

# Leveraging Data as an Enterprise Asset

## Emergence of the Chief Data Officer



# Leveraging Data as an Enterprise Asset: Emergence of the Chief Data Officer

## Foreword



**Peter Aiken, President and Founder, Data Blueprint**

The challenges of data, how to leverage it and make good organizational decisions about it, are increasingly on the minds of executives. We also have copious amounts of evidence that increasingly complex technical environments are placing growing demands on current technology leadership. If we ask them to do more with data then something else must slip. The solution is a new professional – someone focused full time on data and equipped to understand today's data challenges and forge the new ground required to help organizations successfully apply their craft in cooperation with the existing organization IT infrastructure. Yes, the Chief Data Officer must operate outside of the exiting IT constraints in order to be successful.

IT correctly runs according to a project mentality but data is not a project and attempting to run it as one has lead to many, many implementation challenges. In fact, in 25 years of working IT project failures, I've never found one that didn't emanate from a data source. The disconnect between the business and IT over data is so vast that everyone recognizes the challenge.

So now we have the three key ingredients for organizational data success:

1. Establish a Chief Data Officer position that is dedicated solely to data asset leveraging
2. Unconstrained by an IT project mindset and
3. Reports directly to the business.

Only with this new paradigm will organizations truly be able to exploit a data advantage.

*Peter Aiken will chair Enterprise Data Leadership Summit, taking place on March 19-20, 2014 in Chicago.*

*Enterprise Data Leadership Summit 2014 will bring together innovative and data driven companies which are now recognizing the importance of the emerging Chief Data Officer role in leveraging data as an enterprise asset. Full details can be found at [www.datadrivenbiz.com/enterprise-data-leadership](http://www.datadrivenbiz.com/enterprise-data-leadership)*

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## Overview

Both survival and growth for a large number of organizations across multiple industries depends on the evolving and transformative nature of "Big Data Technologies" and more importantly, the need to leverage the massive volume of their data as an enterprise asset.

At the same time, the complexity of data cleanup and management, further multiplied by the significantly increasing data volumes, is a growing challenge at the C-Level.

While executives comprehend the vast advantages that data can bring in terms of cutting-edge business decisions, increased revenues and competitiveness in the marketplace, they also recognize that effective Data Governance (DG) plays a crucial role in gaining strategic insights from the data.

Past organizational DG paradigms have relied on Chief Information Officers (CIO) and IT for data development, modeling, design, acquisition, recovery, retention and all other matters relating to security and maintenance, but questions of analytics on which data matters and how it should be used remain inadequately addressed.

It is becoming increasingly clear that CEOs and other C-Suite peers need to address organizational and leadership issues around DG, leveraging, strategically implementing, and monetizing data on an enterprise level across all spectrums of the organization.

This is driving the growth of a relatively new C-Level leadership position, the Chief Data Officer (CDO). This position is charged with optimizing existing external and internal data and integrating it as strategic non-depleting assets across all organizational silos and departmental fiefdoms as the leading transformative tool it has become in the 21st century world of business and commerce.

This white paper addresses governing the data deluge and achieving multichannel organizational data consistency by reinventing information management and data quality frameworks.

Further it will explore the growth of the CDO at the C-Suite level and the use of analytics to mine data as a strategic and enterprise asset reporting to the business side, and to serve as a link between the business side and IT.

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## The Evolving role of Big Data as strategic enterprise assets

The 1990s saw a digital technology phase that transformed how information is gathered, processed, stored and disseminated. This ushered in a new global economy, setting many traditional business and commerce models on their collective heels.

A prime example of this is the music industry, which lost billions of dollars in revenue with the advent of entirely new distribution models driven by websites such as MySpace and Napster. Universal Music whose business roots go back to Decca Records in 1934, initially reacted defensively and filed lawsuits claiming copyright infringement.

But facing the existential challenge of the music industry, Universal joined the data game through the creation of a Digital Tool team which created a powerful data platform. This early version of a data-led platform spearheaded the company's leading market share resurgence through drawing on diverse data from online music services' streaming data, to social media and web sentiment analysis, to physical sales, to stars' concert and TV appearances, among other things.

