

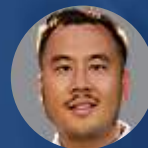


Investing in a New Generation of Converged Analytics

RESEARCH BY:



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



Raymond Huo
Sr. Research Analyst,
Business Analytics and Decisioning Software, IDC



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In This InfoBrief

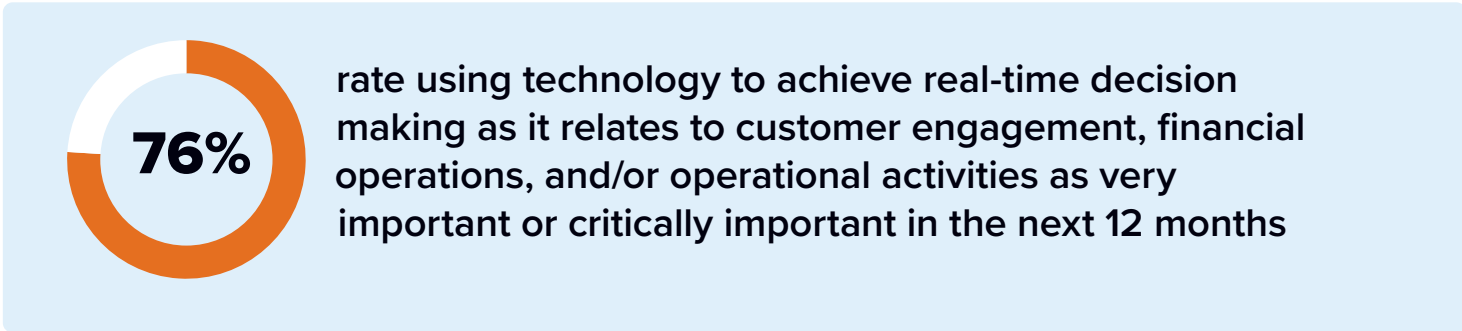
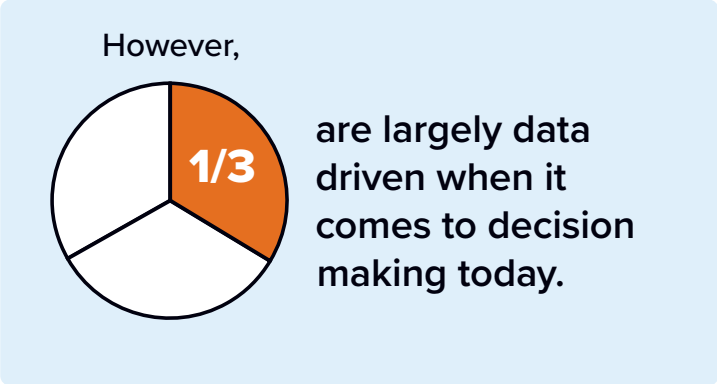
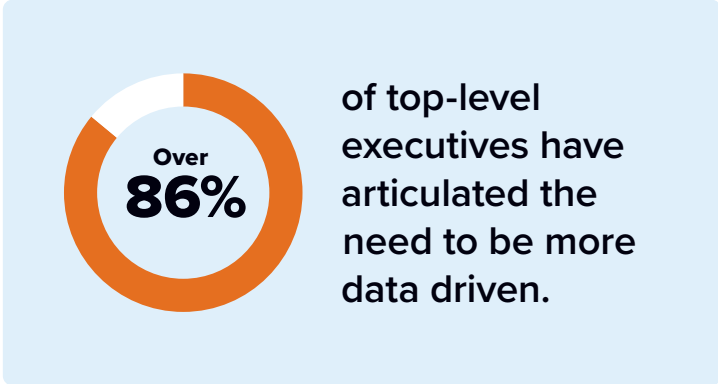


While enterprises have invested in data and analytics for decades, they have been hindered by **legacy data architectures and tools, as well as a lack of data culture.**

Leveraging data from IDC's latest *Business Intelligence, DataOps, Data Trust, Streaming Data, and Future of Intelligence* surveys, we examine **what it means to invest in a new generation of converged analytics** to ensure that organizations are ready to face the future of enterprise intelligence.

