TDWI Snapshot Series

2023 State of Analytics

By James Kobielus

TDWI's research reveals critical areas for analytics success, as well as challenges organizations face in analytics and best practices for overcoming them

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Research Methodology

This State of Analytics Report examines the current state of enterprise analytics and highlights the challenges organizations are facing. It reveals where organizations are in their analytics journey and explains areas critical for analytics success: organizational commitment and resources; platforms, tools, and architecture; and governance. Additionally, it provides considerations and best practices for moving forward in analytics.

For this study, TDWI incorporated results from several surveys and assessments that were run throughout the year. Data from this report comes from the 2022/2023 TDWI Data and Analytics survey and the TDWI Analytics Maturity Model Assessment. Data from the 2023 Analytics Maturity Model includes input from the 122 respondents from various industries and company sizes who have participated in the assessment to date.

The Scope and Importance of Analytics

Analytics is the ability to extract useful insights from data. Generally, it involves use of visualizations, reports, statistics, and machine learning to find significant trends, correlations, categorizations, anomalies, and other empirical patterns in data sets of varying volumes, types, and sources. These patterns may be historical, future-facing, and/or related to the present moment.

Analytics is a core decision support tool in modern organizations. It can provide tangible benefits such as deeper insights, increased productivity, improved customer service, improved operational efficiencies that drive cost savings, and top-line growth that delivers larger profits. For innovative companies, analytics can drive new products and services. It can also provide an important competitive advantage.

Analytics is a strategic tool at every level in the organization, with core use cases in all functional groups. For example:

- Chief marketing officers and their organizations use analytics for recommendation engines, campaign optimization, customer retention and churn mitigation, up-sell and cross-sell analysis, behavioral targeting, sentiment analysis, brand monitoring, influencer analysis, customer experience optimization, content optimization, and such newer use cases as AI-driven chatbots and generative AI for outbound communications.
- Chief operations officers rely on analytics for supply chain optimization, predictive maintenance, defect tracking, sensor monitoring, and materials management, among other applications.
- Chief financial officers use analytics for complex risk modeling, as well as to measure and monitor financial health indicators of the enterprise (such as revenue, cash flow, and ROI).

- Chief information security officers employ analytics for security incident and event management, fraud detection, and other sensitive applications.
- Chief technology officers use analytics for IT log analysis, event monitoring, troubleshooting, and system and network optimization.

To address these and other analytics use cases, companies are evolving beyond traditional approaches such as spreadsheets, query tools, and reporting applications. Many are deploying machine learning, natural language processing, generative AI, and other advanced analytics applications and technologies. Many are also looking to data discovery approaches to find insights within their data. As organizations strive to analyze new data more effectively, they require a scalable, flexible architecture for data management, access, governance, and security.

TDWI expects that enterprise interest will continue to build for analytics technologies and methods. Many seek self-service analytics tools that can help the organization democratize access to and use of this technology. As this trend intensifies and analytics becomes even more integral to organizational cultures, more nontraditional users will adopt, use, and develop analytics assets to drive business success.

An organization that is more mature in its use of analytics is better able to reap the business benefits of this set of tools, platforms, and approaches.

An organization that is more mature in its use of analytics is better able to reap the business benefits of this set of tools, platforms, and approaches. Enterprises can advance along the analytics maturity curve by pursuing a multidimensional strategy that involves adopting the latest platforms, tools, and services; becoming more data-driven in decision and process management practices; evolving their culture to empower a wider range of individuals, roles, and teams to manage, govern, and utilize analytics in their daily functions; implementing the ingestion, transformation, cleansing, and augmentation of diverse data from a growing range of internal and external sources; and measuring top- or bottom-line impacts from data and analytics use.

The Overall State of Analytics

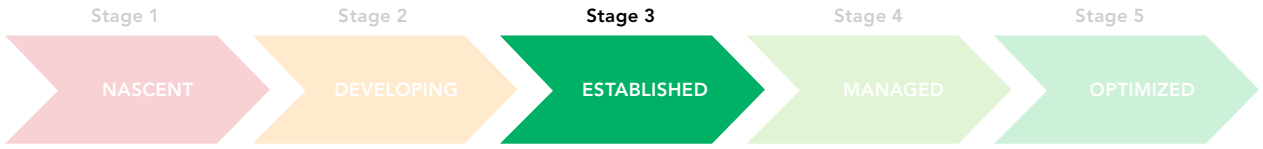
Enterprise analytics maturity is a key enabler of better data-driven decisions and more effective utilization of data to drive results.

In the TDWI Analytics Maturity Model (AMM), we measure the following key dimensions of enterprise fitness and readiness to use analytics operationally:

- **Organizational commitment** measures an organization's maturity of leadership, strategy, teams, culture, and analytics use in its operations.

