**Gartner for CDAOs Tool**

Sample Job Description — Chief Data and Analytics Officer (CDAO)

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# Primary Responsibilities

The chief data and analytics officer (CDAO) is an executive leader that has the primary enterprise accountability of the organization’s data and analytics (D&A) assets to drive value for business stakeholders. This includes creation and management of data and analytics strategy, and execution of related programs and practices that drive measurable business outcomes. This role involves establishing, leading and operating the D&A function; developing talent and mature D&A culture; building trust and managing data; and evolving technology capabilities.

* Maintain authority and accountability for exploiting the value of enterprise information assets, and of the analytics used to render insights for decision making, automated decisions and augmentation of human performance. Be the corporate leader of data-driven insights and use cases that help support the exploitation of strategic and tactical business opportunities.
* Build partnerships with executive leadership and board members to establish the vision for managing data as a business asset — to exploit data and analytics capabilities to maximize the value derived from data assets.
* Define data and analytics vision, strategy and associated practices. Lead the creation (and assure the ongoing relevance) of the organization’s data and analytics strategy in collaboration with the CIO, chief strategy officer and CEO.
* Institute an enterprise operating model for data and analytics that is consistent with the capabilities and competencies required to execute the strategy.
* Foster the creation of a data-driven culture, related competencies and data literacy across the enterprise. Lead these transformation efforts by developing D&A talent and maturing the capability of the organization.
* Oversee delivery models, methods and practices for creation of data products and to ensure consistent application and use of data and analytics solutions.
* Establish and maintain trust in data assets by instituting governance mechanisms for data and algorithms used for analysis, analytical applications and automated decision making.

## Additional Responsibilities

* Lead data-driven innovation for the enterprise, including investigation, adoption and exploitation of artificial intelligence.
* Lead research, strategy creation and development of new data products or services to expand markets, monetize data (directly and indirectly) and impact enterprise profitability.
* Expand the organization’s research and analytics offerings, especially in emerging analytical approaches, skills and technologies, focusing on accelerating digital business innovation and transformation.
* Identify new kinds, types and sources of trusted data to enable business value innovation throughout the organization.
* Create and oversee a centralized data management service for sourcing external data to ensure quality, traceability, timeliness, usability and cost-effectiveness.
* Define processes for the effective, integrated introduction of new data.
* Oversee the development and deployment of the enterprise’s data and analytics platform for digital business.
* **[*Optional, for public-sector clients*]** Create and expand open data public offerings to empower citizens, advance transparency, and enable better government and commercial services.

# Outcomes and Impact

The performance of the CDAO should be measured on business impact (business outcomes achieved or affected), by directly tying data and analytics initiatives to their stakeholders’ mission-critical priorities.

* **Impact metrics:**
  + Track the potential and business impact of D&A by linking use cases to business outcomes (e.g., revenue, profitability, cost optimization, environmental sustainability, equity and inclusion, customer satisfaction/Net Promoter score).
  + Quantify the risks involved and mitigated with your D&A by looking at regulatory compliance and data ethics (e.g., personally identifiable information, reputational impact, compliance fines).
* **Progress metrics:**
  + Track the time from insight to action by monitoring how long it takes before D&A insights are acted upon (e.g., projects delivered, platforms implemented and supported, number of D&A users, usage metrics).
  + Measure data quality by assessing the datasets related to your business domain (e.g., correctness, completeness, timeliness of information in business context). The D&A team should be able to help with this.
  + Track data literacy levels, as data literacy is the basis for becoming more data-driven as an organization (e.g., training delivered, skills attainment, staff performance).

# Key Activities

## Business Value and Outcomes

* Identify internal and external stakeholders and their goals. Organize, formalize and prioritize your stakeholders and their wants and needs.
* Express business outcomes in terms of your stakeholders (e.g., in terms of revenue growth, or cost and risk reduction).
* Focus on business outcomes, not reporting. Inventory the business’ KPIs, not just for the purpose of reporting on the business with dashboards and reports. Modern data and analytics strategies use KPIs that describe how data and analytics will be used to improve the business, actually achieving those business outcomes through specific business actions.
* Create an optimal portfolio of business outcomes, contributing the essential data and analytics capabilities necessary to run a successful organization.
* Connect with stakeholders to identify stakeholders’ unmet needs that expose new opportunities, and to redesign business processes and interactions as part of the digital transformation.

