Understanding Chief Digital Officers:
Paradoxical Protagonists of Digital Transformation

The Oxford Chief Digital Officer Report, created in partnership with General Assembly.

Dr Gillian Brooks
Dr Michael Smets
Professor Andrew Stephen

Saïd Business School, University of Oxford
23 October, 2018

Table of Contents

Executive Summary

We live in turbulent times. Now well into the Fourth Industrial Revolution, businesses today face many exciting new opportunities due to technology and the digitisation of almost all facets of daily life. The rapid pace of change and increasing complexity of technology, however, also pose many challenges. In response, the need to digitally transform businesses across all functions—from marketing to operations to finance to HR—has become a strategic necessity. Leaders from all types of organisations are looking for ways to leverage technology. They need to keep up with market expectations and find new sources of value and efficiency—but that is not all. More fundamentally, they need to secure the future of their organisations.

To address these opportunities and challenges, a new C-suite role has emerged in recent years: Chief Digital Officer (CDO). The CDO role is increasingly common in all kinds of organisations. Yet, by virtue of its newness, it is not well understood. What does a CDO do? Who are they? What value do they add? And, ultimately, what makes them successful? This report sheds light on these kinds of questions.

Academics at Saïd Business School, University of Oxford conducted over 40 in-depth interviews with CDOs from 13 countries and a wide range of sectors. The value of this approach is that through talking to CDOs and analysing their responses, we understand the role of the CDO—through the eyes of the CDO. The picture that emerges makes the role clearer, albeit no less challenging, as CDOs emerge as paradoxical protagonists of digital transformation

We find that the CDO role is beset by paradox. In order to succeed, CDOs continuously face—and manage–several: paradoxes, such as:

- They are the interface between the organisation and its environment to translate technological and market trends into new organisational capabilities. But discovering and exploiting these opportunities creates any number of internal challenges. Paradoxically that puts many exciting opportunities in the outside world and many challenges on the inside.

- They are charged with leading digital transformation, but find themselves leading profound changes that go well beyond technology and digitisation.

- They are expected to have specialist (often technical) knowledge and be effective generalists.

- Given the novelty of their role, there is no shared understanding of the responsibilities role they try to fill. In the extreme, they transform everyone, but belong nowhere.

- They have to be disruptors and catalysts for change, but must also build consensus and serve as cross-functional integrators.

- They have to drive important, far-reaching, and, ideally, long-term changes in their organisations but their role is transitional and—if successful—eventually obsolete.

Successful CDOs embrace the paradoxical nature of their roles and turn contradictory demands into complementary forces. They succeed by embracing complexity and the paradoxes in their roles that require them to be at the same time both externally and internally focused, paradigm-breaking disruptors and consensus-building integrators, and specialists and generalists.

Ultimately, CDOs are protagonists for the digital transformations that their organisations desperately need to be future-ready. Successful CDOs have learned how to grapple with the paradoxical nature of their roles, somehow turning contradictions into complements. Their lessons are helpful for all kinds of managers and business leaders who are trying to be future-focused and want to be positive forces for technology-enabled change in their organisations.

Foreword

In 1950, the average age of companies in the S&P 500 was 60 years. Today, it's 20. Digital forces have enabled entirely new businesses to grow and thrive at a speed that was unthinkable only a few years ago. What's more, this dynamic doesn't just apply to tech companies. Retail, consumer goods, professional services, and heavy industrials are all finding significant parts of their businesses altered by the proliferation of data, connected devices, mobile experiences, and more. To respond successfully, large companies need to make bold moves that will determine whether they will transform to meet their customers' fast-changing expectations, or cede market share to an energetic and nimble startup.

In our work of upskilling and reskilling large workforces to meet this challenge, we've found that large companies are making one bold move in particular: appointing a Chief Digital Officer (CDO). A unique role in the modern corporate era, the CDO is meant to bring together an astonishingly diverse range of responsibilities, from technology and marketing to supply chains and human resources. As opposed to creating a new function within the company, the CDO is inherently transitional — it's meant to infuse new ways of working, technology, and infrastructure into a company, and then fade away after enabling a more responsive and nimble approach to business.

Along with our partners at Saïd Business School, we are interested in understanding the role of the CDO as a forceful response to the rapidly evolving business landscape. The research team at SBS has conducted over 40 in-depth interviews across industries and around the world to understand the CDO's background, structure, work patterns, and goals.

I believe the insights in this report will be helpful not only to current and aspiring CDOs, but also to CEOs and boards that are considering whether to hire a CDO, and how to empower this exciting role to effect meaningful and sustainable change.

Jake Schwartz
CEO and Co-Founder
General Assembly

Introduction:
Welcome to the Digital-First World

The Chief Digital Officer role is a relatively new one. It emerged in the mid-2010s as a corporate response to the increasing realisation among chief executives that their organisations needed someone to craft their digital transformation strategies and then oversee their execution. Organisations decided that they needed "Digitisation Czars" with a perspective that was broader than, for instance, the traditional remits of established leadership roles such as Chief Information Officers and Chief Technology Officers. CDOs, in contrast to their CIO and CTO colleagues, are meant to take an organisation-level approach to digital transformation. Everything is up for being digitised, from marketing to operations to finance to HR, and CDOs are expected to take up the digitisation challenge.