Change-Driven Demand Is Driving Investment in a New Generation of Analytics

Market uncertainty has elevated the demand for robust analytic capabilities to support agility and speed in decision making.



The new demand for robust, fast, and flexible analytics cannot be met with legacy data and analytics architecture, technology, and culture.



The demand for access to new data and analytics solutions is increasing at a time when the complexity of the data environment has also increased.



A new generation of “data-native” executives, managers, and knowledge workers has entered the workforce.

Sources: IDC Business Intelligence and Analytics Survey, 2022, n = 504, and IDC Future Enterprise Resiliency & Spending Survey, Wave 1, 2022

What the Market Says

Next to customer engagement, **the second highest strategic area of interest at the board level is leveraging data and improving decision making** to remain competitive and/or exploit changing market conditions.

n = 738, Source: IDC Future Enterprise Resiliency & Spending Survey, Wave 1, February 2021

“It’s easy to build a dashboard, but that doesn’t mean anyone will use it. Our responsibility is not only to deliver metrics but to help everyone make informed decisions.”

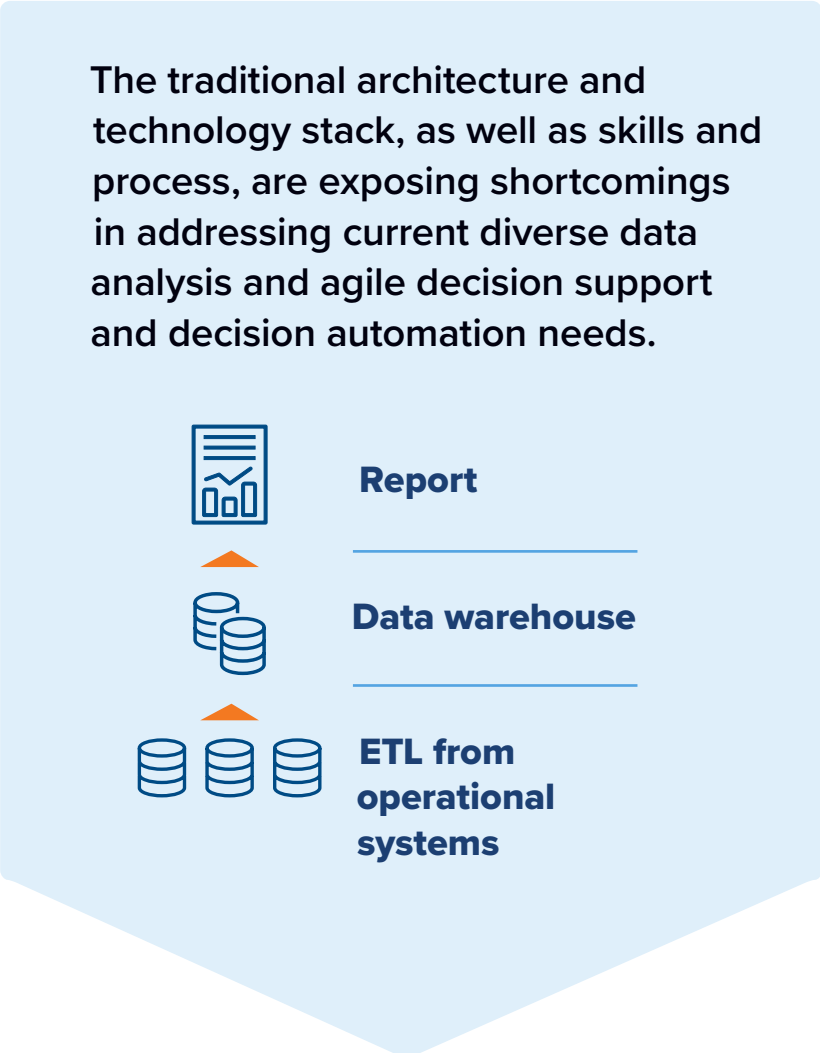
Vice president,
Multinational restaurant chain

35%
of enterprises have appointed or hired a **new analytics and/or data leader.**

Source: IDC Business Intelligence and Analytics Survey, 2022

Challenge #1: A New Data Environment

Enterprises have invested in data and analytics technology for decades. However...