- **Resource commitment** addresses the extent of an organization's deployment of human and financial resources to support analytics.
- **Data infrastructure** covers the data platforms, tools, and architectures an organization uses for analytics. It addresses the unification, integration, accessibility, and scalability of the infrastructure.
- **Analytics** encompasses the scope and types of analytics an organization applies in its business. It covers such factors as the rate of analytics adoption, the percentage of people who perform their own analytics, the extent to which analytics is embedded in business processes, the degree of automation in the analytics pipeline, and the level of innovation an organization has achieved with its analytics.
- **Governance** addresses the extent to which an organization has implemented data and model governance, security, privacy, and ethics in its analytics practice. It encompasses such factors as its implementation of controls on proper access and use of analytics, the guardrails it has instituted to ensure that correct models are deployed into production, the extent to which it has implemented a data catalog for searching and managing analytics assets, and the level of cooperation in analytics among business and IT personnel.

The overall average score for all enterprises responding to the 2023 AMM is 55 out of 100, which puts respondents at the early Established stage of maturity (see Figure 1).



Category	Score (max. 20 pts)
Organizational Commitment	12.0
Data Infrastructure	11.0
Resources	12.0
Analytics	10.0
Governance	11.0

Figure 1. *The stages of analytics maturity along with participants' average scores for each category.*

During the Established stage, an organization's profile in each of the principal analytics maturity factors is as follows:

- **Organizational commitment:** In the Established stage, the company is putting a solid analytics strategy in place. IT and the business may be working together as a team on selected projects. The team is working to determine the right business problems to solve and how to incorporate analytics into the decision-making process. Analytics projects led by individuals or single departments in the company could be bearing fruit, and there is interest in building prototypes to see how analytics could be advanced and extended further across the enterprise.
- **Resource commitment:** In this stage, the organization has formed a group that is responsible for analytics (typically in IT). This may be in a center of excellence and marks the start of setting up data literacy programs to help business users. Additionally, the organization is starting to hire more data scientists and data engineers to help with more advanced, complicated analytics. A virtuous cycle starts to take hold as the organization establishes an analytics practice that drives business success, which, in turn, encourages leadership to expand budgets and staffing to support established and new analytics initiatives.
- **Data infrastructure:** In this stage, the organization has some sort of data warehouse or data mart(s) in place—typically still for structured data only, although it is looking at other platforms for new kinds of data. The company may be deploying cloud data warehouses or data lakes to increase flexibility and reduce costs for some of its analytics initiatives. It is moving toward a hybrid or cloud architecture with more data (perhaps 1-2 TB) it needs to manage.
- **Analytics:** In this stage, organizations use reports, dashboards, and some kind of self-service tools that enable data visualization. The organization is thinking about making the move to use predictive analytics more widely for use cases in IT, operations, or marketing. It may invest in tools with search-based interfaces to offer easy-to-use options to the organization. Some of these tools are cloud-native. Skills start to become an issue because there is substantial handholding involved in self-service and more data scientists are needed to perform more advanced analytics.
- **Governance:** In this stage, a data governance team has formed but there are no real guardrails for analytics governance. Some organizations might have a steering committee overseeing data governance, with departmental representatives providing progress reports and compliance updates. However, most do not, although this may be a top priority.

TDWI has seen similar results in yearly surveys of analytics and data professionals. Findings from these surveys show that the majority of organizations are using self-service analytics tools. Many organizations are starting to adopt machine learning and other advanced analytics tools, but many struggle to achieve the next stage of maturity, such as embedding these assets into business applications to drive greater process automation and closed-loop optimization.

THE STATE OF ORGANIZATIONAL AND RESOURCE COMMITMENTS FOR ANALYTICS

Organizational and resource commitment can often make or break an analytics effort. In this regard, the hallmarks of a fully mature analytics-using enterprise are that it:

- Has solid executive leadership, strategy, and evangelization for analytics
- Provides ample, consistent funding for analytics
- Consistently measures the business impact of analytics
- Has thoroughly adopted analytics at all levels and for all functions
- Maintains collaboration, change management, and other processes necessary to deploy and manage analytics in production
- Sustains a culture of trust and innovation in analytics
- Employs a trained, talented, and data-literate team with a range of specialties needed to support different aspects of the analytics life cycle

However, responses to the survey showed that most companies haven't yet achieved full maturity in organizational and resource commitment to analytics.

Leadership and Strategy

Leadership in analytics is commonplace in the business world now. When asked if their leadership supports and evangelizes analytics across the company, most respondents