Google Search Interest Over Time
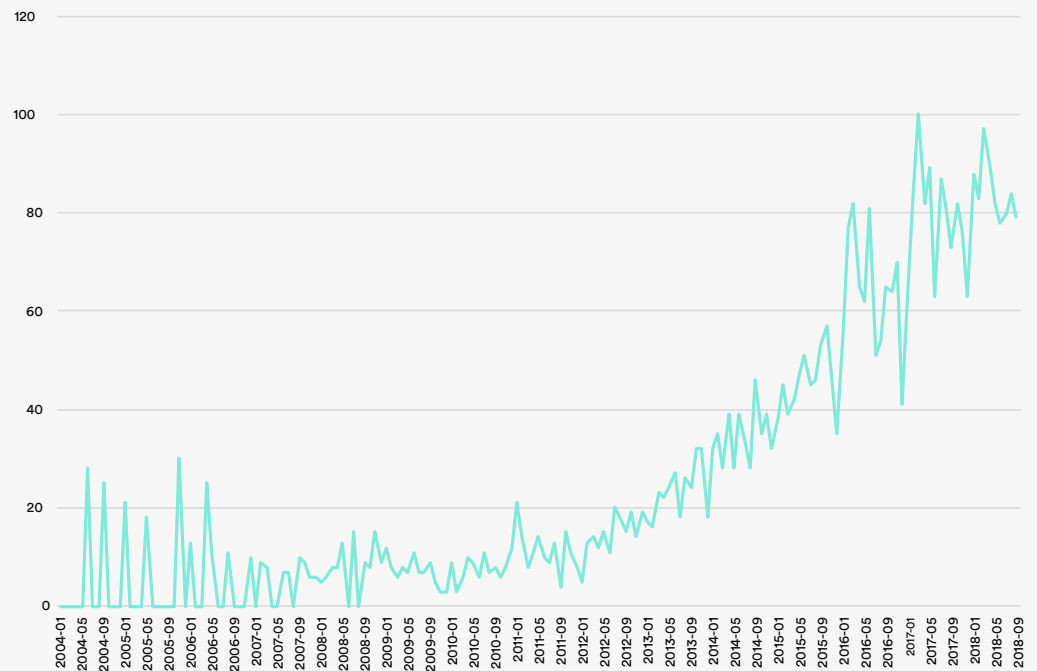
A novel yet potentially far-reaching executive position such as the CDO is destined to be inherently challenging, but also incredibly rewarding. Digitisation, advances in technology, and—more generally—the Fourth Industrial Revolution present exciting opportunities. CDOs can be positive forces for change and innovation. They can lead their organisations towards finding new technology-enabled sources of value and growth, using data and technology to forge closer and more valuable customer relationships, and applying advanced technologies such as artificial intelligence to solve problems and generate new levels of efficiency.

Has this potential been realised? In fact, what does the CDO role look like in practice? Although it has become increasingly common for organisations of all types and sizes to have CDOs, it is not a well understood role. What do they do and what kinds of

Research Methodology

BACKGROUND
Gender

24.39%

75.61%

● Male
● Female
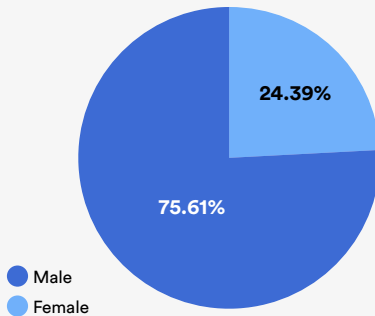
General Assembly and Oxford Saïd conducted in-depth interviews with 41 Chief Digital Officers. Trained interviewers spoke to CDOs via phone or videoconference and interviews on average lasted about 50 minutes. Questions were open-ended and invited respondents to discuss their experiences as a CDO, their backgrounds, what they thought about the CDO role, and how to determine success in the role. Interviews were recorded with respondent permission, transcribed verbatim, and then analysed by the Oxford Saïd researchers to uncover the key themes and points of view detailed in this report. Respondents are anonymous.

professionals become CDOs? What are the challenges and opportunities of their roles and how do they add value to their organisations? What makes them ultimately successful? These are the kinds of questions addressed in this report.

We addressed these questions through a research collaboration between the Future of Marketing Initiative at Saïd Business School, University of Oxford and General Assembly. We interviewed 41 CDOs from 13 countries and across a range of sectors to understand what the role of the CDO is really like—through the eyes of leading CDOs. As the protagonists of digital transformation, it turns out that CDOs have much to teach all managers and leaders active in this field. This report shares what we have learnt from these leading CDOs so that all future-oriented professionals, regardless of their role or type of organisation or sector, can be positive forces for technology-related transformation in their organisations.

