The Chief Data Officer: A welcome new C-suite member in data-driven organisations
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Enterprise data management is becoming increasingly important for many companies and for different reasons. Most companies will mention the need to improve efficiency as a reason to improve data management. Another main driver for banks and insurers is a set of new regulations they have to comply with. For frontrunners in many sectors, improvements in data management lay the necessary groundwork to start utilising data as a source of new business opportunities and to enable digitisation and integrated customer experiences.

These various needs for improved data management increasingly require an integrated and centralised approach.

This raises the question whether such an approach should be embodied in a single function, that of the Chief Data Officer (CDO).

This paper is based on KPMG research of public information on the topic. Subsequently, the views and opinions of data professionals that were shared during two roundtable sessions have also been included in this paper. We would like to thank the participants for the open and stimulating discussions.

Definitions and characteristics of a CDO

The CDO is a C-level executive responsible for the organisation’s data management and governance, and for establishing and integrating data and information policies in the company. As such, the CDO is the pivotal figure in aligning a company’s data and information strategy with its overall business strategy.

The diagram below shows how a well-established CDO can support and enhance the effectiveness of his or her colleagues in the C-suite.

“Improvements in data quality and rationalising the IT landscape may not be the sexiest subjects, but they are essential to increase our innovative strength and to drive our future offerings”

CDO roundtable participant
In order to successfully fulfil these roles and responsibilities, we believe that a CDO must possess the following key skills:

- strategic thinking
- technology and (data) architecture
- enterprise data management
- predictive analytics
- value seeker
- curiosity for and alignment with innovation initiatives
- organisational change management capabilities

**The rise of the CDO: some statistics**

A 2016 KPMG study of the S&P 500 companies found that 52 of these have formally appointed a CDO or have created C-level functions with a comparable range of responsibilities. The FS sector accounts for a relatively large number of CDOs (or equivalent functions): 20 out 52 CDOs work in FS, whereas this sector only makes up 9% of the S&P 500.

Research\(^1\) shows that the number of CDOs is increasing. In 2014, more than 100 of the largest global companies had appointed a CDO, more than twice the number of CDOs in 2012. This rise of the CDO is forecast to continue: by 2017 25% of large organisations are expected to have a CDO on board. In heavily regulated industries like Financial Services (FS), telecommunications and pharmaceuticals, this number is expected to be even higher and reach 50%. After 2017 the number of CDOs seems to really take off, with 90% of “large organisations” expected to have a CDO by 2019\(^2\). More than 25% of CDOs will be female.

The banking and insurance sectors, as well as government agencies, have been the first to adopt the CDO role. From a geographical perspective, the US leads the way with 65% of all CDO appointments (in 2014), followed by the UK with 20%.

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The CDO role is a relatively new one and not yet well established and accepted in organisations. This may easily lead to tensions with other C-level roles on topics like mandate, span of control, programmes etc. Subsequently, expectations on what the CDO will bring may not be realistic. In this setting we expect that the first generation of CDOs will struggle to survive and only few of them may be successful.

Key roles & responsibilities for CDOs

The CDO is accountable for designing and implementing strategies that enable an organisation to acquire, manage, analyse and govern data. This is to enable a company to realise its data-related business objectives. The CDO interacts with business stakeholders to identify data requirements. In cooperation with the CIO, he or she then designs, build and implement a data and IT architecture to fulfil the information needs of business.

In this respect, it is relevant to make a distinction between responsibility and accountability. In the end, a CDO cannot be held accountable for data management, quality or governance, because he is not the owner of all the processes or systems involved. This basically is a business responsibility. Being the chief in command for data in organisations, knowledge workers expect the CDO to ensure the realisation of an enterprise data strategy, policies and procedures. Those will create the foundation for proper data management in an organisation. This is his accountability. Additionally, organisations expect the CDO to drive improvements in data quality. He/she should therefore have a sufficiently powerful mandate to push for those improvements throughout the organisation.

This translates into four major areas of accountability for CDOs:

- **data governance**: setting the data strategy, designing and implementing policies and procedures for data management, building and facilitating data governance structures within the organisation.
- **data architecture**: defining the corporate data architecture and facilitating its maintenance.
- **data analytics**: establishing and maintaining a capability that provides (predictive) analytics insights.
- **data services**: providing a wide range of data services like data quality monitoring, master data management and document management solutions.

“New offerings should in principle come from the business, the CDO’s role is to facilitate by making sure the required data management and architecture are in place.”

