# The journey to CDO

## How to succeed in the most influential role of the decade

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# The CDO has arrived, and expectations are sky-high

Hailed as one of the hottest leadership jobs of 2021, the chief data officer (CDO) is now in high demand. In fact, the role's a permanent fixture in 65% of companies — that's a remarkable improvement on the 12% of companies where CDOs had a home in 2012.

The reason for this upsurge is clear: at a time when data-driven companies consistently outperform their peers, strong data leadership can make the difference between success and failure.

Those CDOs that get it right will do more than simply take the lead on data governance and compliance. They will define an organization's data-driven objectives and then translate them into business results through effective communication. Ultimately, they will use data as a strategic asset.

**But carving out a successful position isn't always easy.**

According to M&A Executive Search  the average tenure of a CDO is noticeably brief — shorter than all other C-suite roles.

While this is partly due to the fact that the best CDOs are being headhunted by coveted companies with increasingly attractive perks, it also suggests there are teething problems with the role.

It's a theory proven by MIT Sloan research, which finds that the CDO role is well established in just 30% of organizations.

## 30%
*of organizations have a well established CDO role*

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## How can you make a success of your journey to CDO?

At Exasol, we commissioned research from Vitreous World to investigate the reality of this situation. We surveyed 250 active CDOs from across the UK, the US and Germany to uncover their journey — exploring their education, skill sets and the experiences that have helped them get to where they are today, as well as the challenges and barriers they've faced along the way.

With help from Savannah Group, a global executive search firm specializing in functional C-suite appointments, we qualified this survey data with in-depth interviews. We spoke with established CDOs and some of the next cohort of CDOs from the Carruthers and Jackson CDO Summer School run by Exasol's Chief Data and Analytics Officer, Peter Jackson, alongside data expert Caroline Carruthers.

We made some eye-opening discoveries about what needs to change in order for today's aspiring CDOs to prosper. For example, 60% of the executives we spoke to agree there is a lack of support for people looking to move into the role; and 63% say that the education system isn't doing enough to show the appeal of a data career to the next generation.

## 60%
*of CDOs agree there is a lack of support for people looking to move into the role*

## 63%
*say that the education system isn't doing enough to show the appeal of a data career to the next generation*

**We also uncovered the must-have traits for a CDO that are often overlooked. If you want to discover what they are, and find out what you can do to ensure your journey to CDO is a successful one, read on.**

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# Why are CDOs in such high demand?

## 58%

*Data-centric businesses are 58% more likely to exceed revenue goals according to a recent report*

Recognizing this, organizations around the world realize that they need to put data at the center of their vision and strategy. And they need someone to take the lead on this.

### Enter the CDO.

*"Business requirements have evolved over recent years, and more data and analytics are needed. Data quality is fundamental: if you put garbage in, you get garbage out. There is a growing appreciation that you need accountability to bring thousands of employees in different departments together — and you need a person/team responsible for data quality. Data needs to be easy for people to access, action and get value from."*

Tony Zona | CDO Summer School participant and Director - Business Intelligence at Grant Thornton UK LLP.

The CDOs that get it right can deliver impressive results. Research from Gartner[1] states "CDOs who have business-facing KPIs and multiple business partners are 1.7 times more likely to be effective at consistently producing clear business value by successfully demonstrating ROI from the D&A investments. They are also 2.3 times more likely to be effective at reducing time to market and 3.5 times more likely to be effective at data monetization."

## Hiring hurdles

It's not always easy for companies to find the right candidates though. According to recent research, almost half of businesses (46%) have struggled to hire for roles that require data skills.

Our survey uncovered several reasons for this. 63% of the CDOs we spoke to agree that the education system isn't doing enough to show the appeal of a data career to the next generation. This is something we explored in our recent D/NATIVES report, which found that, while four out of five (78%) respondents believe data is important in education and work, just 52% feel their education has given them the confidence and skills to use data.

Another issue stems from the fact that the CDO is still an emerging role and, as such, is not clearly defined.