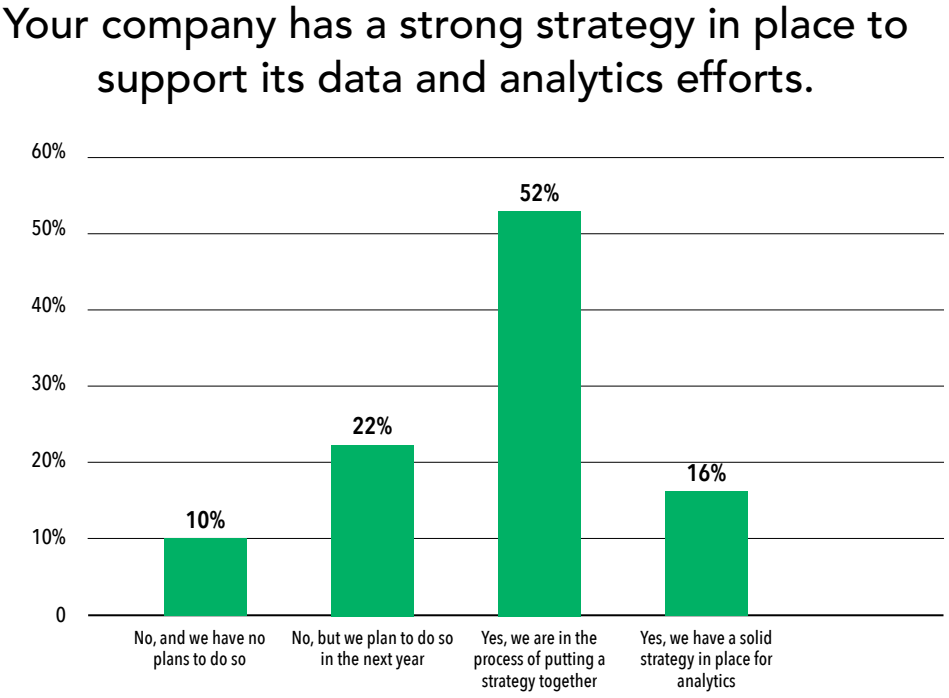


Figure 2. *Many enterprises lack scalable enterprise-wide data infrastructure for analytics. Based on answers from 122 respondents.*

(67%) report having top-down support for analytics. Only 10% say their organizations have no plan to define a strong analytics strategy (see Figure 2). Many companies recognize the central importance of analytics in digital business transformation; more than three-quarters of respondents are already leveraging it for those initiatives or are in the process of putting together digital transformation strategies in which analytics will play a key role.

The AMM showed that business leaders are increasingly coming from analytics backgrounds. Analytics professionals have risen into the ranks of leadership in a significant number of companies, with more than one-third of respondents reporting that they have a CAO, VP, or director focused on analytics.

However, a clear majority (61%) of respondents still lack appropriate strategic leadership for their analytics initiatives. Over two-fifths of respondents either place responsibility for analytics under IT or don't have anyone specifically responsible for leading it organization-wide (all not shown). Nevertheless, organizations are beginning to strengthen their analytics strategy for analytics, with three-quarters of respondents reporting that they're either in the process of doing that now or plan to in the coming year.

Two-thirds of survey respondents report having top-down support for analytics, indicating its importance.

Funding and Staffing

Commitment of budget and people to analytics cannot be taken for granted in today's economy. Indeed, the AMM showed that funding for ongoing analytics practices remains touch-and-go in many organizations. Only 39% of respondents report that their organizations have well-established funding processes for analytics. However, that is a significant step up from findings eight years ago (in the 2015 Analytics Maturity Model) in which only 26% of 251 respondents agreed with the statement "We have a well-established funding process in place for analytics."

On a positive note, the AMM showed that about one-half of organizations are hiring more people for analytics while also using more analytics technology to boost productivity and working smarter in their application of analytics to the business. However, only 16% report having all the resources they need. In fact, roughly one-third report that it's a struggle and that they have too few resources to deploy analytics effectively in their business (all not shown).

The AMM clearly showed the centrality of data scientists in organizations' staffing models for analytics. A majority of respondents' organizations have data scientists on staff, with more than half of those respondents using data scientists within the analytics team. About half of the data scientists embedded in an analytics team collaborate with business professionals. Approximately 20% of respondents say they plan to add data scientists to their teams soon (all not shown).

Staffing models for analytics vary widely across organizations and are far from set in stone. Nineteen percent of respondents have a complete team with enough data engineers, DevOps, and the like to support diverse analytics needs. A slightly lower percentage are addressing analytics with ad hoc staff; 16% have no clear plans to assign staff, dedicated or ad hoc, to supporting analytics initiatives (all not shown).

Skills shortages are a reality in enterprise analytics. Only one in seven respondents reports having all the data scientists they need. However, the survey showed that 70% of respondents recognize they can improve the skills of some existing business analysts to become data scientists.

To close the skills deficit, enterprises are making analytics training available to their staff. Over half (58%) of respondents either regularly schedule funded analytics training or fund internal or external analytics training. Only one-third don't provide or fund analytics training, but instead suggest that staff read and educate themselves on analytics tools and methodologies.

Processes and Metrics

TDWI research has consistently shown that collaboration between business and IT roles is essential to successful enterprise adoption of analytics. The AMM showed that collaboration among business and IT on analytics has established itself as a practice or a committed journey in many organizations, with 44% of respondents reporting that they regularly work together and 35% reporting that they are moving in that direction.