CDO roundtable participant
Where do CDOs fit in their organisations?

Reporting lines for CDOs can be categorised into four models:

1. The dominant reporting structure for CDOs is one where the CDO reports directly to the CEO. This is especially true in larger FS companies. This reporting structure is appropriate where the CDO’s main role is in the alignment of IT and business strategies, and where the CDO operates independently across all business units and has representatives in each of these.

2. In another common reporting structure, the CDO reports directly to the CIO. A study by The Economist Group in 2015 reported that around 92% of CIOs are calling for a CDO role in their organisations, owing to the increasing importance and complexity of data management. In this model, the CDO works with the CIO to leverage data as an operational enabler.

3 & 4. Other reporting structures involve direct reports between the CDO and the Chief Risk Officer, or other functional heads such as Chief Operations or Marketing Officers.

Roundtable participants shared their views on where they fit in their organisations:

“In my bank, we have decided, after an extensive discussion, that as the CDO I will report directly to the COO. Another option that was considered was a direct report to the Chief Commercial Officer, to support our view that data should in the end be utilized to better service our customers. We settled on the direct report to the COO as this places the CDO function right in the heart of the organisation.”

CDO roundtable participant

“The best position for a CDO within a company is where you find the maximum amount of sponsorship. Although I’d prefer to be much closer to the business, the best place for me right now is the IT department. It’s not a natural fit, but they get what we do.”

CDO roundtable participant

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CDOs come in different types

In addition to his or her position in the corporate hierarchy, the personality and the leadership style the CDO brings to the job matter a great deal. Ideally, this style should fit the challenges the organisation faces. Do these challenges mainly require an internal focus, or is a more outward-looking stance called for? Should the CDO have an orientation on operational matters, or should he/she occupy themselves mostly with transformational change? Gartner has developed a model that follows two dimensions of focus (internal or external) and orientation (operational or transformational). This gives rise to four situations, each served best by a distinct CDO type:

- **Broker & Engineer** (internal focus, operational orientation): the CDO provides services for internal operational business needs and is focused on achieving efficiency.
- **Integrator & Optimizer** (external focus, operational orientation): the CDO delivers operational data services that are used by both internal and external users. Also, the activities are expanded and integrated into a shared-services organisation.
- **Enabler & Conductor** (internal focus, transformational orientation): though focused on the needs of internal users, the CDO is expected to drive transformation across the enterprise in situations where data assets are to be used aggressively by business leaders.
- **Explorer & Pioneer** (external focus, transformational orientation): the CDO is expected to be an innovator who creates new offerings, explores ideas and brings transformation initiatives for internal and external users.

We asked several Dutch CDOs where they would position themselves today, and where they would like to find themselves a couple of years from now. In general, when looking at their current functioning they lean more towards an operational orientation.

Generally, the ambition is to have more of an external focus and a transformational orientation in the near future. Opinions differed, however, on whether the CDO should take the lead in creating new offerings (e.g. based on data analytics), or leave this primarily to the business.

“It depends on the timeframe you take in mind. I’m not saying that as a CDO I will be developing new products, but I am having discussions on the CDO’s position in our value chain. I think we underestimate how fast our world is changing. Today we still have one-size-fits-all offerings, soon the smart use of data will enable us to really personalise our offerings. That does require a ‘Explorer & Pioneer’ type of CDO.”

CDO roundtable participant

“I think we fulfil all four of these roles. The CDO’s ambition, however, should be to be an ‘Explorer & Pioneer’; this is how new customer value is created, the three other roles merely serve to enable this.”

CDO roundtable participant

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KPMG’s view

Many companies now realise that to survive in this information age they need to transform their traditional business models to digital. KPMG believes that the nature and extent of the activities involved in setting up and maintaining a digital organisation asks for a new function (i.e. the Chief Data Officer).

The CDO is the pivotal figure in aligning a company’s data and information strategy with its overall business strategy. KPMG believes that the CDO is a strategic thinker, innovative with a clear understanding of (data) technology and organisational change management capabilities. The number of CDOs is increasing, mainly driven by demand in the Financial Services sector. As the CDO role is relatively new and not well established the first generation of CDOs will struggle to survive and only few of them may be successful.

We believe that a CDO may be well positioned when he/she is close to the business with strong links into the CIO office. Today CDOs lean more towards an operational orientation. In near future, they will have more of an external focus and a transformational orientation.
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