Market Guide for Data and Analytics Governance Platforms

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By Analyst(s): Guido De Simoni, Saul Judah, Andrew White, Ted Friedman, Melody Chien, Malcolm Hawker

Initiatives: Data Management Solutions

Modern data and analytics initiatives need a balanced set of governance capabilities, but stand-alone products often do not provide what is needed. Data and analytics leaders must therefore explore the emerging market of converging capabilities and exploit them to support their governance needs.

Overview

Key Findings

- Developments in the data management technology market such as converging technologies present opportunities to optimize data and analytics governance.
- Business performance is increased when governance activities are coordinated by the identification of data sources, curation of data, application of workflow and harmonization. They are further increased when reporting and visualization are provided in a coherent platform enhanced with automation that serves the needs of business leaders and users.
- More and more vendors with focus on a single “platform” are creating the market applying relevant technologies capabilities supporting and enabling data and analytics governance.

Recommendations

Data and analytics leaders seeking to consolidate governance frameworks for data management should:

- Develop an internal checklist, based on specific “persona” requirements, as a foundation for engaging the right vendors by assessing how the data and analytics governance platform matches the maturity and agreed objectives of the data and analytics governance initiatives.
- Prioritize specific policy types like quality, security, privacy or ethics, and evaluate vendors based on their ability to address these priorities.
- Examine all your D&A governance initiatives as a whole, and identify the opportunities to consolidate the technologies or tools that are currently used into emerging unified governance platforms.

Strategic Planning Assumption

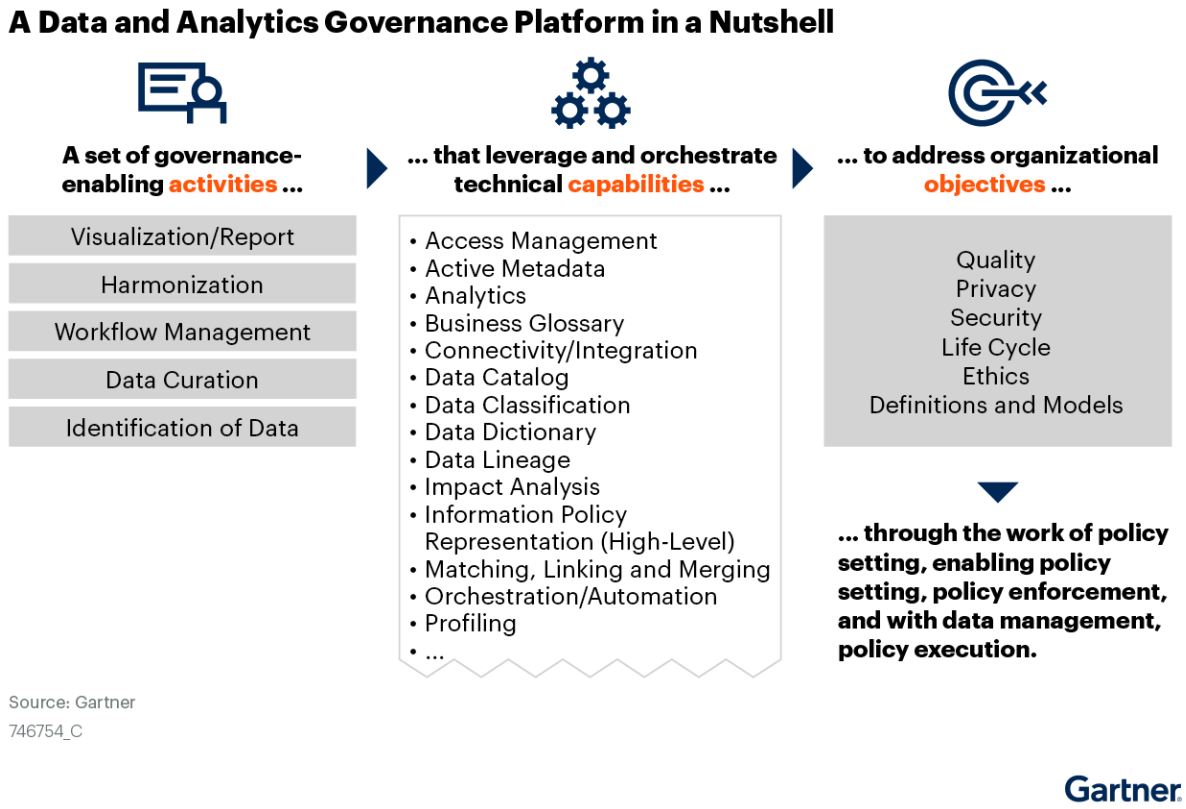
Through 2025, 80% of organizations seeking to scale digital business will fail because they do not take a modern approach to data and analytics governance.