Enterprises that successfully implement analytics often benefit from an organizational component such as a center of excellence or innovation team focused on the tools and techniques. However, the AMM showed that many enterprises still lack such an organizational structure. Thirty percent of respondents report having one in place, less than one-third say they are in the process of putting one in place, and 39% say they are not moving in that direction.

Change management processes are essential for establishing a smooth transition to using analytics as an integral business tool. The AMM showed that many organizations are unprepared to manage any disruptions that may result from implementing analytics in business processes. Slightly over one-third of respondents have analytics change management processes in place. On a positive note, close to three-fifths (57%) are either implementing the necessary change management processes currently or plan to start in the coming year.

Measurement of analytics' strategic business impact is a necessary step in the enterprise maturity journey. However, the AMM showed that only one-quarter of respondents' organizations collect such metrics. On the positive side, though, 58% of respondents stated that though they don't measure analytics' business impact, they think they've gained value from employing it in the business.

Adoption and Culture

Analytics must be adopted pervasively to have the greatest business impact. The AMM showed that the groundwork is in place in many organizations for deeper adoption of analytics in decision-making and for further competitive differentiation. Already, many business units in the typical company use analytics for day-to-day decision-making, with 17% of respondents stating that more than 70% of their business units use it daily for decision support; 61% of respondents report that more than two-fifths of their business units rely on analytics for daily decision-making.

However, the AMM showed that data literacy is not yet universal in business. Thirty-nine percent of respondents reported that their organizations are data literate; about one-third reported that their organizations are not.

Enterprises are sharply divided in their trust of analytics; almost one-half say there's a culture of trust in analytics in their organizations, almost one-third disagree, and nearly one in four (23%) is neutral on the matter.

Also, there is a sharp division between those organizations reporting that their culture of innovation extends to analytics and those who say it doesn't. Slightly less than half (46%) say that culture extends to analytics, while 29% say it doesn't, and one-quarter (25%) remain neutral on the matter.

THE STATE OF DATA INFRASTRUCTURE FOR ANALYTICS

Data infrastructure is a fundamental enabler of successful enterprise deployment, use, and management of analytics. In this regard, the hallmarks of a fully mature analytics-using enterprise are that it:

- Deploys a well-architected, company-wide data platform, tools, and architecture in place for analytics that can scale by use case, season, and demand to address users' needs
- Provides access for all its employees to a wide range of analytics tools, data, and applications
- Collects, integrates, and manages diverse sources and types of data for analytics
- Automates, orchestrates, and monitors multiple data pipelines for analytics
- Has operationalized analytics in business systems or applications in their organizations

Enterprises are sharply divided in their trust of analytics, with almost one-half saying there is a culture of trust in their organizations, almost one-third disagreeing, and nearly a quarter staying neutral.

However, responses to the survey showed that most companies haven't yet achieved full maturity in platforms, tools, and architecture for analytics.

Architecture

Enterprises vary widely in their deployment of a company-wide data infrastructure for analytics that can handle user growth. Thirty-seven percent of respondents report that their organizations have such an architecture, roughly the same percentage (39%) say theirs don't, and about one-quarter of respondents are neutral on the issue (see Figure 3).

Enterprises are at various places in their journeys toward deploying a well-architected infrastructure for data access. Eleven percent are already there; 21% are in the process of architecting their DW, data lake, and other platforms into such an ecosystem; and another 22% are using those platforms together (albeit siloed).

Many enterprises intend to move to more flexible and scalable architecture. Close to one-half of respondents stated they're moving to such an architecture. Thirty percent say their data architecture is already scalable; 22% say their architecture isn't scalable and they're not moving in that direction.

On-demand scalable data architecture is a key aspiration among enterprises. Slightly less than one-half of respondents indicated that their organizations are moving in that direction. Twenty-eight percent say they're already there.