To summarise what follows, we find that CDOs are best characterised as *paradoxical protagonists* charged with driving digital transformation in their organisations. They often face monumental expectations, institutional inertia and other seemingly insurmountable challenges, yet they manage to break through inertia and instigate valuable changes. To do so, we find, they have to be much more than technology-focused executives and instead adopt a broader view. Less obviously though, digital transformation reaches into all areas of the organisation. CDOs, therefore, are not technologists limited to digital matters, but rather become Chief *Disruption* Officers. They succeed by embracing complexity and the paradoxes in their roles that require them to be at the same time both externally and internally focused, paradigm-breaking disruptors and consensus-building integrators, and specialists and generalists. Interestingly, we also find that often a successful CDO is one who does themselves out of a job; ultimate success means making the role obsolete.

Backgrounds and Bosses

BACKGROUND
Internal or external hire into the CDO role

- External
- Internal

34.21%

65.79%
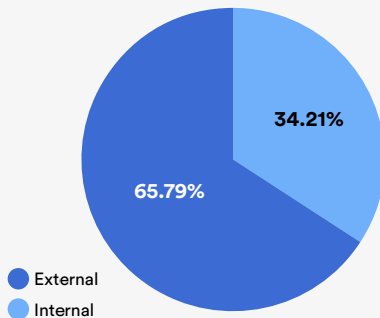
Hiring from the outside is the norm. 66% of our CDOs were hired from outside their current employer. Bringing fresh perspectives and external expertise is important, which makes sense if they are to have a transformative impact on the business.

A State of Semantics:
Jargon, Buzzwords & Unnecessary Complexity

With any technological development, new words and concepts emerge. The digital environment is no different: CDOs spoke of the acronyms and buzzwords of "tech-speak", in which the younger members of their teams, "digital natives" who grew up with the internet, are fluent. As one CDO put it, "the biggest risk to a company is going for the buzzwords".

This is potentially problematic because of the desired organisational impact of digital teams, i.e. the CDO's direct reports. Traditional IT departments also use jargon and technical language, but they often tend to be more separate from the rest of the organisation. People in other departments do not feel the need to understand what IT engineers are saying; they are concerned only with whether systems work or not. However, when organisations are aiming for a digital transformation, by definition people throughout the organisation will be involved at a fundamental level. There is often some anxiety about the need for everyone to understand the changes and to keep up with the latest terminology. As one CDO put it, "Some of the language or the lexicon that comes with digital teams feels quite foreign to organisations".

There is also a generational divide. The CDOs who spoke to us are typically younger than their CEOs, but older than the digital natives in their own teams. "This is the first time in my life that the people who report to me are all younger than me," explained one interviewee. These younger team members can speak the digital language required for the role, but need to be guided by the managerial expertise, organisational insight and strategic acumen of the CDO.

"I have come into an environment which is full of acronyms and jargon and the latest buzzwords, which are mostly ill-defined, not understood and create barriers for understanding".

Conversely, having to translate the language of their teams to the rest of the organisation contributes to the challenge of building credibility in the CDO role. If the language of digital teams is not well understood, it is likely that their value is not clear either: "In any type of change role, you face an immense amount of scepticism. Most of the peers that I talk to struggle the most with clearly quantifying the value that they add, and that seems to be biggest pain point that they get at the Board level". In many cases, therefore, part of the job of a CDO is literally that of translator—they explain business to their teams and digital language to the CEO and other colleagues.

Backgrounds and Bosses

BACKGROUND
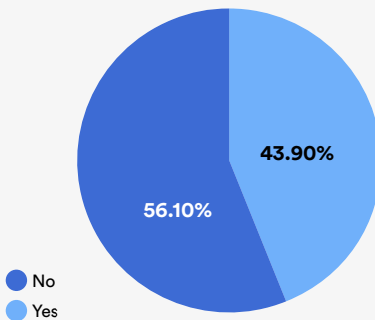**Business or management degree**

31.71%

68.29%

● Yes
● No
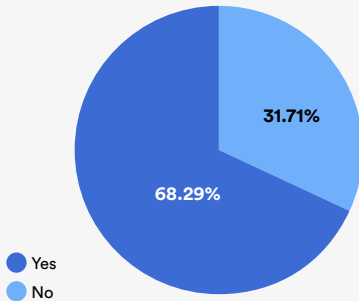
BACKGROUND
Technology or technical degree

43.90%

56.10%

● No
● Yes

Having a business education is common, but a technical or technology-focused education less so. Over two-thirds—68%—of our CDOs had some form of business degree in their prior education, often an MBA. Comparatively fewer (56%) had an education that involved a technical or technology-related degree such as engineering. Having both was not entirely uncommon, though: 29% had both business and tech in their education backgrounds. This seems consistent with the view that successful CDOs are not necessarily technical experts, but rather are well-versed in how to lead, grow, and transform businesses.