Market Definition

A data and analytics governance platform is a set of integrated business capabilities that help business leaders and users to evaluate and implement a diverse set of governance policies and monitor and enforce those policies across their organizations’ business systems. These platforms are unique from data management and discrete governance tools in that data management and such tools focus on policy execution, whereas these platforms are used primarily by business roles, not only or even specifically IT roles.

Figure 1 offers a potential representation of components and scope for a data and analytics governance platform.

Figure 1: A Data and Analytics Governance Platform in a Nutshell



Market Description

The data and analytics governance platforms market is embryonic. This Market Guide provides Gartner's initial coverage of the market and focuses on the market definition, rationale for the market and market dynamics. Overall, data and analytics governance has attracted technology investments that give organizations capabilities from a range of technologies, both broad and deep.

Most organizations have become good at setting up silos for specific governance components: data security and privacy management and data retention. In the last 10 years, there has been added focus on governing data and analytics through the analytical pipeline too. Before that, throughout this progression, master data management (MDM) sought to govern the most widely shared information, but was frequently poorly scoped. MDM was augmented with information stewardship solutions to cater to the policy enforcement needs of business users that MDM offerings lacked. More recently, interest in ethics and governing ML models has become an emerging focus. For example, the European Union has public policy concerning governing such things.

Organizations, aided by vendors keen to sell specialized solutions, have done well in developing very optimized, but also siloed, systems. Separate markets have spawned over time with overlapping functionality and capabilities.

Several defined markets (including those for data quality solutions, master data management solutions and metadata management solutions) offer capabilities to operationalize specific aspects of data and analytics governance. Information stewardship applications emerged a few years ago to address some policy enforcement tasks, especially in MDM, data quality (DQ) and application data management (ADM) scenarios, but, until now, this has not expanded to additional policy classes.

The breadth of requirements for modern data and analytics use cases drives demand for data and analytics governance platforms that include the capabilities in Table 1.

Table 1: D&A Governance Platform Capabilities

(Enlarged table in Appendix)

