

REGION FOCUS: WORLDWIDE

# Embedded Analytics

## Removing Roadblocks on the Path to Pervasive Analytics



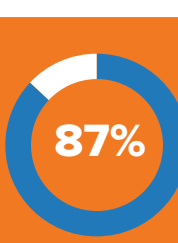
Dan Vesset  
 Group Vice President,  
 Analytics and Information Management, IDC

## Fostering a Data Culture

Using data and intelligence are keys to running a digital business.



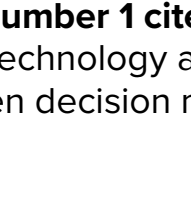
Todays' volatile environment demands greater **focus on rapid, data-driven decisions** by everyone in an organization.



To that end, executives have become more involved in **fostering a data culture and investing in initiatives to raise employees' data literacy.**

87%

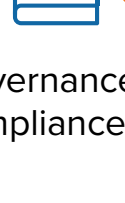
of executives have explicitly articulated the need to be more data driven.



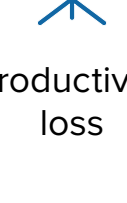
**Use of data and intelligence is the number 1 cited lever to running a digital business** over the next 12 months. Yet, many technology and business roadblocks to pervasive analytics and data-driven decision making remain including:



Decision latency



Governance and compliance risks



Productivity loss

One of the key methods for removing these roadblocks and turning negative impacts to positive outcomes is to **invest in embedded analytics.**

Source: Data Culture Survey, IDC 2021 and IDC's Future Enterprise Resiliency and Spending Survey - Wave 7, 2022

## Embedded Analytics

Analytics integrated into operational processes deliver insights and recommendations in the flow of work.

### Common Embedded Use Cases



Recommendations embedded into customer service or call center applications.



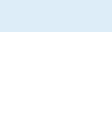
Storage utilization KPIs embedded into infrastructure management solutions.



Metrics about network traffic embedded into networking management solutions.



Equipment performance analytics embedded into predictive maintenance applications.



Developers should consider embedding analytics at both the data processing and at the user interface level of the technology stack.

## Benefits of Embedded Analytics

Increase decision velocity, leading to faster, in-the-moment data-driven decision and actions.



**Increase operational efficiency** by providing users with real-time, contextual analytics by reducing the need to switch between operational and analytic applications.



**Provide easier access to information** promoting speed to insight by minimizing or eliminating the need to move data.

60%

of organizations who said that time to insights improved significantly over the past 12 months have already embedded analytics into most of their enterprise applications.



**Reduce the need for developers to build their own analytic engines or databases**, thus improving speed of product development and new feature introduction.

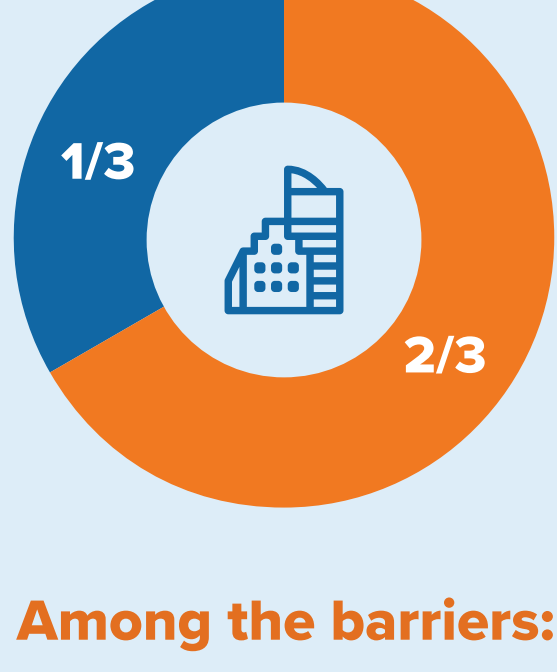


**Eliminate the need for multiple security schemes** as embedded analytics map to the enterprise security and data access schemes, minimizing the risk of data privacy and security issues.

Source: IDC Business Analytics Survey, 2022

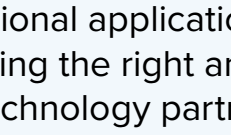
## Challenges of Embedding Analytics

While a third of organizations have already embedded analytics into most of their applications,

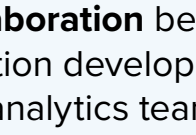


the rest (2/3) have not done so or have only embedded a few applications.