Professional Jurisdictions:
Filling a Role that is Still Taking Shape

Unlike other C-suite positions, the role of the CDO is undefined and subject to a range of different, and sometimes conflicting, expectations. As one CDO explains: "The CDO is not the CFO, or the COO, or the CIO, which are consolidated functions and therefore everyone has a shared, more-or-less shared, understanding or common ground on their roles. The CDO does not have the same role".

Indeed, the CDO often grows into the position while the position itself is still taking shape, and interviewees suggest that they are constantly navigating uncharted waters without a working compass, "feel[ing] their way through the job". As such, the typical CDO seems to adopt a number of different personas in their roles. These are described in Table 1.
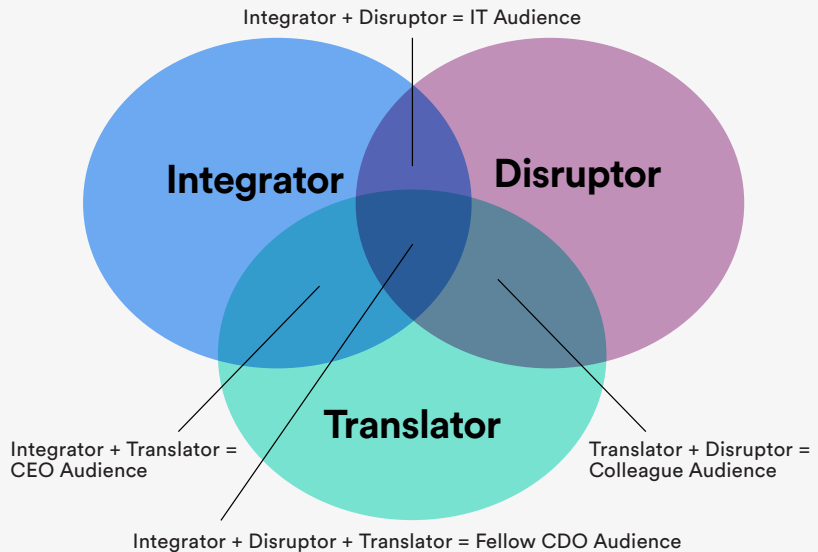
Table 1. CDO Personas

PERSONA	DESCRIPTION
Translator	An individual with exceptional communication skills who translates across languages of technological capabilities and organisational needs.
Integrator	A consummate diplomat that bridges company demands with achievable goals—industry trends into actionable items.
Disruptor	An individual who challenges the status quo in order to provide effective digital transformation.

CDOs who are uncomfortable with their undefined role will face an uphill battle within the organisation, as they will be focused on defending their role as opposed to accomplishing what they set out to do. "It's hard internally to get buy-in and support. This is the hardest thing for a CDO to do because if you've just come in to challenge and disrupt, inevitably you're going to piss people off. It doesn't matter how brilliant a change management agent you are, or how articulate or how ready the organisation is, people resist change".

Our analysis reveals that CDOs think of themselves as presenting different aspects of their role—the different personas described in Table 1—to different audiences or stakeholders including the CEO, the IT department, and the rest of the organisation. Examples of this are shown in Figure 1. For instance, to the CEO, the CDO is an Integrator and Translator; to IT she or he appears as a combination of Integrator and Disruptor; while to the rest of the organisation the CDO acts as Translator and Disruptor. This can be difficult. However, to succeed it seems to be important to find ways to interweave seemingly otherwise different personas. As one CDO said: "The CDO is in a tough position and you're forced to take on multiple hats—some being very business-related, some being very culturally-related, and I think often times, they're very intertwined".

Figure 1. CDO Personas and Corresponding Audiences

Integrator + Disruptor = IT Audience

Integrator

Disruptor

Translator

Integrator + Translator =
CEO Audience

Translator + Disruptor =
Colleague Audience

Integrator + Disruptor + Translator = Fellow CDO Audience

Although we did not prompt these ideas with an interview question, CDOs detailed the different audiences they face in their job (see Figure 1)—and the respective personas they may have to adopt (translator, integrator and disruptor; see Table 1). When a CDO needs to address the CEO audience, they adopt the roles of an *integrator* and *translator*, bridging their expertise of digital trends and how they can be implemented alongside the technological capabilities and organisational needs of the company. This is represented in the grey area of Figure 1. In addressing the IT department, the CDO retains their *integrator* role, but adds that of *disruptor* to the mix, challenging existing practices within the organisation in order to implement new digital initiatives. Finally, in addressing colleagues within the company, the CDO continues to question the status-quo as a *disruptor*, but must do so by educating—as a *translator*—his or her colleagues on digital transformation opportunities.

"The biggest challenge is fighting the label that you're the tech guy. For me to fix the conference room projector, you know, you're paying [me] a thousand dollars an hour to do that sort of stuff".