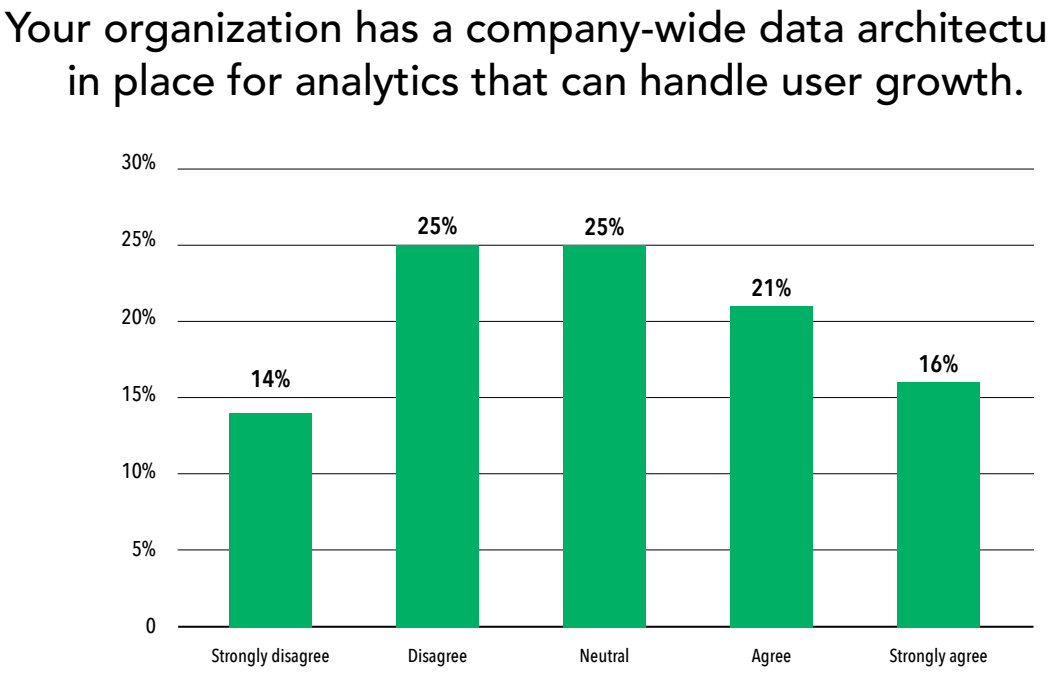


Figure 3. *Many enterprises lack scalable enterprise-wide data infrastructure for analytics. Based on answers from 122 respondents.*

Access and Use

Universal access to analytics is far from a reality in most organizations. In more than half of responses, access to analytics is provided to fewer than 40% of personnel. Access to analytics is provided to more than 40% of personnel in 42% of respondent organizations.

The AMM found that many enterprises still lack well-defined unified access platform and governance processes, a deficiency that can impede users' ability to seek access to data they need for analytics. Twelve percent of respondents stated that their organizations don't allow such access, 30% said access is only granted through IT, and one-quarter said it's only if users meet certain access criteria.

The enterprise data warehouse and spreadmarts are still the dominant data sharing model in many organizations' analytics practices, with roughly one-half of respondents stating that data access is limited to this model. Data lakes are the dominant data sharing model in 34% of respondent organizations, with the remainder relying on data collected from external third-party partners through web services APIs and placed in a cloud data warehouse or equivalent.

The lack of a well-defined unified access platform and governance processes can impede users' ability to access data needed for analytics.

Many organizations are only partway through their journeys to use the most sophisticated modern tools to analyze their data. Only 9% of respondents use a full range of analytics techniques, as well as NLP, deep learning, IoT analytics, and other facets of AI. Sixteen percent use core BI tools plus self-service data discovery as well as predictive analytics/ML against multiple data types. Approximately one-quarter use core BI tools and self-service data discovery while just starting with predictive analytics/ML. More than one-third still rely primarily on such core BI tools as reports, dashboards, and visualizations. Fourteen percent only use spreadsheets for analytics.

Where predictive analytics and machine learning are concerned, enterprises split into roughly equal camps: those that barely have any such models in production compared to those with many. Ten percent of respondents have hundreds of PA/ML models in production. Eleven percent have tens of models in production. More than one-third have 2-10 models in production; one in ten (10%) has just one model in production, and 30% have none.

TDWI research has consistently shown that persona-fitted analytics tools are essential for user productivity. The survey showed that fully three in ten organizations are thinking or planning to put in place analytics tools that can be used by different personas. A roughly equal percentage already make use of multiple analytics tools fitted to each persona, but without clear processes for pushing work between the tools. One in ten already uses such tools and have clear processes for pushing work between then.

Analytics-derived insights can come much faster when the infrastructure and tools use automation to distill them from complex data. The survey showed that automated

analytics tools are in use in a little over a third (36%) of organizations; another third is looking into acquiring such tools.

Integration and Operationalization

Most organizations integrate multiple data sources for analytics, with over 93% of respondents indicating this is their practice. Of these, over half use multiple sources of structured and unstructured data and 39% primarily rely on multiple structured data sources.

Enterprises generally design their data analytics architectures to integrate diverse data from disparate sources for access and analysis. One-half of respondents only perform integrated analytics using structured data. The remainder of respondents split roughly equally between those who integrate both structured and unstructured data and those who haven't yet designed an architecture to integrate diverse data for access and analysis.

Back-end infrastructure for analytics is growing more complex. Our survey showed that enterprises vary widely in their ability to orchestrate and monitor multiple data integration pipelines for analytics. Forty-four percent of respondents report that their organizations are orchestrating and monitoring multiple data pipelines and fewer (28%) said they're not.

Embedding of analytics in business applications can greatly extend and amplify their impact. More than one-third (37%) of respondents' enterprises operationalize analytics within business systems or applications. Close to one-quarter are trying to implement this capability. A slightly higher percentage (29%) are simply thinking about implementing this capability.