*"I've seen job ads that are asking for so much that you're left uncertain about what they want or need from the role. There's often a broad bucket of requirements. Companies looking to hire a CDO need to deliberate and define the criteria and what success looks like so business expectations can be set,"*

Derek Danois | CDO, GE Healthcare

[1]Gartner press release "Gartner Survey Finds 72% of Data & Analytics Leaders Are Leading or Heavily Involved in Digital Transformation Initiatives", May 5 2021

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## 64%

*of respondents say the career path to CDO isn't obvious*

As a result, 64% of the respondents to our survey agree that the career path to CDO within many organizations isn't obvious, and 62% agree there is a lack of CDO role models. 60%, meanwhile, agree there is a lack of support for people on the CDO career path.

*"The chief data officer needs to demonstrate the value of data, treating data as an asset, building data literacy and making sure better decisions are being made due to better insight and intelligence. You need to improve the organization's data maturity to be able to quantify these things. If not, the passion of the Chief Data Officer goes out of the window, then you'll notice the Chief Data Officer leaving the organization."*

Abel Aboh | CDO Summer School 2021 participant and Data Management Lead, Bank of England.

As we enter the post-COVID-19 world, these complexities will only accelerate. Yet, the need for effective CDOs will only become greater.

*"The pandemic has accelerated the organizational need for a CDO. A lot of our interactions are more facilitated by data than they were before. When you are sitting in a face-to-face meeting, I think it's more likely you'll make decisions made based on gut reactions. When you are on a Zoom call and you know you're being recorded, there is a little more accountability."*

Ted Carter | CDO, USA

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# Who are the current generation of CDOs?

While it's widely accepted that most C-suite professionals must put in several decades of middle to senior-level management work before they make it to the executive table, today's generation of CDOs are strikingly young. According to M&A Executive Search, the average age of a typical C-suite member is 56, yet the majority of the CDOs we spoke to (55%) were between the age of 25-34 when they were first appointed to the role. Interestingly, 18% of the German respondents we spoke to were between 18-24 when they took on the role – more than double the number from the UK and the USA (7%) that were in that age bracket.

## 55%
*were between the age of 25-34 when they were first appointed to the role*
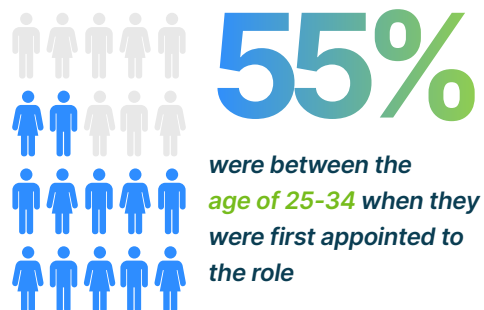
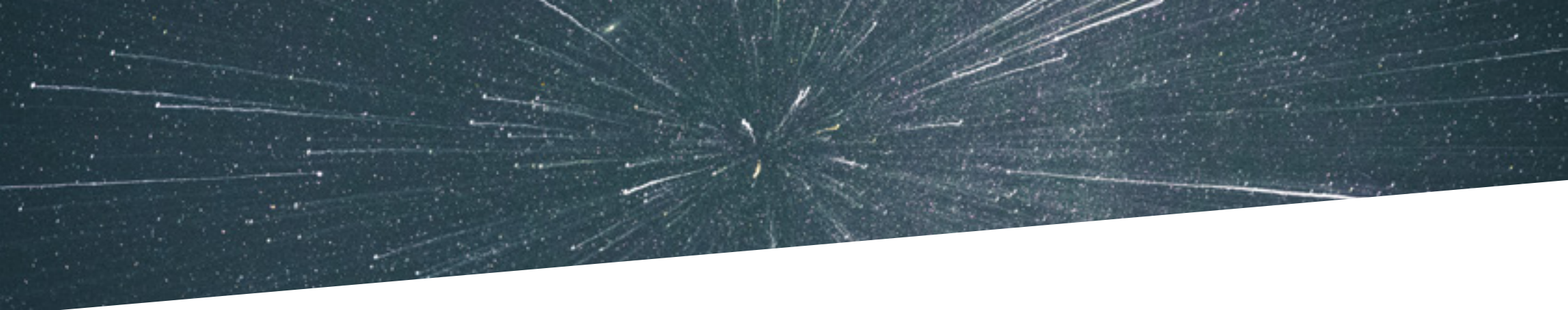And these aren't the only surprises we uncovered in our research.