Technology Capability	Description
Access management	Set up and assign roles, organization relationships and user access privileges for functions related to the work of data and analytics governance.
Active metadata	The continuous analysis of all available user, data management, systems/infrastructure and data governance experience reports to determine the alignment and exception cases between data as designed versus actual experience. Active metadata utilization includes the capability of operationalizing these analytic outputs in the form of operational alerts and generated recommendations. It identifies the nature and extent of patterns in data operations, ultimately resulting in AI-assisted reconfiguration of data itself and operations that use that data in active metadata utilization.
Analytics	Analytics models. New breeds of products are helping with not only data preparation, but also versioning of models and reports and promoting them from dev to test to production environments.
Business glossary	The ability to develop and use a glossary in support of policy analysis and development. The ability to support taxonomies and ontologies to address semantic variations. This expands from business glossaries into identifying relationships between data elements, synonyms and (preferably) support ontologies and semantic relationships (business metadata).
Connectivity/integration	Capability to provide facilities for loading (import) and exporting metadata, including roles, in a fast, efficient and accurate manner with other third-party tools. These facilities provide a communication backbone for the bidirectional flow of metadata between the central repository and the data sources or other participating applications. The solution should support interoperability and, potentially, harmonization of metadata. Metadata harmonization refers to interoperability between several different metadata standards in combination and in a single software system. This concept is based on the idea of machine processability, or the ability to automate the processing of different aspects of the metadata specifications. In this manner, machines can handle extensions, manage modules, understand refinement, and provide support for multiple languages.
Data catalog	The ability to inventory and curate data assets. Data inventory capabilities are enabled by machine learning and automatic detection of relationships with other data assets. Data inventory requires a user-augmented process for validating and resolving any ambiguity in the automated inventory process.
Data classification	Data classification is broadly defined as the process of organizing data by relevant categories so that it may be used and protected more efficiently. On a basic level, the classification process makes data easier to locate and retrieve. Data classification is of particular importance when it comes to risk management, compliance and data security.
Data dictionary	A data dictionary (technical metadata) is a collection of names, definitions and attributes about data elements that are being used or captured in a database, information system or part of a research project. It describes the meanings and purposes of data elements within the context of a project and provides guidance on interpretation, accepted meanings and representation. A data dictionary also provides metadata about data elements. It is associated with a metadata repository, used to document and manage metadata, and is used to perform analysis using metadata. Organizations can also use repositories to publish information about reusable assets, which enables users to browse metadata during life cycle activities such as design, testing and release management.
Data lineage	This capability includes depth and breadth of data lineage for identifying data provenance. Data lineage must be broad because it needs to audit all the steps, applications, and transformations that any data element has gone through from its original source to all the possible endpoints. Data lineage can also be inferred through machine learning to bridge possible gaps in the metadata.
Impact analysis	This capability includes impact analysis to identify the impact of a change on any metadata element. It needs to be deep to allow for drilling down or analyzing to the finest level of detail, such as column-level or transformation logic.
Information policy representation (high level)	A place to model, store and access (for state and/or persistence) a business representation of the governance policies being enforced, with integration and links to business rules enumerated in the various applications.
Matching, linking and merging	Matching, linking and merging of related data entries within or across diverse datasets using a variety of traditional and new approaches such as rules, algorithms, metadata and machine learning.
Orchestration/automation	Orchestration/automation comes with augmented data management. Augmented data management uses machine learning to automate various activities, including data quality, data integration, workload management, data catalog, data preparation, insight discovery, model development and insight sharing. It applies statistical significance and business context/relevancy. Note: The term "augmented" conveys the use of ML automation and AI techniques to improve human tasks and contextual awareness. This capability becomes more crucial in modern data and analytics architectures due to the sheer volume of multistructured data that needs to be processed in an ever-shorter amount of time. Augmented data management also caters to the needs of citizen roles, such as citizen integrators or citizen data scientists. AI- and ML-assisted data fabrics for new applications are driving practices away from custom-made design and toward metadata-driven solutions.
Profiling	The statistical analysis of diverse datasets (ranging from structured to unstructured data and from internal to external data) to give business users insight into the quality of data and enable them to identify data quality issues.
Rules management (low-level)	Automates the enforcement of business rules that are tied to data elements and associated metadata. This capability supports dedicated interfaces for the creation of, and the order of execution and links with, information stewardship for effective governance.
Tag management	The solution should possess enrichment capabilities through user tagging of content or automatic detection, such as personally identifiable information/data (PII or PID). The solution should provide context (such as tagging and rating) to enable data analysts, data scientists, data stewards and other data consumers to identify and integrate access to additional relevant datasets for the purpose of enhancing business value.
User interface (as support for all governance related roles)	The ability for the solution to support the skills and needs of a variety of roles — such as data architects, data engineers, data stewards and data analysts — and provide them with collaborative workflows. The ability to address a variety of users with an interface that is easy to use and engaging to interact with. The UI should enhance the experience that users have while interacting with the solution/product and ensure that different personas find the appropriate virtual environment in which to work. It should also create a collaborative experience.
Workflow management	Workflow management capabilities include business process modeling, data flow modeling and documentation, and support for analytics key performance indicators (KPIs) and other benchmarking efforts.
Task management	Ability to set up, assign and reassign tasks across the organizational roles involved in policy setting, enforcement and external roles/users. Provide management tools such as dashboards and work-to lists to monitor status of tasks. Exception lists.
Model management	Ability to review, edit, explore and otherwise interrogate various models (data, policy, rule, organizational, etc.) and various states and conditions over time.
Security (on the platform itself)	Provision of certain data security policies through data risk assessment and orchestration of data security controls that are available on the governance platform. The controls enact certain data access privileges, audit or monitoring to enable certain levels of security provision by the platform.
Organization and role models	Ability to set up organizational models and associated user IDs with key roles across the various workflows (see above) and intersection of work related to policy setting and policy enforcement. For example, set up models that tag real people to data elements, tasks, workflows, rules and more.