Only **17%** of organizations have a complete architectural layer (data control plane, fabric, mesh) in place to **manage and control the behavior of people and processes in the use of data.**

Nearly half (**47%**) of organizations are **using more than one type of software** across a spectrum of custom code, commercial on-premises software, and SaaS deployments to **meet their data requirements.**

n = 500, Source: IDC Data Trust Survey, 2021

n = 401, Source: IDC DataOps Survey, 2021

In the past 12–18 months:

- 41%** of organizations started using **new data types** (e.g., text, images, video, geospatial).
- 34%** started using **new external data sources.**

Source: IDC Business Intelligence and Analytics Survey, April 2022

Yet the biggest challenge is not about the data...

Challenge #2: Silos

Much of the discussion about business analytics challenges has been focused on data silos.

This challenge has become more acute as data has become more distributed. However, most organizations also labor under:



Analysis silos:

Lack of standards for coordinated data analysis across descriptive, diagnostic, predictive, and prescriptive analysis methods



Decision-making silos:

Distributed decision making without broader cross-functional organizational context

Data and analysis silos, coupled with the lack of a common language among business, analytics, and IT, lead to:



Lower data literacy



Loss of staff productivity



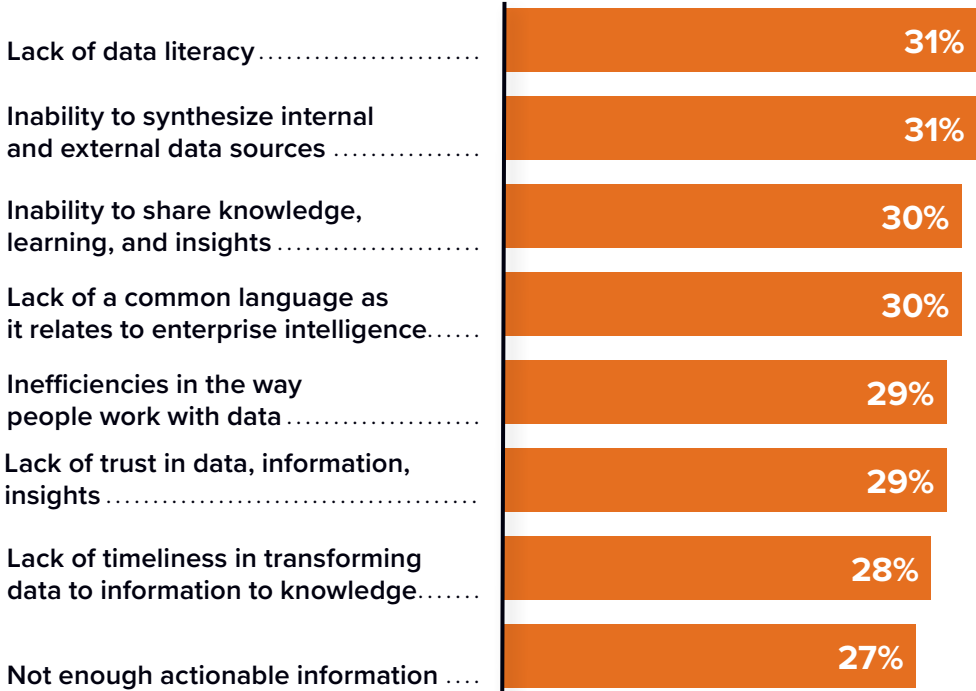
Inefficient utilization of analytic and data assets



Inability to develop, deliver, and communicate actionable insights

Most enterprise intelligence challenges are traceable to data, analytics, and decisioning silos.

