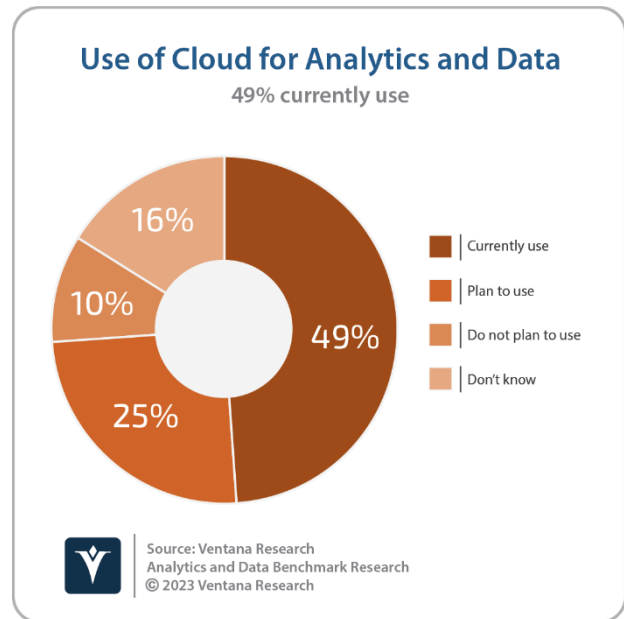
Embedded Monitoring and Governance

Cloud analytics providers help streamline the monitoring and management needed for analytics. To properly manage analytics, an organization must be able to monitor its data pipelines to make sure data is flowing properly through the system. Usage must be observed to understand which parts of the system are being used the most and least so the system can be optimized. The historical usage patterns can be used to monitor trends and identify anomalies so adjustments can be made quickly. And application providers need to be able to understand resource consumption to plan capacity and cost appropriately.

With the adoption of cloud and the requirements that come with that transition, data must be integrated, automated and secure. If an organization is in the data business, it is in the security business. As such, data governance capabilities must be a core component of the analytics platform, especially in a multitenant cloud environment where breaches, while rare, could happen. Accordingly, almost three-quarters of organizations (71%) have implemented formal data governance policies and procedures. A governance framework with embedded data cataloging capabilities makes it easier for developers to design and build the analytics. Those capabilities ensure that organizations comply with their data governance policies and regulatory requirements. When moving analytics capabilities to the cloud, it is important to choose a provider and platform that is certified to meet the requirements of different industries, such as HIPAA, CCPA, GDPR and SOC 2 compliance.

Closing the Loop

To operate efficiently, organizations need agile analytics and a platform capable of initiating and acting digitally rather than manually. For decades, almost since its inception, data analytics have been performed using read-only systems with no connection back to operational systems. The rest of the exercise was left to the reader. Data analysis provides information, but there is no guidance on how, exactly, to proceed to get results. AI/ML-enhanced embedded analytics operating in a cloud environment close the loop and allow for a more informed, more productive workforce. In fact, we assert that by 2026, more than one-half of embedded analytics processes will include artificial intelligence and machine learning algorithms to improve line-of-business decision-making.

Embedded Analytics
Market Assertion

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The discrepancy between organizations using analytics and those that would benefit from using them is an opportunity for corporate software developers and OEMs/ISVs to help reach more people and make their applications more valuable. Rather than building their own platform, organizations should consider products that provide embedded analytics, automation and AI/ML capabilities out of the box and can help an organization move from analysis to action.

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