Source: Gartner (November 2021)

These technology capabilities are available across various data and analytics tools and technologies that can be used for operationalizing various aspects of the work of data and analytics governance with regard to policy management. For a practical example about how the technologies capabilities could be "connected" to support policy management, see The Role of Technology in Data and Analytics Governance Policy Management.

Market Direction

Today, the wide range of narrow governance-related stand-alone tools that exist span a variety of areas. Such solutions include data security, data privacy, data quality, file analysis, master data management (MDM), data or records retention, data catalog, data governance, and analytics applied across a variety of both operational and analytical use cases.

As a result, there is both an overlap and a disconnection of capabilities. This means that organizations are paying for similar capabilities several times over. Furthermore, the high level of integration and maintenance needed between these solutions comes at an increased cost, but without providing additional business benefit.

Emerging data and analytics governance platforms should, in time, provide a holistic view across the execution silos, but not necessarily replace them. It is likely that the convergence of capabilities that we observe across data management initiatives (see Modern Data and Analytics Requirements Demand a Convergence of Data Management Capabilities) may be different than what will emerge for data and analytics governance, in order to serve different users and uses. The fact that most data and analytics governance implementations focus on execution of governance policy in infrastructure reinforces this bifurcation. IT departments are under pressure to respond to requirements for more automation to support data and analytics governance policy management and execution. Therefore, they must consider new internal conversations as well as refreshed knowledge of emerging platforms (see Implement Your Data and Analytics Governance Through 5 Pragmatic Steps).

The points above refer to and focus on the capabilities organizations need to meet their D&A governance needs. This does not dictate how vendors will behave. Some will partner and integrate solutions to form interoperable platforms. Some will acquire others to attempt the same. Some will remain focused on niche or stand-alone segment needs. The next few years will be marked with ongoing and increased acquisitions and developments, even as other markets such as data management, analytics, BI and data science develop capabilities in this lucrative and growing market.

Gartner sees growing demand for converged data and analytics governance platforms that address both policy setting, execution and enforcement across all policy types. Three years ago, this was not the case. This question is coming up more and more (Gartner customer interactions on the matter grew 192% YoY from 2019 to 2020).

The market is expected to reach 30% adoption in 10 years (see Hype Cycle for Data and Analytics Governance and Master Data Management, 2021).

Market Analysis

There is a need for convergence of capabilities with the recognition that the work of data and analytics governance is different than the work of data management. Although the capabilities that serve both are similar, the context in which those same capabilities are used differs between governance and management (see Modern Data and Analytics Requirements Demand a Convergence of Data Management Capabilities).

The following sections show how these capabilities are currently used for data quality, master data management, and data security.

Data Quality

Data quality vendors are investing heavily in AI/ML, natural language processing (NLP) and graph techniques to meet customer demands by introducing augmented data quality capabilities. Gartner highlights the importance of augmented data quality as a rapidly emerging technology practice in Hype Cycle for Data Management, 2021. Together with other augmented data management technologies, this will change how organizations tackle data management initiatives.