% of respondents who find the following challenges very difficult to overcome



n = 1,170, Source: IDC Future of Intelligence Survey, 2021

Rethinking Analytics

What if...

...we reframe the requirements not as access to data but as the **ability to make better decisions and generate better business outcomes?**

...we recognize that Gen-D workers (the new generation of “data-native” workers) have blended **skills that don’t require us to segment them** as business subject-matter experts, analysts, data scientists, or data engineers?

...we don’t chase each request for **data, information, report, and insight as a one-off project?**

To achieve this, we propose a framework for identifying decision-making patterns to guide development of underlying data and analytics architecture and technology.

Each path from data to decisions requires traversing some or all of the following steps. However, decision circumstances differ. In addition, it is difficult to anticipate all analytics use cases, which exist any time a decision is made.



A Framework for Converged Analytics and Decisioning



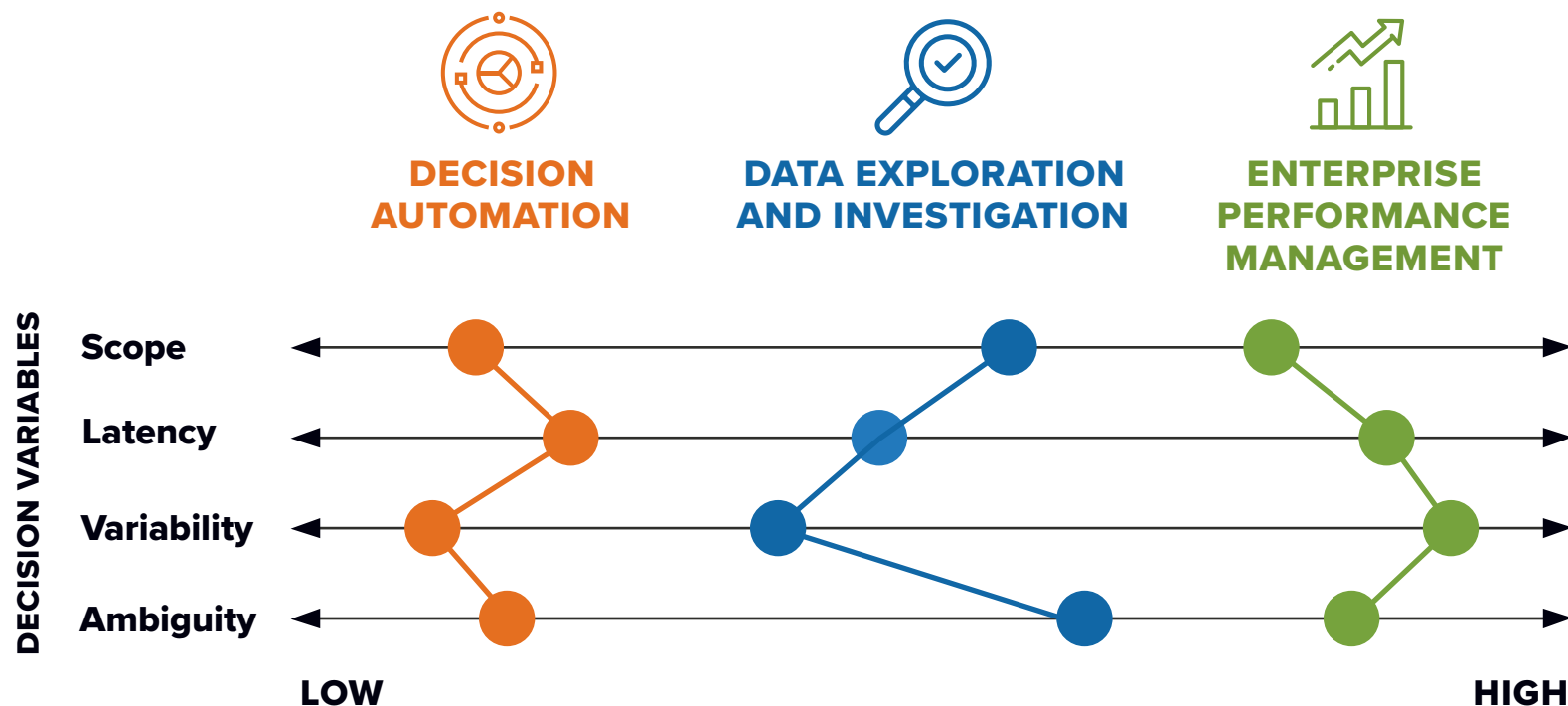
IDC RECOMMENDS

Focusing on identifying decision-making patterns based on key decision variables.



IDC SUGGESTS

Starting with three usage patterns that will inform decisions about the underlying technical capabilities for a converged analytics and data management architecture and platform.



Scope. Extent of a single decision’s impact.

Latency. Time interval within which a decision needs to be made. Can range from sub-seconds to months.

Variability. The frequency of recurrence of the same decision.

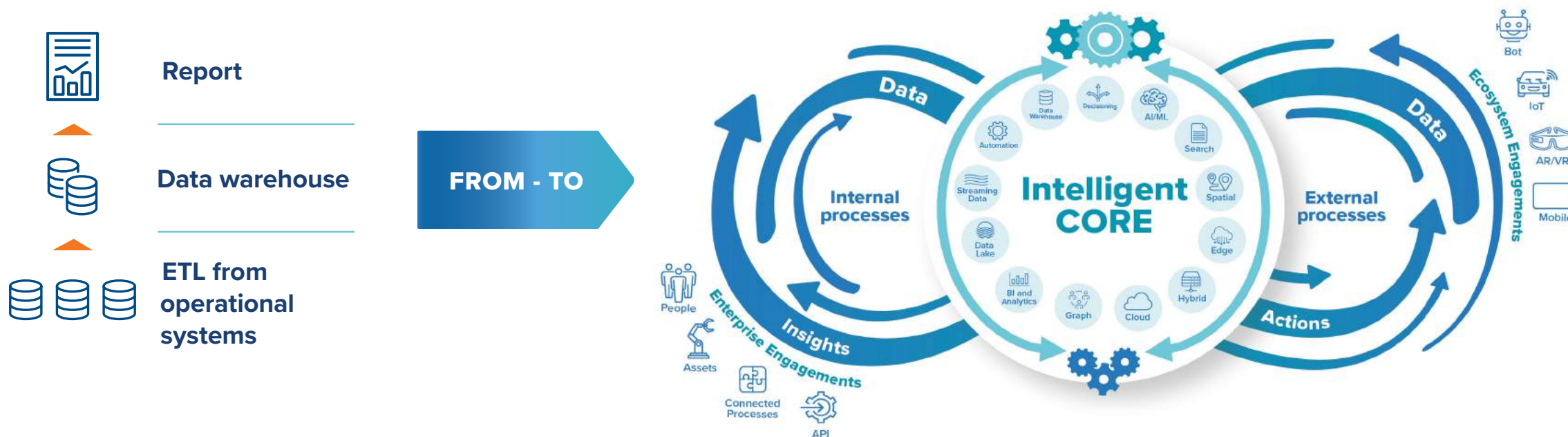
Ambiguity. Extent (probability) to which it is possible to predict the outcome of the decision.

Then and Now: Converged Data and Analytics Capabilities and Technology

▶ As calls to ensure pervasive access to data and analytics (both stand-alone and embedded into applications) intensify, many IT groups are struggling to react to ongoing requests for data and information in a timely and repeatable fashion.