65% of the CDOs in our survey were offered the CDO role as a promotion and hadn't considered it before. What's more, 38% of those we spoke to from the UK, and 36% from Germany had no idea what a CDO role entailed until it was offered to them. This is perhaps reflective of how new the role is, and the lack of clarity that exists even to those that are deeply ingrained within the industry.

## Technical tunnel vision results in missed opportunities

What's less surprising is that, prior to becoming CDO, 73% of the people we spoke to had come from a technical background, and 69% say that most people in their teams are from a technical background too. Only 3% said they were from an arts/creative background.

## 73%
*of the people we spoke to had come from a technical background*

Yet, it seems that there's a willingness to change. **Most (59%) of the CDOs we spoke to see the value in hiring from diverse, non-technical backgrounds.** And, although the majority of respondents to our survey (59%) have remained in the same sector throughout their career as a CDO, a fairly high proportion from the UK and USA (45% and 42% respectively) have jumped between sectors. This demonstrates that CDO skills are transferable — and 78% of the CDOs we spoke to agree that this is the case.

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In fact, it seems that professionals with non-technical degrees and experience could bring something more than those taking the more obvious route into the role. This is something that Exasol's Chief Data and Analytics Officer Peter Jackson has found. **"The best data scientist I've ever had in one of my teams had a philosophy degree from Warwick University," he said. "He was creative and curious."**

Our in-depth interviews with established CDOs uncovered some compelling examples of what can be achieved when non-technical candidates are given a chance.

*Derek Danois, CDO at GE Healthcare, for example, has seen real benefits from employing a diverse team. "I have a combination of people on my team. A physician, someone with a healthcare IT background and another with marketing background and MBA," he said. "This makes for great conversation between them and a cross pollination of ideas. A marketing background is a good thing as we have to communicate across a number of business functions, and they are a strong liaison to the commercial part of the business to gather the data analysis they need. And they are someone that is credible at the table, for example, when discussing customer engagement."*

*Rick Hawkins, CDO – Global Risk & Global Finance at HSBC, has also experienced similar benefits. "When I started and had six people, I was hiring technical people and accountants," he said. "That's because we were lacking in data experts. I went after engineers, people who wrote SQL and understood computing. Now we have established a baseline capability, the diversity of my needs for candidates has evolved, for example, bringing in lawyers and ontology specialists. Detail freaks come from a variety of backgrounds."*

There's also value to be had by incorporating a creative slant into the traditional STEM mix. This can not only widen the talent pool, but encourage a more diverse approach to learning about, and working with, technology.

**"I like to talk about STEAM learning — which adds arts into the traditional science, technology, engineering and math mix," said Sally Eaves, CTO and founder of Aspirational Futures in a** recent DataXpresso podcast**. "Adding in vital softer skills facilitates a more holistic approach – it provides the imagination required to envision what our future might look like and to be able to consistently adapt amidst constant change."**

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## Women are missing out

It's not just creatives that are missing out — our research also found issues around gender parity. Of the CDOs we spoke to, 73% were male and 26% were female. This is actually a slight improvement on the wider gender gap found across data science roles in general, where as few as 15% are women. That said, there's still a significant amount of work to be done.

*"While I am an exception, German technology departments are often dominated by men who are aged between 40-50. They have studied technology and their outlook is 'it's always been done in this way'. I don't know why it isn't the same in the UK and US, maybe they are more open-minded? It's only because of COVID-19 that we are starting to move on a bit."*

Christine Bogner | CDO, Germany

## An opportunity for change

The CDO role is opening C-Suite doors to women who have been overlooked for senior executive roles for many decades.

*"Organizations love to hire female talent. There are some incredible female CDOs, and they are able to command a premium and cherry pick and shape the role more. It's an amazing time to be a female CDO!"*

Heather Barnes | Partner - Technology & Digital at Savannah Group

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# What it takes to be a CDO

## 98%

**of CDOs believe they are adept at making decisions and finding patterns or anomalies in data**

As you might expect, almost all (98%) of the CDOs we spoke to believe they are adept at making decisions and finding patterns or anomalies in data. The majority (96%) also say they are skilled at critical thinking, risk management, math and problem solving.