Augmented data quality represents an enhanced capability to evolve data quality processes — for improved insight discovery, next-best-action suggestions and accuracy — through the use of metadata, data catalogs and AI-related technologies such as ML, knowledge graphs and NLP. This capability exists in data quality solutions and is aimed at increasing efficiency and productivity by automating process workflows, minimizing dependency on humans, and reducing time to value by means of data quality improvement. These evolutions in data quality are expected to be consumed in data and analytics governance platforms. We are also observing these augmented DQ capabilities critically depending on the metadata derived from integrated systems for precise data processing or decision making. One example of this is automating enforcement of data protection rules for sensitive data elements by referencing semantics, business glossaries, lineage and policies that are available in metadata solutions and data governance applications.

Master Data Management

Drastic increases in data volumes and a business focus on digital transformation are forcing businesses to modernize their MDM programs. Such drivers force organizations to design lean MDM programs that focus on narrow master data, and, separately, application data management (ADM) programs, such as those focused on ERP, CRM or e-Commerce applications. Companies evolving to meet changing needs recognize MDM and ADM as a business imperative and competitive differentiator. In response, technology providers have delivered innovations that provide MDM benefits at scales previously unattainable. Together, the forces of changing business needs and new technologies are reshaping MDM.

The technology most influencing the evolution of MDM solutions is augmented data management (see Summary Translation: Hype Cycle for Data and Analytics Governance and Master Data Management, 2021). This includes the use of AI, graph and similar technologies to reduce constraints imposed on MDM programs by legacy technologies and human-driven governance processes. These technologies provide for greater scale around core MDM processes such as using machine learning to improve speed and effectiveness of entity resolution. They help automate governance processes by using active metadata to inform entity classification and management. As these innovations affect MDM, they also affect data quality, data integration and active metadata management (see Market Guide for Active Metadata Management).

There is a shift in the MDM software market toward a focus on more integrated solutions that support a data fabric design to integrate a wide array of capabilities across the data management ecosystem. As such, by 2025, Gartner coverage will focus on a new breed of data management solution that integrates all of these new technologies into a cohesive data and analytics governance platform.

Data Security

Data security has become a key issue (see Hype Cycle for Data Security). This is driven by the growth in privacy and regulations and other legislation, as well as by the transition to cloud services, on top of more traditional intellectual property protection needs. Data security governance has several challenges, especially to do with the variety and volume of data organizations hold and the increased need to process and share sensitive data.

For most use cases, a data risk assessment is essential to review and identify several data security controls and technologies that will be required to address data security and privacy risks. It will also allow the organization to protect data well enough for the envisioned use. The number of technologies that teams engage for data protection has been creeping up, as the requirements complexity grows faster than vendors are consolidating and integrating these technologies. Managing the rule set in these tools in isolation almost invariably leads to gaps or side effects in overlapping areas. Meanwhile, there are data security platforms evolving that bridge gaps and carefully orchestrate the implementation of data security controls and policies. Examples of market convergence areas include:

- Data masking, data discovery, digital asset management (DAM) and data access governance (DAG): Data discovery capabilities are added to give clients greater visibility across their data stores. Frequently, the information is stored in a data catalog.
- Data discovery, tokenization and data governance
- Data discovery and data classification

For more about this area, see 2022 Strategic Roadmap for Data Security Platform Convergence.

Representative Vendors

The vendors listed in this Market Guide do not imply an exhaustive list. This section is intended to provide more understanding of the market and its offerings.

Market Introduction

The needs associated with data and analytics governance have never been centralized and consolidated, yet time and again, siloed solutions were the only tools employed. If the level of data and analytics governance support does not reflect the realities of digital business, critical business operations will function suboptimally or fail, causing significant and lasting damage to the organization. This is evidenced by a recent data and analytics governance survey, which shows organizations falling well short of reaching their governance objectives. [1] Even when they don't fail outright, business operations will limp along meekly and gradually decline in performance, leading to ever-greater malaise.