Regardless of the audience and personas that are prominent at any given time, what we see across the board is that CDOs must be expert multi-taskers. They also need to be strategic, no matter what they are doing and who they are working with, and focus on people ahead of technology. As one CDO put it: "you have to be strategic with what digital is disrupting; it is more a people transformation than a technological one". The focus on general strategy and people-management aspects over technical considerations seems to be critical. One CDO went so far as to say that if he were hiring a CDO, he "wouldn't put a CDO in if [he] didn't have the power to steer the company and the strategy of the company". This was a recurring theme in our interviews.
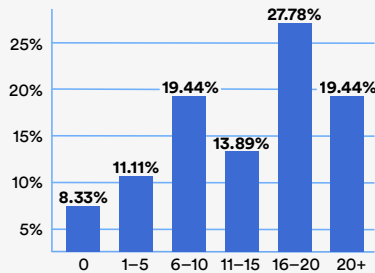
Also, this multifaceted and somewhat amorphous nature of the CDO role is related to the fact that while there is a general pathway to the position, in terms of a MBA being

Backgrounds and Bosses

BACKGROUND
Number of years in a "digital" role prior to the current role

The level of experience in digital roles varies widely. The vast majority (81%) of our CDOs reported at least six years' digital experience prior to their current role. However, overall the answers ranged from none to more than 20 years. The median response was in the 11–15 years range, with the most common response (28%) in the 16–20 years range. The number of years of experience in digital roles is important in this job, and it appears that it does skew towards the 10+ years end of the scale. It seems essential that CDOs have worked through some transformations or "generational shifts" with digitisation earlier in their careers to gain some experience. However, a long history of digital roles may not be necessary for this given how quickly technologies can advance. Sufficient first-hand experience therefore may be attainable even in a relatively short period of time such as 5–10 years.

a common denominator amongst our interviewees, there is no detailed sense of which types of expertise might be needed. The CDOs we interviewed came to the role from a variety of backgrounds, with some having no experience at all in the digital field and others claiming over 30 years of "digital experience". Some had strong technical skills derived from a background in IT, while others took on the role armed with an MBA and previous experience in management consulting. As one interviewee states, "the beauty of the CDO skill set is that we are change champions; we continue to evolve".

Even for those individuals who relish the idea of continuous evolution, this can create challenges, not least because of others' expectations. As one CDO explained, "I think that there's always going to be a natural tension that exists between a CDO-type role in a technology organisation, and it's not that the CDO has to control technology, they just have to be willing to partner together for it to be successful". In most organisations, progress to the top comes through developing technical expertise in one of a number of 'vertical' functions, such as finance or marketing. This expertise gives individuals credibility within their own function and also with their peers in other parts of the organisation. Our CDOs, however, were split on the importance of technical knowledge for their role. One, for example, said, "From a technical skills perspective, it's good to have actually done it, so to be a maker versus a manager", while at the other end of the scale we heard, "This position needs to be a very executive position. It cannot be a theoretical position; it needs to be a business guy with demonstrated ability to shape the organisation and to implement and deliver results".

So where exactly does the CDO fit in, especially one whose professional background might not make them an obvious choice for the role, and who may not even have any of their own digital expertise, but relies on marshalling the knowledge of a team of younger digital natives?

An Imposter in the C-Suite?
Building Confidence and Credibility in the Role

The ambiguity surrounding the role and the qualifications necessary to hold it can undermine the confidence of the CDO. Some of our interviewees described feelings that may be associated with Imposter Syndrome. As one CDO stated, "I'm not an expert in anything, I'm just a guy who sifts out stuff along the way". Another added: "As a CDO, I am a warrior and I suffer from anxiety".

Certainly, many are aware of the need to actively establish credibility within the organisation. One explained, "The challenge for the majority of CDOs is actually being able to generate the credibility within the company and to have the power to influence within the company, to actually be a key figure in fostering this new culture". Another echoed this sentiment: "I can't just leap straight into [the role], because although I've made my opinions known and there's groundwork to do, there's trust to be built, and credibility to be built as well; I see that as a journey".

This notion of "a journey" appeared in numerous interviews as the CDOs viewed their position as having a beginning, a middle, and an end. "Every CDO role has to be an interim role," explained one interviewee, "in the sense that the best CDOs are the ones who make themselves redundant over the course of 2-3 years". Another said, "The goal is to stop needing a CDO; we're not going to talk about digital in a few years. It will be the normal operating model".

The inherent uncertainty of the CDO role, especially when compared with other C-suite positions, is why so many of our interviewees talked in terms of claiming their seat at the table. As one CDO explained, "They [the company] expect[s] you to be the teacher, but actually you become the parent, they become the child. And it shouldn't be any of those, it should be peer-to-peer, which is to understand that I bring a different perspective, skills and capabilities that they need to adopt and I need to understand their expectations".

"I'm not sure I'm the right person for this role… I am the Chief Doubt Officer".

Personally tasked with defending their position and professionally mandated to address the expectations of the CEO, it can take a special kind of person to succeed as CDO. They must be a protagonist—a powerful advocate for digital transformation—yet comfortable with ambiguity and uncertainty. As one interviewee explained, "There are best practices and there are themes and concepts which we know to be true and we know can drive value, but they're just ingredients. What we're trying to do is work out the recipe and be a master baker and teach people how to bake at the same time".