## Data and Analytics

The CDAO needs to have a broad understanding of the full range of strategic data and analytics capabilities, and the ability to communicate these concepts, methods and techniques in ways easily understood by other stakeholders:

* **Data and analytics strategy expertise:** Acumen for strategic business and technology planning and execution, including policy development and maintenance.
* **Data-driven culture change:** Playing a critical role in driving and overseeing major business change to deliver enterprise value by managing major data-driven change initiatives.
* **Data literacy:** For example, the ability to describe business use cases/outcomes, data sources and management concepts, and analytical approaches/options. The ability to translate among the languages used by executive, business, IT and quant stakeholders.
* **Analytics and business intelligence:** For example diagnostic, descriptive, predictive and prescriptive analytics approaches.
* **Data science and AI:** For example, graph analysis, machine learning and natural language processing.
* **Data management:** For example, data integration (ETL) or metadata.
* **Information/data architectures:** For example, the differences between data fabric, data mesh, data warehouse, data lake or data hub. Identify and manage the most important business information assets across the organization.
* **Data structures:** For example structured, semistructured and unstructured data.
* **Data and analytics governance:** For example MDM, data quality and data stewardship practices. This extends into widening connected governance, which touches on data security, privacy access, and other compliance and regulatory governance practices.
* **Statistical skills:** For example, understanding the difference between correlation and causation.
* ***Optional requirement (desired, but not essential):*** Demonstrated knowledge of information systems/tools, related software and data management, enterprise content management, and record-keeping policies and practices in a complex organizational environment.

## Management and Operations

* Develop, manage, allocate and govern the annual budget for the office of the CDAO.
* Organize and lead a data and analytics center of excellence, and constantly improve the organization’s capacity to develop insights with advanced analytics.
* Define members’ responsibilities and accountabilities. Define job roles, recruit candidates, and then manage (directly or indirectly) a team of data and analytics leaders and senior information management professionals in different regions or business units across a complex, international group enterprise.
* Oversee development, publishing and maintenance of the organization’s data and analytics architecture and platforms, as well as a roadmap for its future development, ensuring that it matches and supports business needs.
* [***Optional***] Partner with the CIO to operate these resources.
* [***Optional***] Partner with the CIO to scan the horizon for emerging management tools, skills, techniques and technologies. Work together to ensure their timely introduction for competitive advantage and to minimize duplication.

# Knowledge/Skills

The CDAO must be an executive leader with an understanding of business objectives and goals; industry domain expertise; and knowledge of D&A concepts, methods and techniques. The CDAO must have exceptional interpersonal and leadership skills with a focus on stakeholder engagement and communication. The CDAO will work as a peer with other C-level executives and the board of directors to facilitate their data-driven vision, strategy and operating models.

## Business Domain Knowledge

The CDAO needs to have an excellent understanding of — and ability to drive excellence in — the business process and associated data:

● **Business and financial acumen:** For example, understanding business concepts, practices and business domain language to engage in problem-solving sessions and discuss business issues in stakeholder language.

● **Business process transformation:** For example, the ability to understand how D&A can help redesign the way work is done and track how impactful the changes are.

● **Business data:** For example, the structure, ownership and use within an organization (call detail records in telco, points of sale in retail, etc.).

## Transferable Leadership Skills

The CDAO needs to be highly proficient in these transferable leadership skills:

* **Demonstrated leadership:** Proven track record of leading complex, multidisciplinary talent teams in new endeavors and delivering solutions. Ability to balance team and individual responsibilities, build teams and consensus, get things done through others not directly under their supervision, and work ethically and with integrity.
* **Excellent business acumen and interpersonal skills:** Able to work across business lines at a senior level to influence and effect change to achieve common goals.
* **Communication and storytelling:** Creating consistent value-oriented storylines for better understanding and execution of the D&A Strategy. Ability to effectively drive business, culture and technology change in a dynamic and complex operating environment (e.g., conveying information to diverse audiences in a way that is easily understood and actionable). Comfort with public speaking and the ability to creatively and concisely express ideas to business and technical audiences.
* **Influencing and emotional intelligence:** For example, by asserting ideas and persuading others to gain support across an organization or to adopt new behaviors. Ability to explain digital concepts and technologies to business leaders, and business concepts to technologists. Can “sell” ideas and processes internally at all levels, including the board and investors.
* **Facilitation:** For example, hosting sessions to elicit ideas from others, understand their issues and encourage group participation.
* **Creative and critical thinking,** **and outstanding analytical and problem-solving abilities:** Familiarity with business information generation and analysis methods (for example, framing new concepts that spur use case ideation for business participants and brainstorming with business users about future product and services).
* **Teamwork:** For example, working with business domain teams as well as D&A teams and IT staff.
* **Collaboration:** For example, fostering group problem solving and solution creation with business and technical team members.
* **Relationship management:** For example, creating relationships and building trust with internal and external stakeholders quickly.