Paul Gathercole, the Digital Team leader, stated in the Economist Intelligence Unit Report, The Data Directive, that Universal's openness to data changed the company dramatically and led to acknowledgement across company departments in becoming data driven. "Our data team now handles queries from all parts of the business, such as asking for a precise breakdown of how popular a given artist might be across various digital and analogue channels," said Mr Gathercole in the report.

The takeaway lesson from the recording industry is clear: organizations that do not invest heavily in turning data into strategic assets face extinction.

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## Data Deluge

Among the bigger challenges for organizations leveraging data as an enterprise asset and monetizing them is managing the increasing amounts of sources and speed in which data are collected and processed

Consider the widely cited fact that AT&T mobile traffic increased 8,000% between the years 2007-2010 or Eric Schmidt's often repeated comment that, "Every 2 days we create as much information as we did up to 2003." Some of the data deluge sources include:

- Social media data such as Facebook, Twitter, YouTube, blogs, etc.
- Machine generated data such as sensors, smart grid, RFID and network logs.
- Location-based information data such as GPS and mobile logins.
- Contact center data such as audio conversations, text chats and customer emails.
- Staff data such as internal emails, calendars and instant messaging.
- Open data released by governments.
- Syndicated data such as market report and weather data.



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## Regulatory Compliance

Data in heavily regulated organizations such as government, financial services, healthcare, insurance and energy is playing an increasingly larger role as an enterprise asset. The compliance challenge couples the sheer volume of data with a lack of consistent structure to deal with growing complexity of compliance regulations.

Until the era of data hit its stride, most compliance-critical enterprise data was stored in relational databases with highly structured formats. But with so much data coming from various sources, compliance policy must uniformly come to grips with enormous volumes of increasingly unstructured data.

The key to ensuring compliance in dealing with Big Data Techniques is to track down and isolate the compliance-sensitive portions of that data. As one IDC analyst is quoted as saying in a Wall Street & Technology story: "Big data solutions that support evolving business and regulatory requirements by maintaining an ecosystem of large data sets will become invaluable in months or years from now."

A text book example of the data deluge meeting compliance issues is a Midwestern power consortium whose database three years ago consisted mainly as a spreadsheet.

"All they had to do was to read the meter and then calculate. It wasn't complicated," said one data management consultant. "But now the State has required that regular meters be replaced with SMART readers, and SMART readers are now reporting data back to the power company, so now where they used to have one record per customer per month, the power company gets one record per customer every 15 minutes. Starting next year, the next generation of appliances are going to report their usage to the SMART reader. They are already overwhelmed because their data went up a hundredfold, when now it's going to go up 9000% when all your appliances start reporting back to the SMART reader."

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## Personal Data

While organizations in highly regulated industries grapple with the increasing need to leverage data as strategic enterprise assets, the emergence of personal data is what noted Europe Union politician, Meglena Kuneva calls “the new oil of the Internet and the new currency of the digital world.”

Organizations in sectors such as retail and leisure are increasingly finding that leveraging personal data related to spending and lifestyle habits is becoming crucial to remain competitive and to grow.

The use of personal data, however, is in itself creating a new wave of regulatory compliance issues now being legislated throughout the world regarding privacy rights. This in turn puts organizations under increasing pressure to better manage both the amounts of personal data they gather and its use. Singapore, for example, has already passed the Personal Data Protection Act in 2012 and the European Union is considering similar legislation.

## Marketing Data

Related to personal data is the use of data and analytics to drive brand recognition globally and locally both online and in brick-and-mortar outlets. Coming from such sources as transactions, call centers and social media activities, organizations are provided with a treasure trove of personal data that they leverage into new product ideas and new communications strategies.

With data evolving as the major strategic asset driving business, government and commerce, the way data is governed, managed and utilized is also evolving on an organizational level. This includes the changing roles on the C-Level suite.