▶ Instead of developing and supporting bespoke solutions, organizations with higher levels of enterprise intelligence have identified key decision-making patterns and used them to develop technology platforms in order to rapidly address all decision support and decision automation needs using a range of real-time streaming and batch data processing and analysis components.

In the past 12–18 months, 44.4% of organizations have undergone a significant data architecture change.



n = 504, Source: IDC Business Intelligence and Analytics Survey, 2022

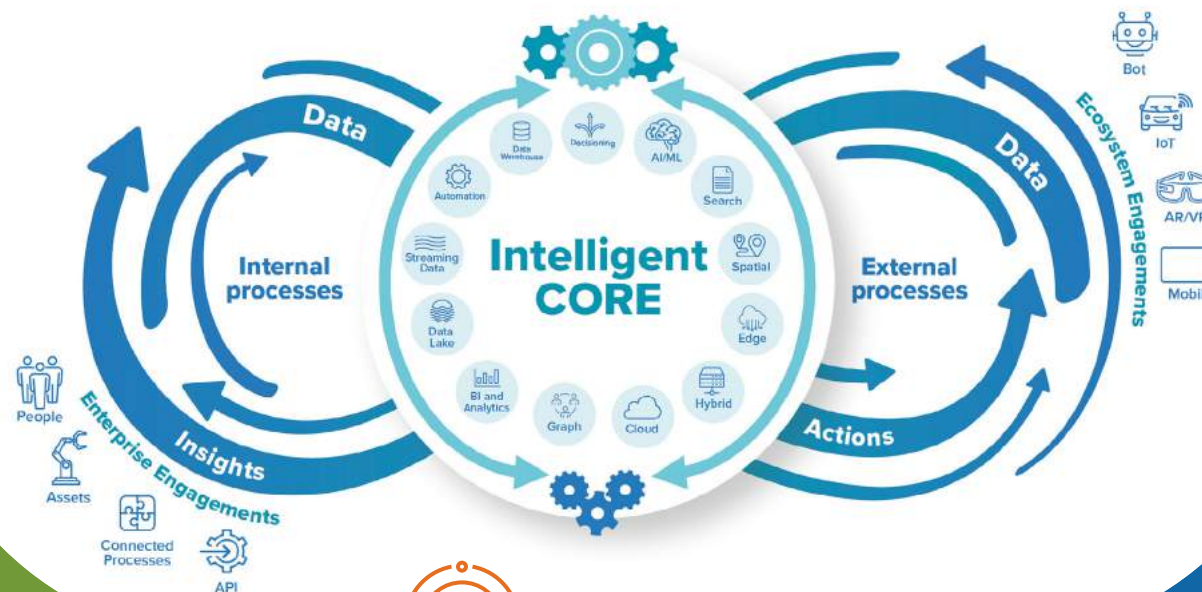
Then and Now: Converged Data and Analytics Capabilities and Technology *(continued)*



ENTERPRISE PERFORMANCE MANAGEMENT

In the last 12–18 months, **40%** of organizations have started to track **new KPIs or metrics**.

n = 504, Source: IDC Business Intelligence and Analytics Survey, 2022



DATA EXPLORATION AND INVESTIGATION

Nearly half (**47.6%**) of organizations say their **BI/Analytics software solution is driven by ML capabilities**.

n = 504, Source: IDC Business Intelligence and Analytics Survey, 2022



DECISION AUTOMATION

73% of organizations are using **streaming data for real-time analytics**.