In order to build credibility and act as a translator, especially with limited or no formal technical expertise, they need exceptional communication skills. To be an integrator they must be the consummate diplomat, but at the same time be able to challenge existing roles and structures as a disruptor. They must maintain the external perspective of a change agent while occupying a senior internal role, albeit one that is often without clear authority. As an interviewee explained, "you are at the crossroad of everything that has been done before and what you think is coming. It is a tough position to be in".

Backgrounds and Bosses

BACKGROUND
Reports to CEO or President or Chairman

42.11%

57.89%

● Yes
● No

… where No includes CFO, COO, CMO, CSO (for example)
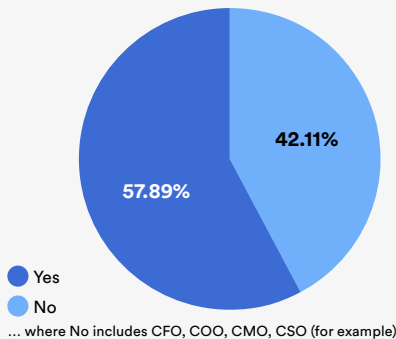
CEOs don't always have direct oversight of their CDOs. Of our CDOs, 58% reported directly to their organisation's CEO (or President or Chairman). The remaining 42% reported to someone else in the executive leadership team, although who that was varied a lot, from other members of the C-suite (e.g., CFO, CMO, COO) to business unit or divisional heads. We saw that as the number of years of experience in digital or tech-related roles increased, the likelihood of directly reporting to the CEO also seemed to increase.

The CEO: Friend or Foe?

How CEOs Help and Hinder the CDO's Voice and Vision

Over half of the CDOs in our sample report directly to the CEOs of their organisations. Normally, this direct reporting line signals status and direct accountability. For CDOs it is not quite that simple. We heard a wide range of views on how CDOs relate to their CEOs and other C-suite members more generally. Most notably, for many, the CEO is not just the pinnacle of their reporting line, but actively involved in their success—or failure. Simply put, the success and failure of a CDO largely hinges on whether the CEO is "on board" with going digital. If they are, great; if not, then nothing gets done. This situation is not uncommon, but our interviewees suggest that whether the CEO is their "friend" or "foe" may have a bigger impact on CDOs than on other C-suite members. Hence, alignment is ever more critical.

CDOs are adamant that "the role of the CDO is really a transformation change management role. It's about business impact, it's not about technology". To successfully move "digital" out of the technology corner and centrally into the core of the business, CEO support is crucial. As one CDO stated, "The most important role [for the CDO] is leadership and more specifically, change leadership. This is of utmost importance in the role".

Digital transformation often means a profound change. It is tantamount to a root canal treatment, as it really touches a nerve. It disrupts established processes, structures and cultures. As none of these disruptions is obviously encapsulated in the term "digital", organisations may be overwhelmed when the pain kicks in and underestimate what it takes. In the words of our CDOs, this makes digital transformation "one of the toughest jobs going, because people have these massively high expectations of what you can achieve in no time with their money". Crucially, they point out, they are often asked to uproot their organisation's foundations "without really a mandate".

The absence of a clear mandate to transform any structures—digital or not— plunges CDOs into a *credibility crisis*: "The challenge for the majority of the CDOs is actually being able to generate the credibility within the company and to have the power to influence within the company to actually be a key figure in fostering this new culture [of digital change]". To overcome this crisis, CEOs must inject the credibility that CDOs feel they lack by visibly and vocally getting behind the digital transformation initiative, or culture.

While CEO support is important for any sort of transformative change, CDOs seem particularly dependent on it. This is because the extent of their mandate is often unclear and evolving—and so is their role (see previous section). In effect, both the extent of their project aspirations and the basis of their authority are under-specified. As a result, CDOs lack organisational clarity on both their starting-point and their destination. In many CDOs' eyes, this differentiates them from their C-suite peers. As one CDO put it, "we don't have the same professional history [as a CEO], and so consequently leaders don't know how to deal with us". In a way, it sounds as if there is more clarity on what

the CDO is not, than on what he or she is. In the absence of a clear turf or home base, it is incumbent on the CEO to provide a powerful anchor for the authority and ambition of the CDO. This is especially important as the lack of clear alignment with other functions makes it more difficult for CDOs to mobilise their support. Even if they could, however, such support would be partial. Sure, COO support could accelerate operational transformations, but it may prove less effective in accomplishing cultural change. If digital transformation is the kind of all-encompassing disruption that CDOs present it as, then effective support would encompass the entire C-suite. Of course, the logical leverage point to mobilise a C-suite is the CEO.

"The CDO should influence the CEO; the CEO is the number-one stakeholder".

Let's also not forget that while the majority of CDOs are formally part of the C-suite or even the board, a sizeable number of them are not. In those positions, challenges of credibility and clear organisational mandates are exacerbated yet again. However, new challenges also arise. As one CEO summarised, being part of the C-suite may not only clarify "accountability, responsibility and commitment", but also enable "a different conversation with some of the legacy thinkers and the kind of laggards and others". This quote encapsulates how tables turn from "friend" to "foe". Paradoxically, C-suite peers, board members and CEOs are not only key enablers of the transformation, but also potentially key blockers. They are both subject and object, fellow disrupters—or disrupted! This dual role is not easy to play. Yet again, the power to tip the scales one way or another rests with the CEO.