THE STATE OF GOVERNANCE FOR ANALYTICS

Strong governance is essential to well-managed enterprise analytics practices. A fully mature analytics-using enterprise:

- Provides a trusted foundation for analytics across different data types and platforms across the organization
- Secures ongoing user compliance with data governance policies and processes
- Deploys data catalogs and other tools for helping users access trusted data
- Has instituted model deployment processes
- Uses tools and technologies to version, track, and manage its models
- Has a data and analytics governance team in place with representatives from across the company, including key business stakeholders

- Has established the role of data steward and that person's (or team's) roles and responsibilities are clearly identified
- Has implemented governance and security policies for all forms of data

However, responses to the survey showed that most companies haven't yet achieved full maturity in governance for analytics.

Governance Roles

Many enterprises still lack a data and analytics governance team with representatives from across the company (including key business stakeholders) and with roles and responsibilities clearly defined. Only three in ten respondents (31%) have such a team, though that is an improvement from the 2015 Analytics Maturity Model, in which only 18% of the respondents agreed with the statement "We have an analytics governance team in place with representatives from across the country, including key business stakeholders." Nevertheless, more than four in ten respondents on the 2023 survey say they lack such a team.

Data Governance

Data governance is still not universally implemented in businesses. Only 29% of respondents report that the role of data steward is in place and that person's (or team's) roles and responsibilities are clearly identified. About 45% of respondents lack such a role in the 2023 AMM. However, that's an improvement from the 2015 survey, in which 68% of respondents disagreed with the statement "The formalized role of big data steward is in place and that person's (or team) roles and responsibilities are clearly identified."

Trustworthy data for analytics is not taken for granted in many organizations. Slightly more enterprises believe (41%) than doubt (30%) that their organization understands the source of their data and has the right policies in place to deal with different kinds of data.

Fully 30% of respondents report that siloed, ungoverned data predominates in their organizations. Only 10% reported that their organizations have solid data governance plans that are consistently followed. Roughly one-third only trust the data in the DW that they use for BI. Around one-quarter are starting to put in place data governance practices that cover more than just the DW.

Enterprises are adopting tools such as data catalogs to help users access trusted data. Already, one in ten has one and some (but not all) personnel are are using it. Sixteen percent have a data catalog and most users have accepted the need to use it. Slightly less than one-quarter are still selecting a catalog vendor. Two in five are contemplating a data catalog.

Model Governance

Model deployment and management processes are not yet a mainstream practice in the enterprise (see Figure 4). Additionally:

- Only one in seven (15%) enterprises checks models to ensure they are not incorrect or unethical (e.g., have racial bias, etc.) before they are put into production
- One in five (21%) is putting those controls in place
- One-quarter (26%) deploy models but don't check their accuracy, and close to two in five don't have models in production
- One in eight (12%) enterprises uses model registries and other technologies to help capture metadata about models
- A slightly higher percentage (13%) has a file system approach to managing various model versions
- One in five (21%) has just a few models in deployment, with data scientists manually versioning them
- Only two in five (42%) respondents don't have models in production