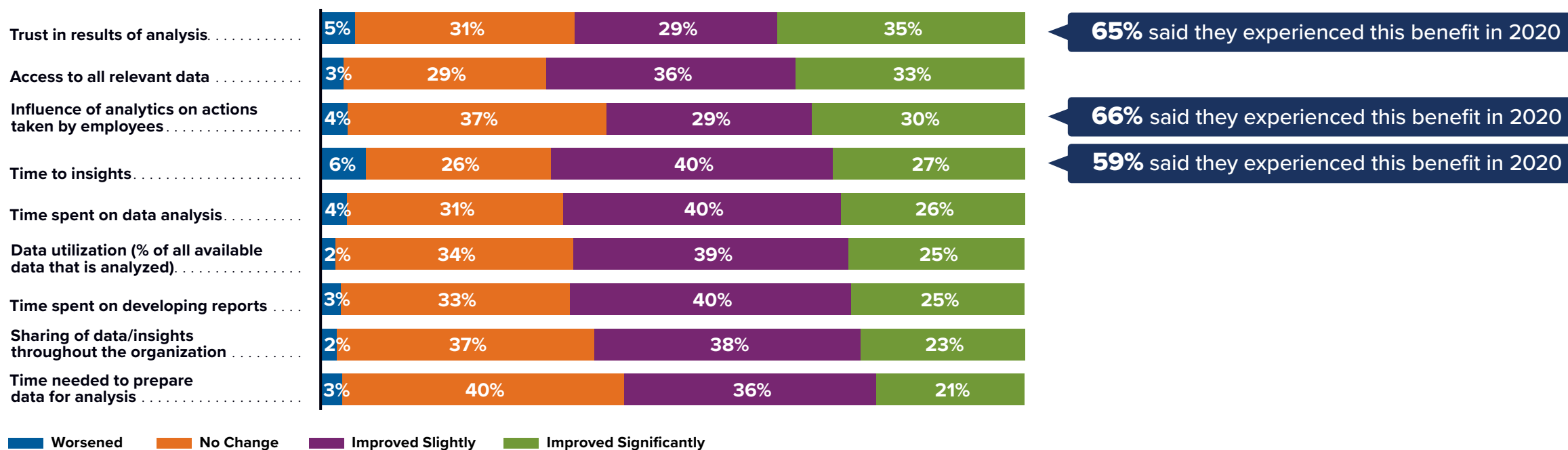
n = 626, Source: IDC Streaming Data Pipeline Survey, 2021

First-Order Benefits of the New Generation of Converged Analytics

▶ Analytics that address the needs of all decision patterns result in greater productivity of data engineers, data analysts, data scientists, and the whole “Generation Data” user base.

▶ Trust in analytics, access to data, and influence of analytics on actions (i.e., data-driven decision making) are top areas of improvement for organizations.

How did the following measures change at your organization in the past 12 months?