As the skills become more interpersonal and less technical, these figures drop slightly. 95% say they are good at leading a team and collaborating, and 91% say they are skilled at change management and asking questions.

But these aren't the only skills required to become a successful CDO. According to Gartner, "93% of CDOs reported that effective communication is critical to the success of their roles." And 95% of the CDOs we spoke to said the same. **"If the CDO does not exert influence across the organization by promoting data sharing, engaging stakeholders and training the workforce to become data literate, they will likely not perform well in their role,"** said Debra Logan, **distinguished research vice president at Gartner.**

*"Influencing, negotiating, and selling a compelling vision are important. You can have the best data capability in the world, but if you haven't sold it, compelled people to use it, or been able to tell a story about how the organization needs to change, then it's useless."*

Abdul Malique | CDO, UK

Ultimately, this is about data storytelling. According to TDWI, data storytelling is **"the practice of building a narrative around a set of data and its accompanying visualizations to help convey the meaning of that data in a powerful and compelling fashion."**

[1] Gartner press release "Gartner Survey Finds 72% of Data & Analytics Leaders Are Leading or Heavily Involved in Digital Transformation Initiatives", May 5 2021

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# 79%

of CDOs we spoke to think storytelling is important

> *"There are two things that are important. One, how to drive data literacy so it's not scary and nebulous. And two, how can you create a compelling narrative through data storytelling in order to drive maturity of understanding."*
>
> Abdul Malique │ CDO, UK

What's interesting is, while the majority **(79%) of CDOs we spoke to think storytelling is important**, and have the requisite skills to do it well (94% say they are good at communicating, and 93% say they are skilled at presenting an argument), their perception is that they aren't capable. In fact, more than one in ten (12%) say they feel unskilled at storytelling, and this rises to 16% when focused on responses from participants in the USA alone.

This is where non-technical hires and education about what storytelling really means may make a big difference.

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# Current challenges facing CDOs

## 1. The role is not clearly defined

Half (50%) of the CDOs we spoke to believe the value of the role is not yet recognized in the business world and 46% agree that an organization's expectations for the CDO role are too high and misinformed.

## 46%

say that an organization's expectations for the CDO role are too high and misinformed

*"Some organizations don't know what they want. They say they need a CDO as almost a tick in the box for any data risk,"*

Tony Zona | CDO Summer School participant and Director of Business Insights at Grant Thornton UK LLP.

Meanwhile, 41% say they face unclear role expectations, while over a third (36%) believe the C-suite doesn't understand the CDO role. While 32% of respondents in Germany agree the CDO role is not understood by other departments/business functions, this rises to 42% in the USA and 51% in the UK.

*"We always ask candidates if the role they were sold by the client before joining is the role they find themselves doing today and there is very often a disconnect. Often leaders are dragged into operational issues, having to spend more time on fixing the basics or the business was in "sales mode" when hiring and hasn't really understood the reality of their company's current data landscape and its complexity. There needs to be greater transparency and understanding from both a client and candidate perspective about the realities and expectations of the CDO role so that the right person is hired into the right role in the right firm and can be successful and thus add genuine commercial value."*

Heather Barnes, Partner | Technology & Digital at Savannah Group

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## 2. Cultural change is proving difficult

It's been argued that culture is the greatest barrier to data success, and that certainly seems to be the case here.

According to our research, 42% of CDOs face a resistance to change within their organization, with over a third (37%) pinning the blame on a lack of C-suite buy in.

**51%** agree that C-Suite / senior management aren't willing to embrace the level of change required to become a data-driven business.

*"There have been roadblocks, and in some cases we still haven't got around them. It's about finding the middle ground, and demonstrating the value of data. There are a lot of people in the industry who don't see value in the academic areas of governance, asking questions such as, 'Why do I have to define data in a certain way?' However, much like an insurance policy, these investments don't come to fruition until something bad happens, which can lead to regulatory fines or customer data loss,"*

Rick Hawkins | CDO – Global Risk & Global Finance at HSBC

## 3. They are held back by tech

Outdated technology systems are often the biggest barriers to data liberation. Breaking these down to achieve data democratization is key, but not always possible if the CDO has little control over infrastructure budgets.