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## Chief Information Officer (CIO)

Multiple internet dictionary sources define the CIO or Chief Technology Officer (CTO) as "A job title commonly given to the person in an enterprise responsible for the information technology and computer systems that support enterprise goals."

Typically, a CIO reports to the Chief Executive Officer or sits on the executive board and is involved with analyzing and reworking existing business processes, with identifying and developing the capability to use new tools, with reshaping the enterprise's physical infrastructure and network access.

However, with the advent of cloud analytics where one or more key element of data analytics is provided through a shared public or private cloud the traditional role of the CIO is rapidly changing in responsibilities and diminished role in financial allocations. According to a Getronics report, 77 percent of the CFOs and financial directors surveyed indicate they already have assumed greater responsibility for technology decisions over the past two years.

With the storage and security technology of data change there is a corresponding need for restructured data governance so the data can be better leveraged and mined as a non-depleting enterprise asset on the business side. That role is increasingly being filled with the relatively new Chief Data Officer title.



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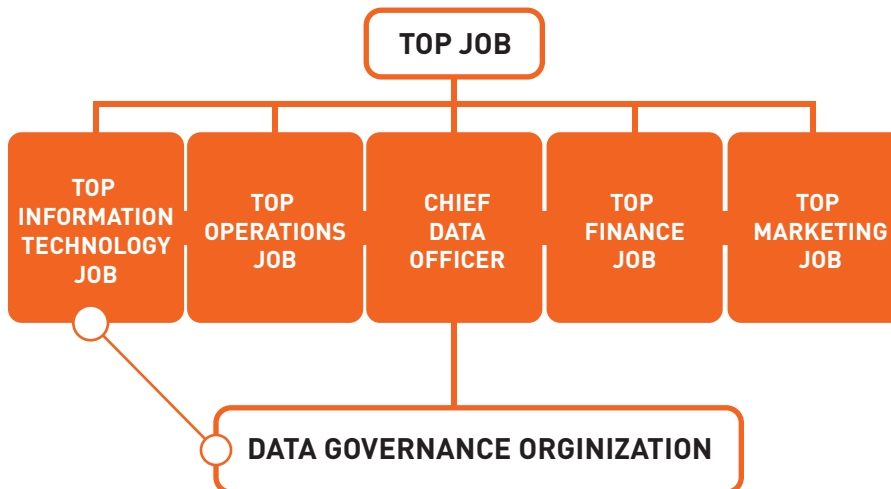
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## The CDO on the C-Level Suite

Data management experts continue to make a strong case for having the growing role of a Chief Data Officer (CDO) on the C-Level Suite to be responsible for Data Governance (DG) and for leveraging all organizational (both internal and external) data into strategic enterprise assets reporting to the business side. In turn, organizations have responded to the importance of the position in the quickly evolving world of data management and 70% of the current CDOs have been hired in the past year, according to 2013 survey research conducted by Data Blueprint.

In his book, *The Case for the Chief Data Officer: Recasting the C-Suite to leverage your most valuable Asset*, Peter Aiken, Ph.D., founding director of Data Blueprint starts with the premise that “Data are an organization’s sole, non-depletable, non-degrading, durable asset” and a CDO’s role is to be solely dedicated to leverage them as assets unconstrained by an IT project mindset, and reporting directly to the business.

Aiken further argues for a new division of labor in Data Governance in which the CDO is independent from IT. “Since IT is already overloaded and has its hands full with the technology ‘hows’ focus of the organization’s application systems, as well as all the other hardware, networks and system’s software it is appropriate that the CDO take ownership of defining the business ‘what’ focus,” he writes.



*Enterprise Information Management Experts: 30+ Chief Data Officers, Chief Data Scientists, EIM Directors/SVPs and other corporate-level executives will come together to offer their take on the importance of streamlining information management processes.*

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## Aiken's book states the CDO roles are three-fold:

- Making Data Management (DM) independent from business information system development
- Remaining data focused on culling data ROT (redundant, obsolete, & trivial) which reduces data volume and enriches data quality
- Improving the organizations DM maturity

"What remains, is the unique authoritative, and identifiable data and definitions desired by the organization – the master definitions – managed," he writes.