### Among the barriers:



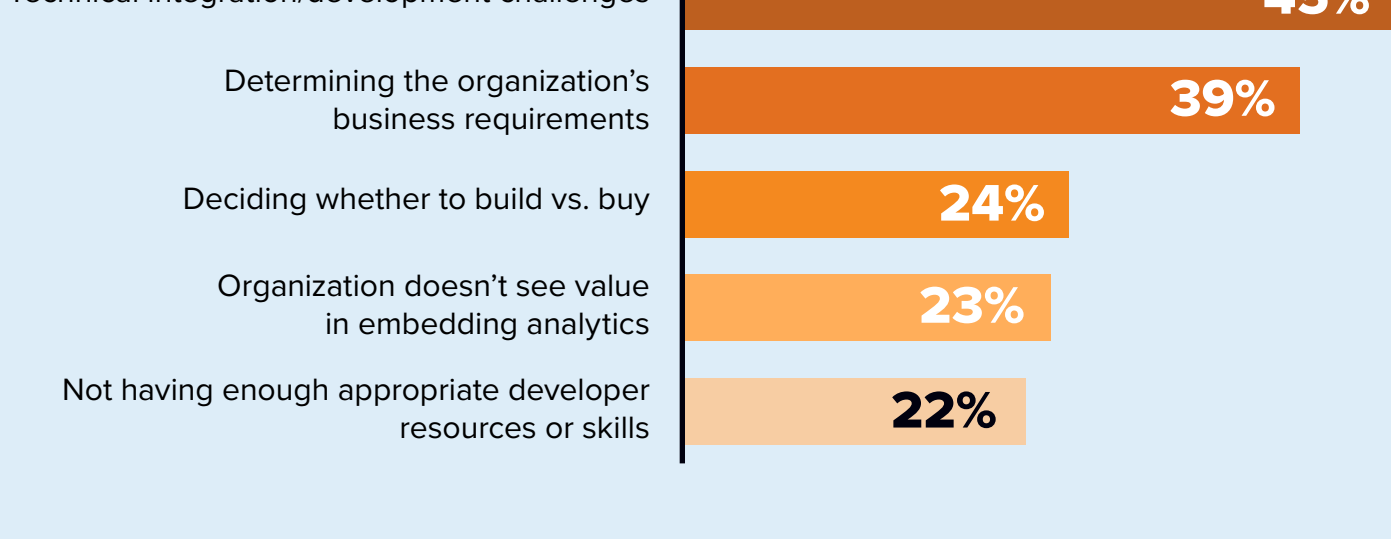
**Technical integration** with operational applications and selecting the right analytics technology partner



**Disconnect or lack of collaboration** between application development and analytics teams

### Q. What challenges has your organization faced when implementing embedded analytics?

(% of respondents)



Source: IDC Business Analytics Survey, 2022

## Critical Success Factors for Scalable, Extensible, Enterprise-Grade Analytics

**Minimize data movement between operational and analytic databases across deployment locations.**

**Make available a range of analytic engines to address descriptive, predictive, and AI/ML workloads.**

**Provide support for integration between a data warehouse and a data lake, standard development languages (e.g., SQL, Java, C++, Python, R), cloud storage APIs, service level agreements (SLAs) consistent with operational requirements.**

**Ensure scalability and performance, including terabytes per second ingest/egest rate, and exabyte storage capacity.**

Source: IDC, 2023

## Embedded Analytics at Scale

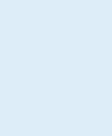
### Recommendations for success with embedded analytics



**Set actionable goals.** Ensure that internal investments flow into data and analytics initiatives that deliver insights to everyone in the organization and stakeholders outside of it.

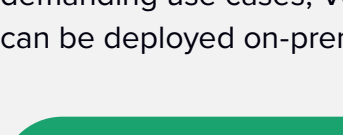


**Explore practicality.** It may be difficult, time consuming, costly, or impossible to retrofit a legacy application with embedded analytics. Place initial priority on ensuring that net new applications are built on a data platform that enables embedding of analytics into workflows. Ensure that initial wins and demonstrated ROI are leverage for subsequent use cases.



**Technology selection.** Assess not only initial technology costs, but also the total cost of ownership (TCO) of such an analytics platform to enable embedding of analytics at scale. Look for solutions that match performance, scalability, extensibility, manageability, and security requirements.

## Message from the Sponsor



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Learn more about using Vertica as part of a modern, scalable, data analytics platform for embedded analytics.