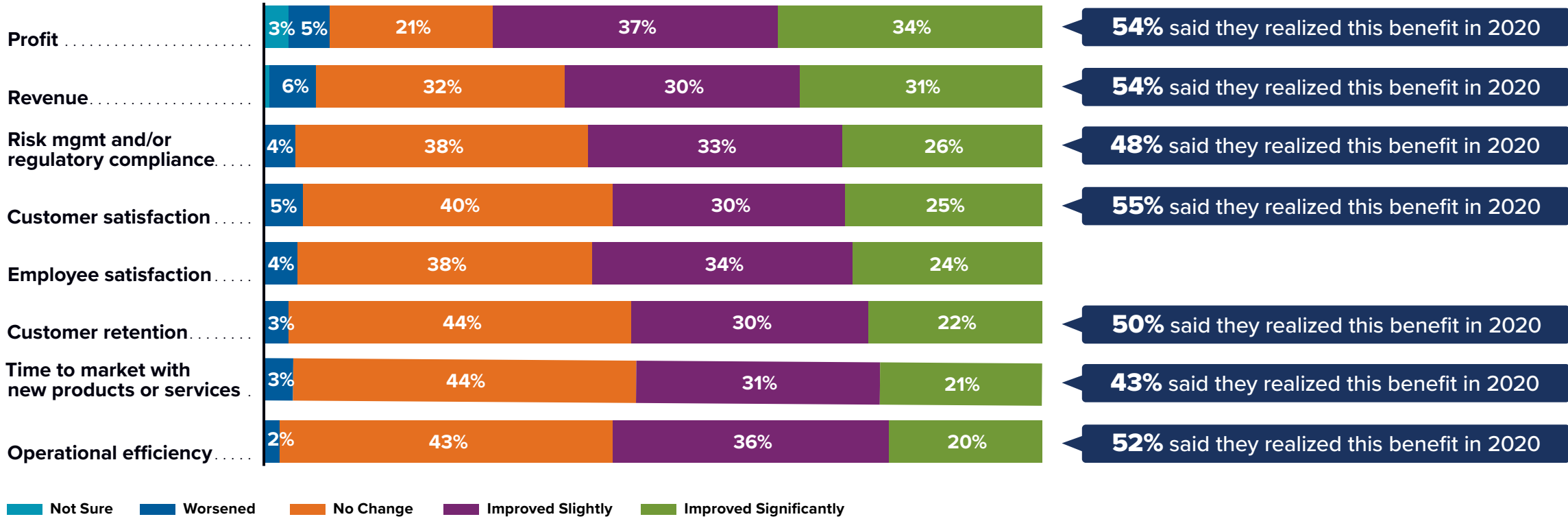


n = 504, Source: IDC Business Intelligence and Analytics Survey, 2022

Second-Order Benefits of the New Generation of Converged Analytics

Gains in data and analytics work productivity and better decision making result in improved business outcomes across financial, customer, employee, and operational objectives.

How did the following measures change at your organization in the past 12 months?



n = 504, Source: IDC Business Intelligence and Analytics Survey, 2022

Key Takeaways and Recommendations

- 1 **Reframe the work and value proposition** of data management, data engineering, business analytics developers, and data scientists from delivering data and information to helping the enterprise make better decisions.
- 2 **Categorize decisions into three usage patterns** of data exploration and investigation, enterprise performance management, and decision automation.
- 3 **Modify the decision support requirements** gathering practice to focus on a dialogue between IT and internal stakeholders, centered on the five characteristics that define decision types and usage patterns.
- 4 **Design a data management and analytics architecture** for a technology platform that supports a full range of usage patterns, from ad hoc data exploration to AI-driven decision automation.
 - ▶ The need to be more data driven has elevated the demand for and investment in a new generation of analytics.
 - ▶ While enterprises have invested in data and analytics for decades, they have been hindered by legacy data architectures and tools as well as a lack of data culture.
 - ▶ Ensure that the selected technology vendor or vendors have a clearly articulated strategy to infuse their software with AI/ML capabilities to automate specific tasks or activities.
 - ▶ Ensure that the selected technology vendor or vendors can address requirements for processing and analyzing batch and streaming data to enable an event-driven, real-time decisioning platform.
- 5 **Converged analytics provide various benefits**, including greater data and analytics work productivity, improved quality and timeliness of decision making, and a subsequent broad range of improvements in business outcomes.

About the Analysts



Dan Vesset

Group Vice President, Analytics and Information Management, IDC

Dan Vesset is group vice president of IDC's Analytics and Information Management market research and advisory practice, where he leads a group of analysts covering all aspects of structured data and unstructured content processing, integration, management, governance, analysis, visualization, and monetization. Dan also leads IDC's global Big Data and Analytics research pillar.

[More about Dan Vesset](#)



Raymond Huo

Sr. Research Analyst, Business Analytics and Decisioning Software, IDC

Raymond Huo is a Senior Research Analyst in IDC's Business Analytics and Decisioning Software market research and advisory practice. His core research coverage is focused on business intelligence and analytics tools, advanced and predictive analytics, decision management, analytic data management and integration, enterprise performance management, and enterprise planning.

[More about Raymond Huo](#)

Message from the Sponsor

TIBCO Analytics converges **visual analytics, data science, and streaming analytics** into a single, seamless experience – Hyperconverged Analytics.

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