If, however, the level of data and analytics governance is overbearing, complex or overengineered, or continues to be fragmented, the time to value of the initiative will be impacted, and less business value will be delivered at a higher cost.

Data and analytics leaders need the right mix of technologies. In addition, demand for data quality tools, data catalogs, metadata management solutions and other markets' capabilities in one comprehensive solution is growing from both business and IT perspectives. Some core capabilities (such as data profiling and data cataloging) appear in many individual applications. The distinction among them is getting blurred.

The list of vendors in Table 2 is not exhaustive, and it represents vendors that Gartner has identified under the scope of the embryonic Data and Analytics Governance Platforms market (see Note 1).

Further details on these providers and others (the Market Guide is limited to a maximum of 40 vendors) can be found in the Gartner research Tool: Vendor Identification for Data and Analytics Governance Platforms.

Table 2: Simple Table

(Enlarged table in Appendix)

Vendor	Product(s)
Adaptive	Adaptive Metadata Manager, Adaptive Enterprise Architecture Manager, Adaptive IT Portfolio Manager, Adaptive Bank in a Box
Alation	Alation Data Catalog, Data Governance App, Active Data Governance Service Offering
Alex Solutions	Alex Core Analytics Application, Alex Hub, Alex Intelligent Scanners
Alteryx	Alteryx Designer, Alteryx Server, Alteryx Connect, Alteryx Promote, Alteryx Intelligence Suite
Anjana Data	Anjana Data
Aristotle Metadata	Aristotle Metadata Registry
Rocket Software (ASG)	The Data Intelligence Solution
Ataccama	Ataccama ONE (Modules: Catalog & Glossary, DQ, Reference data, Metadata Management, MDM, Desktop), Ataccama ONE (Modules: Catalog & Glossary, DQ, Reference data, Metadata Management, MDM, Desktop)
Atlan	Atlan
BigID	Discovery Foundation, Data Stewardship App, Data Quality App, Data Retention App, Metadata Exchange Apps, Data Flow Mapping App
BlackSwan Technologies	ELEMENT, ELEMENTry
Cambridge Semantics	Anzo Knowledge Graph Platform
CluedIn	CluedIn Master Data Management
Collibra	Collibra Data Intelligence Cloud, Collibra Data Governance Center (on-premise)
Data Advantage Group	MetaCenter Platform
data.world	data.world Enterprise
Datactics	Flow Designer, Data Quality Manager, Data Quality Clinic
DataGalaxy	DataGalaxy Platform
DTA Healthcare Solutions	Compendium Data Catalog
erwin by Quest	erwin Data Intelligence by Quest, erwin Data Modeler by Quest, erwin Evolve by Quest
Global Data Excellence	Data Excellence Management System (DEMS)
Global IDs	Data Ecosystem Evolution Platform (DEEP)
IBM	Cloud Pak for Data, Information Server, Watson Knowledge Catalog SaaS, Optim Data Privacy Solution, Knowledge Accelerators (KA) - Industry Models
Informatica	Cloud Data Governance and Catalog, Cloud Data Quality, Cloud Data Marketplace, Intelligent Data Management Cloud (IDMC) – Master Data Management, Data Integration, Application Integration, Data Masking, Axon Data Governance, Enterprise Data Catalog, Informatica Data Quality
Innovative Systems	Enlighten Data Cleanse, PostLocate, Enlighten Individual Match, Enlighten Company Match, Enlighten Household, Enlighten Profiler
Irion	Irion EDM (and its modules), Irion EDM (and its modules)
K2View	K2View Data Fabric
Ketch	Data Discovery & Classification, Data Access Control & Fortification, Transponder Appliance
Kirey Group	IQF, QISS2, QEngine, Kira, Koro, Kipro
Modak	Modak Nabu
Monte Carlo	Monte Carlo Data Observability Platform
Octopai	Automated Data Catalog, Automated Data Lineage, Automated Data Discovery
Okera	Okera Dynamic Access Platform
OneTrust	Data Discovery, Data Catalog, Data Mapping, Assessment Automation, Targeted Data Discovery, Redaction
Orion Governance	EIIG - Enterprise Information Intelligence Graph
OvalEdge	OvalEdge
Precisely	Data360 Govern, Data360 Analyze, Data360 DQ+, Spectrum, Trillium
Privacera	Privacera Platform (on-prem), PrivaceraCloud (SaaS)
Prodago	Prodago for D&A Governance
Qlik	Qlik Catalog