Consequently, CDOs report high levels of frustration when they cannot have the necessary kinds of conversations with "laggards" on the board, but even higher ones when faced with a "legacy" CEO who has not yet fully embraced the need for digital transformation: "You need a CEO that gets it because it's hard. If they don't get it, then coming bottom up is really tough."

The CCO:
The Chief Contradiction Officer

In addition to the ambiguity and uncertainty associated with the CDO's organisational role and relationships, our study revealed that actually doing the job entailed managing or absorbing a range of contradictions and tensions:

Fundamental Impact vs. Transient Role
Our CDOs described digital transformation as having a fundamental and long-lasting impact on the organization. As one CDO explained: "In every decision I make, I ask myself: 'Is this going to change my business in the next 10 years?' If the answer is 'no', then I don't do it". However, they described the role itself as transient: the definition of success is that they make themselves redundant. According to one CDO: "the end game of the CDO is to disappear. This role isn't supposed to last forever". Paradoxically, then, the more successful the CDO and the more fundamental his or her impact, the more transient their role.

Digital Title vs. Change Leadership Responsibilities
To be successful in the role, the CDO needs to look beyond the boundaries of the company and beyond the boundaries of the industry; the focus of the position is not on technology, but change leadership. As one CDO stated, "the role of a CDO is really a transformation change management role, it's about business impact, it's not about technology. Technology is an enabler and needs to be part of it, but it's really about people and process and change and culture". While technology was the reason the CDO role was created, it is paradoxically the least important skill required in order to succeed in the job.

Gradual Evolution vs. Fast Change
Fundamental change within organisations is best experienced as a bottom-up, gradual evolution. But for the individuals tasked with overseeing a digital transformation, speed is of the utmost importance. The pace of change envisaged by the CDO is at odds with its actual delivery: "The biggest pressure is the desired speed. It's all about speed… Nearly every week a new thing comes up and to drive it, not only to a new topic to talk about but to actually bring it to a successful end very fast, this is the time pressure, this is the biggest issue". To succeed, therefore, the CDO must drive the business transformation fast while enabling the rest of the organisation to perceive itself as evolving gradually.

Insider vs. Outsider
Related to this challenge of working with different temporal expectations, CDOs also find themselves having to adopt two quite different perspectives on the organisation: they must be able to act as both insider and outsider. Transformational change can only really be achieved by working with the organisation as an insider, and yet CDOs need also to maintain their external, 'outsider' perspective in order both to recognise the forces necessitating change and to identify technological solutions as they emerge. As one CDO stated, "The problem for the CDO is that they are expected to know the future. So their role is to adapt their vision because the world is changing every day and it's very complex to know the evolution of the business and the evolution of the future". Paradoxically, they are in a better position to champion radical change as a relative outsider, but are less able to achieve it; while the more they build credibility and power as an insider, the more likely they are also to absorb the inertia of the organisation.

Changing the Wheel vs. Keeping the Car Running

An extension of the insider/outsider contradiction is the tension between achieving the practical objectives of the job while at the same time being open to new possibilities created by developments in the external environment. "Being in one of these roles, you're so focused and heads-down on trying to get things done within the organisation," explained one interviewee. "It's important to keep learning even if you're not able to execute things yet within your role within the company, just stay connected to what's happening outside". CDOs cannot see themselves as either competent project managers or strategic visionaries, therefore: they must always be both.

> *"It's my job to enable, to facilitate, to shine a light on your issues, to give you some alternative, but at the end of the day, I am not running the business. I can't make the decisions for you otherwise I'd be running your business".*

External Pressure vs. Internal Apathy

Digital transformation is usually positioned as a necessary response to external pressure. Customers expect it; competitors are feared to be stealing a march; and digital companies are innovating so fast that other organisations worry they will be left behind. However, despite being sought out and hired to turn an analogue organisation digital, many of the CDOs we spoke to do not feel they have internal support. This means that they are spending at least as much effort on achieving internal "buy-in" as on the transformation itself: "Chief Digital Officers, or anyone in a transformation-type role, you spend so much of your time trying to show people that there's a different way and battling, that sometimes you have to say to yourself: 'Actually, I am not going to win', and that's exhausting in its own right". As another interviewee added, "Expectation management is hard". CDOs can feel that they have been hired to do a job that they are then not allowed to do.

Technical Tinkerer vs. Doomsday Warrior

Part of the challenge for CDOs is managing contradictory expectations and dealing with a "misconception of what it is that we're trying to accomplish with digital pieces". One interviewee said that internal employees minimised the role and the work required: "It's very easy to jump to a conclusion that we're talking about making some Facebook pages for the company".