## CDO Competencies

Many organizations introduce a CDO role in an attempt to bridge the gap between IT and the business unit. To succeed, this person needs to possess a strong IT background, business expertise and outstanding people and communication skills.

According to research conducted by Data Driven Business, the following qualities and competencies are the backbones for the role of the CDO:

- **Strategic leadership.** With constantly developing Big Data technologies, a CDO needs to execute his/her strategic skills to set the course for organizational strategy development and required modifications.
- **Result driven mindset.** The CDO has to have the ability to easily adjust to the ever changing environment to ensure the strategy is on its right course and is meeting its targets of profitability.
- **Organizational relationship building.** A CDO must have the ability to master fully navigate internal politics within the organization. This includes straddling departmental lines from C-Suite all the way down to the front lines.

“ *What remains, is the unique authoritative, and identifiable data and definitions desired by the organization – the master definitions – managed.* ”

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## CDO case study in real time

Brian Baczyk, CFA, was hired as the CDO for Conning, an investment management firm, about a year-and-a-half ago after 19 years as a consultant in the investment industry doing everything from strategic reviews to operational audits to system implementation.

So the CEO asked him to put the consulting hat back on, take a hard look at the organizational infrastructure and make some recommendations as to where the company should go.

“So I essentially spent the first 3 months doing a deep dive into existing levels of data management and governance, organizational maturity, that sort of thing. The results were not surprising, though they still made some groups defensive.”

Baczyk listed the other priorities/challenges he faces as:

- The overall responsibility for market data spending, keeping that under control
- Working with IT on a replacement for a key market
- data provider that offered an opportunity to introduce data governance concepts (ownership, stewardship, metadata) to the organization.
- New product launches – understanding what the data requirements for them are
- Managing the data governance process in the light of DG committee spanning the organization.
- Efforts to replace existing infrastructure elements which involve understanding the data governance aspects, the capabilities of the system, etc.

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## Concluding Remarks

The C-Suite Level in every organizational sector is facing a deluge of data on everything from a rewards card at the local supermarket to the hottest stock commodity. Properly governed and mined, this data could be leveraged as an enterprise asset with strong revenue value in branding, marketing, sales, distribution and manufacturing to name a few benefits. At the same time data compliance issues are increasing not only for such highly regulated sectors as financial services, but also on personal data.

With this paradigm shift toward a data-driven world, organizational survival increasingly depends on the C-Suite becoming more agile in response to the ways data technology is changing how business and commerce is conducted and transacted.

Whether called a CDO or given another title, there is clearly a need in the C-Suite for an individual charged with leveraging data as an enterprise asset. He/she must combine a thorough knowledge of the latest data technologies with being an accomplished business savvy leader with excellent communication skills.

According to research conducted by Data Driven Business, successful CDOs possess strong skills in organizational relationship building and strategic leadership as well as having a result driven mindset. At the same time they recognize data governance and management, and working outside the constraints of IT is key to leveraging it into a non-depleting asset.

As much as Big Data technology can transform the way organizations compete and grow, its value still lies in effective Enterprise Information Management. Emergence of the CDO at the C-Suite Level plays an important role in this process.

The organizational call to action is loud and clear. Failure to leverage data into an enterprise asset could have dire consequences. However, successful implementation will mean continued growth and competitiveness for years to come.

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The industry experts interviewed in this report are speaking at the **Enterprise Data Leadership Summit in Chicago, March 19-20, 2014.**

They will be joined by 20+ speakers who will present on all aspects of Enterprise Information Management and the emergence of the Chief Data Officer role. More information and opportunities to reserve places at this landmark event are available at the conference website: [www.datadrivenbiz.com/enterprise-data-leadership](http://www.datadrivenbiz.com/enterprise-data-leadership)

Exclusive ticket offer: As you have downloaded this report, use discount code "REPORT" and receive an extra \$100 off the current listed price when you reserve your place at the conference through the event website [www.datadrivenbiz.com/enterprise-data-leadership](http://www.datadrivenbiz.com/enterprise-data-leadership)

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