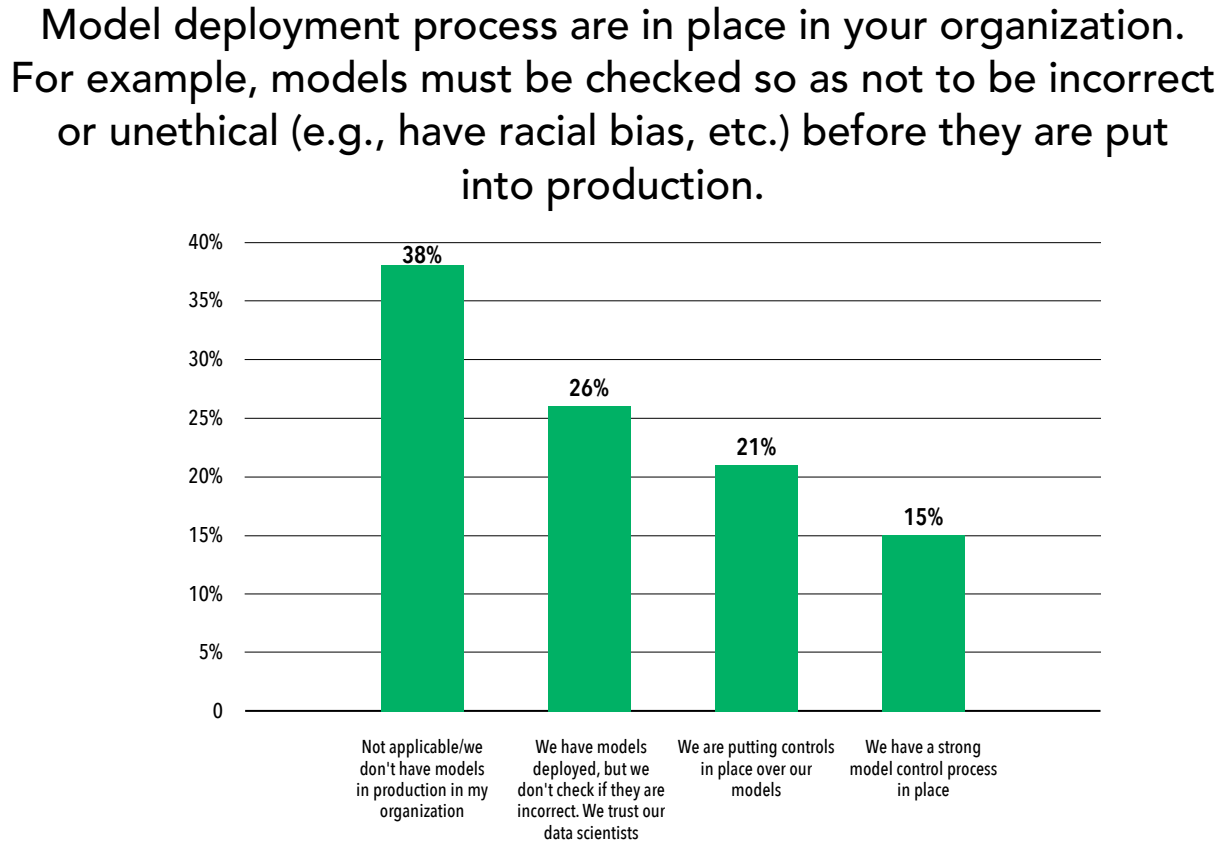


Figure 4. *Analytics model deployment, management, and operationalization still not mainstream practice in many enterprises. Based on answers from 122 respondents.*

Security and Privacy

Data and analytics security and privacy policies are broadly implemented in enterprises. More than a third report that security policies are in place for all kinds of sensitive data, one-quarter say that they have carefully thought through how to deal with different data in their governance team, and one-quarter secure and govern data in the data warehouse (though not necessarily in external sources or in data lakes).

Considerations and Best Practices for Analytics Maturity

This report has highlighted the state of analytics across several areas, including organization, infrastructure, architecture, and data governance. It has detailed some top challenges.

The bottom line is that many organizations are still midway through their analytics maturity journeys. Considering the challenges and opportunities at stake, here are several key best practices.

Gain solid top-down executive support for analytics. Enterprises succeed with analytics when their executives support and evangelize it across the company. They need to walk the walk and model analytics behavior. Success also requires that leadership define a strong analytics strategy that aligns with key business imperatives, such as digital business transformation. To accelerate these transformations, it's helpful for business leaders to come from analytics backgrounds or, at the very least, to be highly data literate.

Ensure that analytics initiatives receive sufficient and consistent funding. Enterprises can hardly succeed with analytics unless they provide consistent funding for the necessary tools, platforms, personnel, and practices. This requires leaders who can secure sustainable funding for analytics. Key among the investments they need to make is in recruiting, retaining, and training people with the right skills, aptitudes, and backgrounds to staff and manage analytics initiatives at all levels in the organization. In particular, investing in in-house data science skills is absolutely essential if an organization is to grow its competency in artificial intelligence and advanced analytics. Likewise, enterprises must focus their training resources on upgrading existing business analysts with data science skills, which can be far more cost-effective than attempting to acquire this expertise externally. Previous TDWI research indicates that when the analytics leader is part of the C-suite, they can have more influence on issues such as funding and training.

Build enterprise-wide trust in analytics for decision support and process optimization. The surest way to determine if users trust analytics is to see if they're adopting it for day-to-day decision-making. To the extent that most users employ analytics daily, enterprises have gained a necessary—but not sufficient—aspect of trust. Data literacy programs deepen that trust by building a culture that is inclined to incorporate analytics

into every decision, process, and strategic initiative. Strong governance processes are the ultimate drivers of strong trust in analytics because they provide users with assurance that decisions are always being based on the most correct, current, contextual, and compliant data and analytics models available within an enterprise.

Enhance the value of enterprise analytics through embedding in applications. Enterprises can multiply the impact of data-driven insights on the business when they embed analytics in their enterprise resource planning, customer relationship management, and other business applications. This requires that they build analytics-driven applications that deliver value in decision-making. It also requires that they embed data-driven analytics into the stream of offers, interactions, transactions, recommendations, and other experiences they deliver to users, employees, and other stakeholders. To be effective, analytics-intensive apps must drive contextual guidance that helps each user reliably attain their goals and objectives.

Democratize the use and development of analytics. Enterprises can greatly boost adoption of analytics if they provide widespread access to data and the tools for exploring, visualizing, modeling, and using it. First and foremost, enterprises must implement a unified analytics access infrastructure, without which users won't be able to easily find the data they need. This infrastructure should be built on a cloud-based data platform that supports a comprehensive range of business intelligence, predictive analytics, and data science capabilities. Users should also be provided with self-service data discovery, visualization, and modeling tools that are fitted to the persona, role, function, and other needs of each category of user.

Organizations must also address data literacy. Previous TDWI research shows that some organizations are starting to put data literacy enablement teams in place. These teams are often part of a data office or some other centralized unit, run by the CDO/CAO/CDAO and are responsible for rolling out data literacy training to different roles in the organization.