In contrast, some external influences make the job of the CDO difficult by exaggerating the pressure to change. Specifically, one CDO commented that oftentimes when a consulting firm is brought in to help with the digital transformation, they provide an initial disruption to the status quo without taking into account the embedded culture that exists at the company:"The consulting industry is one of the most detrimental industries when it comes to digitalisation of industry overall because they pick on any buzzwords and try to strike the fear of God in any large company that they're going to be disrupted immediately".

Managing these clashing perceptions of what they are there to do requires the CDO to have a strong inner conviction of the value they add and the diplomatic skills to build credibility with all audiences and support for what they stand for.

Overwhelmed vs. Excited

Given the need to manage these contradictions and opposing pressures, it is hardly surprising that CDOs expressed conflicting feelings about their role. Many said that they often felt overwhelmed by the pressure to perform the transformation: "My responsibilities are to set-up, to share and to drive a transformation plan about digital transformation, which is everything, the whole scope of the business". However, they were excited and energised by the potential of digitisation, and by the constant innovation in the wdigital sphere: "As a CDO, you are a trend detective in terms of what's happening around us: AI, machine learning, Big Data, it's an exciting thing to be a part of".

Conclusion:
What Can We All Learn From CDOs?

Our research, which is the first academic study we are aware of that has sought to understand the CDO role in detail, has shown that CDOs have a challenging, complex job. Fundamentally, we see them as change agents with an expansive and arguably impossible remit. The challenges they face come from the ambiguity and uncertainty associated with the role given its relative newness. But it is the set of paradoxes they face that, we believe, make it an especially complex role.

Despite this, the vast majority of the CDOs interviewed for this study have flourished and are successful. They have managed the paradoxes and driven digital transformation initiatives forward in their organisations. This is impressive, and suggests that all professionals—managers, aspiring leaders, and current leaders who are not CDOs— can learn from our CDO colleagues. In our view, there are five key lessons from CDOs on how to achieve effective transformative organisational change despite paradoxes, ambiguity, and complexity.

- **Simplify by turning contradictions into complements.** CDOs managed the paradoxes by finding ways to make seemingly incongruent, contradictory elements of their roles fit together. This is a complexity-reduction strategy that can work well. In essence, the more challenging, complex, and confusing an environment, the greater the need for simplification. This is what CDOs have been doing.

- **Wear different hats to relate to different audiences.** CDOs have to switch between integrator, translator, and disrupter personas—and also combine them sometimes—in order to be effective with different audiences inside and outside their organisations. Figuring out which to adopt and when is key to success as it is needed for trying to get people on board with your plans. This can be an effective approach in other change- or transformation-related situations.

- **Make sure your boss—and your boss's boss—"get it."** The relationship between CDOs and their bosses, often CEOs, was found to be sometimes good, sometimes bad. When it worked well, it seemed that CDOs managed up by ensuring that CEOs and other senior executives understood what the transformations were all about. This requires effort on the part of the CDO, but it pays off. When dealing with transformation, particularly involving technology, this is an important lesson for all of us.

- **Never allow jargon and technical aspects get in the way.** CDOs reported facing a lot of jargon and technical information. To succeed, they had to find ways to cut through this. This then allowed them to communicate more effectively with broader sets of audiences in their organisations, which is essential for driving a comprehensive transformation agenda. Playing "buzzword bingo" and throwing jargon around is a distraction, which successful CDOs have sought to avoid.

- **Be a protagonist for something.** The final lesson we can all learn from CDOs is that they are successful when they stand for something. Even when that something is inherently nebulous—"digital" can be a lot of things—they articulated a point of view and took a stand, then rallied the troops and led the charge. This is what protagonists do, and it requires a strong sense of purpose and belief in what one is doing. But to enact transformative change, it must be clear to everyone what your point of view is and the direction in which you are heading.

About

The Saïd Business School at the University of Oxford was founded in 1996, thanks to a generous donation from businessman and philanthropist, Wafic Saïd. Since then it has evolved to be one of the elite business schools of the world, embedded in the world's top University, and aspiring to be a model of purposeful leadership. The school has a well-deserved reputation for excellence in a number of areas, including marketing, finance, entrepreneurship, innovation, major programme management, tax, and more.

The Oxford Future of Marketing Initiative at the Saïd Business School is led by Professor Andrew Stephen and is a collaboration between Oxford academics and industry-leading organisations that aims to inform the future of marketing. This is done through rigorous research that is grounded in real-world questions from the business world. Industry partners include General Assembly, as well as Allianz, Facebook, Kantar, L'Oréal, Nucleus Marketing Solutions, PwC, and Teradata.

General Assembly is a global leader in career transformation. Since launching in 2011, GA has empowered over 60,000 full- and part-time graduates to pursue the work they love in the high-demand fields of software engineering, digital marketing, user experience design, data science, and product management. In addition, General Assembly serves hundreds of companies around the world, including more than 40 of the Fortune 100, including BNP Paribas, GE, L'Oreal, Walmart, and more to upskill and reskill their talent for the digital age. To learn more, visit ga.co.