Source: Gartner (November 2021)

Market Recommendations

- Develop an internal checklist, based on specific “persona” requirements, as a foundation for engaging the right vendors by assessing how the data and analytics platform matches the maturity and agreed objectives of the data and analytics governance initiatives. It is relevant to capture the different personas’ expectations that relate agreed data and analytics governance objectives to the user experience and workflow capabilities provided by the selected technology.

- Prioritize specific policy types like quality, security, privacy or ethics, and evaluate vendors based on their ability to address these priorities. It is essential that the governance priorities emerging from a data and analytics strategy can effectively leverage the vendors' capabilities in policy management.
- Examine all your D&A governance initiatives as a whole, and identify the opportunities to consolidate the technologies or tools that are currently used into emerging unified governance platforms. The portfolio of D&A governance initiatives should drive balanced investments targeting the elimination of technology silos toward emerging governance platforms.

Evidence

[1] The 2021 Gartner Data and Analytics Governance survey was conducted online from 12 July to 22 July 2021 to test our assumption that organizations with distributed, business-outcomes-based governance achieve better business results than centralized, IT-/D&A-led initiatives. In total, 105 IT and Business Leaders Research Circle members participated. 57 were from Gartner's ITL Research Circle — a Gartner-managed panel — and 48 were from an external sample. Members from North America (51%), EMEA (35%) Asia/Pacific (3%) and Latin America (11%) responded to the survey. Respondents were qualified based on their involvement and participation in decision making for data and analytics governance at their organizations. The survey was developed collaboratively by a team of Gartner analysts and was reviewed, tested and administered by Gartner's Research Data and Analytics team.

Note 1
Representative Vendor Selection

The list of vendors is not exhaustive, and it represents vendors that Gartner has identified under the scope of the embryonic Data and Analytics Governance Platforms market.

Table 1: D&A Governance Platform Capabilities

Technology Capability	*Description*
Access management	Set up and assign roles, organization relationships and user access privileges for functions related to the work of data and analytics governance.
Active metadata	The continuous analysis of all available user, data management, systems/infrastructure and data governance experience reports to determine the alignment and exception cases between data as designed versus actual experience. Active metadata utilization includes the capability of operationalizing these analytic outputs in the form of operational alerts and generated recommendations. It identifies the nature and extent of patterns in data operations, ultimately resulting in AI-assisted reconfiguration of data itself and operations that use that data in active metadata utilization.
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Technology Capability	Description
Connectivity/integration	Capability to provide facilities for loading (import) and exporting metadata, including roles, in a fast, efficient and accurate manner with other third-party tools. These facilities provide a communication backbone for the bidirectional flow of metadata between the central repository and the data sources or other participating applications. The solution should support interoperability and, potentially, harmonization of metadata. Metadata harmonization refers to interoperability between several different metadata standards in combination and in a single software system. This concept is based on the idea of machine processability, or the ability to automate the processing of different aspects of the metadata specifications. In this manner, machines can handle extensions, manage modules, understand refinement, and provide support for multiple languages.
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Information policy representation (high level)	A place to model, store and access (for state and/or persistence) a business representation of the governance policies being enforced, with integration and links to business rules enumerated in the various applications.