Roll up and publish metrics on the business impact of analytics. Enterprise success with analytics requires that the organizations measure its impact on the bottom line and other key performance indicators. To build and maintain support for analytics throughout the enterprise, it's not enough simply for stakeholders to have a fuzzy appreciation for its value. They must also see regular data that attests to its impact on revenue, costs, productivity, time to market, and other quantitative metrics.

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Aligning Alteryx with Best Practices for Analytics Maturity

Enterprises have long recognized the role of analytics in shaping business decisions. Even as they adopt machine learning and other advanced analytics tools, they continue to struggle with increasing their analytics maturity.

As a leader in the data and analytics space for over 20 years, Alteryx has developed a platform designed specifically to meet the most demanding analytics needs of organizations worldwide. Organizations can embed Alteryx applications into business applications to help drive greater process automation and closed-loop optimization.

Here's how Alteryx aligns with the best practices emphasized in this report.

Executive Commitment to Analytics

No one expects executives to understand data and analytics at the same level as analysts and data scientists. For executives to preach the importance of analytics and model the analytics environment they want for their organizations, they need to be data literate.

Alteryx provides a range of products within its cloud and desktop offerings that make data easily accessible to executives, regardless of their experience. These user-friendly tools allow executives to quickly answer business-critical questions without being bogged down by complex technicalities.

Executives can use these features unique to Alteryx to advocate for a data-driven culture, interpret data, and communicate its significance confidently to their teams. By demystifying analytics, Alteryx ensures that data becomes a central driver of business objectives, supporting an environment where business outcomes are aligned with analytics strategy to create insights that drive decisions.

Seeing ROI from Analytics Investments

Many analytics initiatives fail because they struggle to produce results, don’t increase analytics maturity, or lose internal support. However, for executives to position their organizations as industry leaders, they need analytics centers that consistently produce results. They need tools and platforms that yield results and receive more funding.

Companies integrating Alteryx into their data stacks have seen ROI in efficiency, increased revenue, reduced risk, enhanced governance, and increased data access.

Additionally, the easy-to-use interface of Alteryx products has helped employees at all levels and within all departments grow their careers, receive promotions, and establish their organizations as industry leaders. The Alteryx platform has helped train existing analysts and non-analysts to use artificial intelligence, machine learning, and data science, increasing employee retention while attracting top talent.

Establishing Trust in Analytics

To create trust in data, Alteryx provides resources to help people increase their data literacy, such as certificates and learning paths. Additionally, the Alteryx Community boasts over 500,000 members from the analytics community. Anyone can ask questions, get answers from experts, and use their learning to understand how to use Alteryx and what the results mean.

Analytics Integration in Business Applications

Alteryx allows businesses to embed workflows directly into internal applications using Alteryx APIs and SDKs. This seamless integration ensures that analytics are a part of an organization's core business operations.

Democratizing Analytics

Alteryx champions the organizational adoption of analytics through a drag-and-drop interface that makes analytics accessible—even to those without a technical background. The unified analytics platform integrates with a long list of third-party services and products.

Moreover, the Alteryx Analytics Cloud Platform offers tools for almost every business need, such as business intelligence, predictive analytics, and data science capabilities. Alteryx Machine Learning, Auto Insights, and more offer self-service modeling, data discovery, visualization, and reporting for any role, level, or function.

Generative AI features within Auto Insights can also summarize insights, write emails, and create presentations tailored to different audiences. Even though these generative AI features come as part of Alteryx products, organizations can elect to use and not use them where appropriate. This option allows companies to ensure analytics are used within a trusted environment.

Measuring Analytics Impact

As already mentioned, the success of an analytics initiative depends on many factors, but none more than the impact that initiative has on an organization.

Alteryx provides a platform that makes it easy to measure the impact and, more importantly, realize it.

The Alteryx platform delivers on many of the criteria used to measure the success of an initiative, including:

- Upskilling employees
- Delivering ROI
- Increasing trust in data
- Empowering an organization
- Promoting adoption
- Increasing analytics maturity

The road to analytics maturity is filled with many intricate and demanding challenges. Executives wanting to improve their organization's analytics maturity while seeing value from their investments in machine learning and advanced analytics can make the process smoother by investing in platforms and tools that naturally support their people.

The unified platform of Alteryx, along with its cloud offerings, aligns perfectly with the trust, training, and maturity that organizations want—and expect—to see from their analytics.

To learn more, visit www.alteryx.com.

TDWI Research provides research and advice for data professionals worldwide. TDWI Research focuses exclusively on data management and analytics issues and teams up with industry thought leaders and practitioners to deliver both broad and deep understanding of the business and technical challenges surrounding the deployment and use of data management and analytics solutions. TDWI Research offers in-depth research reports, commentary, inquiry services, and topical conferences as well as strategic planning services to user and vendor organizations.

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