## Regulatory and Governance

* Lead regulatory and compliance programs related to data and analytics assets in collaboration with legal, compliance and assurance teams.
* Act as the corporate representative to regulators, and represent the enterprise to customers, suppliers and external bodies in the development of industry data and analytics standards.
* Ensure that the data used for financial reporting and to support legal requirements is valid, reliable, traceable, timely, available, secure and consistent.
* Organize and chair a data and analytics governance council.
* Actively participate as a key stakeholder in the business governance domains, such as business strategy and planning, management and financial reporting, enterprise architecture, IT strategy and planning, risk and compliance, and marketing strategy and planning.
* Oversee definition, management and promotion of enterprise data and analytics principles, policies and programs for stewardship, advocacy and custodianship of data and analytics, including data quality and interoperability (in concert with legal, information security, and corporate risk and compliance offices).
* Collaborate with other C-level leaders (e.g. CISO/CRO/CPA, legal counsel) to define and execute expectations and responsibilities for data, in order to evolve and institutionalize behaviors for the appropriate use of information. Account for changing security requirements, privacy needs, ethical values, societal expectations and cultural norms.
* Define, manage and ensure an adequate information trust model, controls for master data and metadata management, including reference data.
* Ensure that business reports derived from controlled data are consistent and representative of the true state of the business.
* Measure master data and reference data for compliance to policy, standards and conceptual models. Assure the deployment and management of data quality monitoring practices.
* Ensure the timely execution of independent audits, including appropriate audit controls for data and analytics that serve as the source material for regulatory reports.

# Additional Details and Considerations

* Business acumen is essential, but a technical information management background is not always needed, and may sometimes be an impediment.
* Sometimes industry outsiders are preferred for a fresh approach.
* Optional requirement for demonstrated knowledge of [***X/Y/Z, industry-specific***]’s business processes and resultant information needs, including risk and regulatory factors relating to information flows.

# Job Requirements

## Education

A bachelor’s or master’s degree in business administration; science technology, engineering and mathematics (STEM); computer science; data science; information systems or related field; or equivalent work experience. Academic qualification or professional training and experience in legal and regulatory areas are also desirable.

[***Note:*** *Chief analytics officer roles* (if the CDAO role or equivalent is not in the enterprise) *may require candidates to have specific, advanced requirements for a postdoctorate degree in business management, mathematics, data science, information science or a related field.*]

## Experience

* Fifteen or more years of business experience, ideally in business management, legal, financial or information or IT management — recently at or near the executive level.
* Broad business experience internally and within the vertical industry is desired.
* Five or more years of progressive leadership experience in leading cross-functional teams, multidisciplinary environments and enterprisewide data and analytics programs, operating and influencing effectively across the organization and within complex contexts.
* Experience in integrating complex, cross-corporate processes and information strategies, and/or designing strategic metrics and scorecards.
* Strategy and management consulting experience desirable.

# Suggested Illustrative Interview Questions

* What aspects do you consider most important for our organization’s data and analytics strategy?
* How do you work with stakeholders and collaborators within the business? What factors do you consider when prioritizing collaboration time allocation?
* How would you create the case for data-driven culture change and obtain stakeholder buy-in?
* How will you foster a data-driven culture and improve data literacy in our organization?
* What factors will prevent progress of our data and analytics business outcomes? How will you overcome them?
* How should we attract, motivate and retain data and analytics talent?
* What do you consider, and how do you manage, the risk aspects of D&A?
* What are the latest trends for D&A and how do we capitalize on them?

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# Disclaimer

The information about this job description given above has been designed to indicate the general nature and level of work performed by employees within this classification. It is not designed to contain or be interpreted as a comprehensive inventory of all duties, responsibilities and qualifications required of employees assigned to this job.