Technology Capability	Description
Matching, linking and merging	Matching, linking and merging of related data entries within or across diverse datasets using a variety of traditional and new approaches such as rules, algorithms, metadata and machine learning.
Orchestration/automation	Orchestration/automation comes with augmented data management. Augmented data management uses machine learning to automate various activities, including data quality, data integration, workload management, data catalog, data preparation, insight discovery, model development and insight sharing. It applies statistical significance and business context/relevancy. Note: The term “augmented” conveys the use of ML automation and AI techniques to improve human tasks and contextual awareness. This capability becomes more crucial in modern data and analytics architectures due to the sheer volume of multistructured data that needs to be processed in an ever-shorter amount of time. Augmented data management also caters to the needs of citizen roles, such as citizen integrators or citizen data scientists. AI- and ML-assisted data fabrics for new applications are driving practices away from custom-made design and toward metadata-driven solutions.
Profiling	The statistical analysis of diverse datasets (ranging from structured to unstructured data and from internal to external data) to give business users insight into the quality of data and enable them to identify data quality issues.

Technology Capability	Description
Rules management (low-level)	Automates the enforcement of business rules that are tied to data elements and associated metadata. This capability supports dedicated interfaces for the creation of, and the order of execution and links with, information stewardship for effective governance.
Tag management	The solution should possess enrichment capabilities through user tagging of content or automatic detection, such as personally identifiable information/data (PII or PID). The solution should provide context (such as tagging and rating) to enable data analysts, data scientists, data stewards and other data consumers to identify and integrate access to additional relevant datasets for the purpose of enhancing business value.
User interface (as support for all governance related roles)	The ability for the solution to support the skills and needs of a variety of roles — such as data architects, data engineers, data stewards and data analysts — and provide them with collaborative workflows. The ability to address a variety of users with an interface that is easy to use and engaging to interact with. The UI should enhance the experience that users have while interacting with the solution/product and ensure that different personas find the appropriate virtual environment in which to work. It should also create a collaborative experience.
Workflow management	Workflow management capabilities include business process modeling, data flow modeling and documentation, and support for analytics key performance indicators (KPIs) and other benchmarking efforts.

Technology Capability	Description
Task management	Ability to set up, assign and reassign tasks across the organizational roles involved in policy setting, enforcement and external roles/users. Provide management tools such as dashboards and work-to lists to monitor status of tasks. Exception lists.
Model management	Ability to review, edit, explore and otherwise interrogate various models (data, policy, rule, organizational, etc.) and various states and conditions over time.
Security (on the platform itself)	Provision of certain data security policies through data risk assessment and orchestration of data security controls that are available on the governance platform. The controls enact certain data access privileges, audit or monitoring to enable certain levels of security provision by the platform.
Organization and role models	Ability to set up organizational models and associated user IDs with key roles across the various workflows (see above) and intersection of work related to policy setting and policy enforcement. For example, set up models that tag real people to data elements, tasks, workflows, rules and more.

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Datactics	FlowDesigner, Data Quality Manager, Data Quality Clinic
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Vendor	Product(s)
Innovative Systems	Enlighten Data Cleanse, PostLocate, Enlighten Individual Match, Enlighten Company Match, Enlighten Household, Enlighten Profiler
Irion	Irion EDM (and its modules), Irion EDM (and its modules)
K2View	K2View Data Fabric
Ketch	Data Discovery & Classification, Data Access Control & Fortification, Transponder Appliance
Kirey Group	IQF, QISS2, QEngine, Kira, Koro, Kipro
Modak	Modak Nabu
Monte Carlo	Monte Carlo Data Observability Platform
Octopai	Automated Data Catalog, Automated Data Lineage, Automated Data Discovery
Okera	Okera Dynamic Access Platform
OneTrust	Data Discovery, Data Catalog, Data Mapping, Assessment Automation, Targeted Data Discovery, Redaction
Orion Governance	EIIG - Enterprise Information Intelligence Graph
OvalEdge	OvalEdge
Precisely	Data360 Govern, Data360 Analyze, Data360 DQ+, Spectrum, Trillium
Privacera	Privacera Platform (on-prem), PrivaceraCloud (SaaS)

Vendor	Product(s)
Prodago	Prodago for D&A Governance
Qlik	Qlik Catalog

Source: Gartner (November 2021)