Our research reveals the extent of the problem. 48% of CDOs say they are held back by legacy applications, and 46% say outdated data management infrastructures; scale and data volumes are a problem. Meanwhile, **43% face performance limitations with things like data analytics**. As a result of all of this, 34% of CDOs in Germany agree organizations don't have the technology stack required for a CDO to excel, and this rises to 44% for those in the UK.

**43%** face performance limitations in areas like data analytics

*"Sometimes executive boards imply that they are a much more data-oriented company than they actually are. Talk is cheap — you need to back it with investment."*

Abdul Malique | CDO, UK

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# 4. A lack of data literacy

The ability to effectively communicate findings from data is now incredibly important. In fact, according to Qlik research, large enterprises with strong corporate data literacy have shown up to 5% higher enterprise value.

But this is a stumbling block for many businesses, especially those in the USA. While 20% of the CDOs from Germany we spoke to say they face poor data literacy across their organization, this rose to 39% in the UK and 45% in the USA. In addition, over half (58%) of the CDOs from the USA say there's a lack of relevant data skills across their organization, compared to 39% in the UK and 32% in Germany.
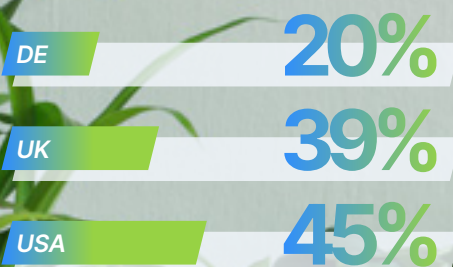
**DE** **20%**

**UK** **39%**

**USA** **45%**

*While 20% of the CDOs from Germany we spoke to say they face poor data literacy across their organization, this rose to 39% in the UK and 45% in the USA*

*"What's most challenging is dealing with members of staff who are not very data savvy. It can be particularly frustrating if they're calling over the phone and want you to help fix their data issues without being able to see anything, but knowing we've got great resources out there. If I had a better connection, better control, they'll be better able to use the resources we have out there for them,"*

Ted Carter | CDO, USA

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# How to make the CDO role a success

With the above challenges in mind, it should come as no surprise that, according to the Enterprise Data Management Council, just 8% have a tenure longer than 3 years, outside the outlier of the finance industry. This is the lowest tenure of all C-suite roles.

Our data backs this up. 1 in 5 (17%) of the CDOs we spoke to stayed in the role for one or two years, the majority (30%) stayed between three and five years, and just a quarter (24%) stayed over five years.
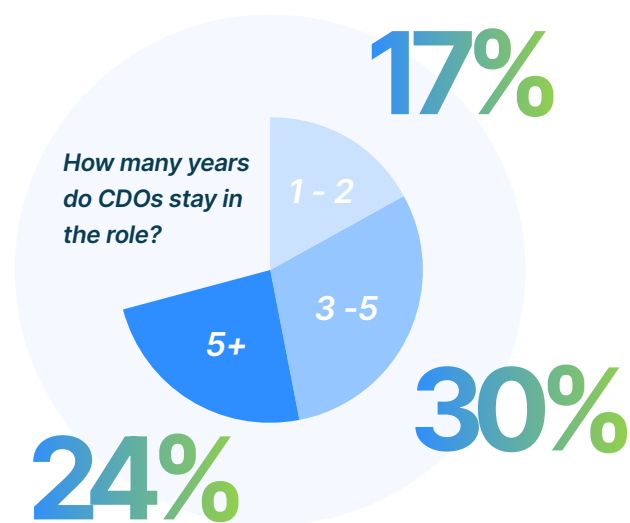
There are many factors that influence a CDO's decision to leave their company. While some are external issues which are difficult to manage such as being headhunted, there are some things organizations can learn from and perhaps do more to change.

For example, the CDOs we spoke to highlighted a lack of support/resources (23%); the fact that the scope of the role didn't meet their expectations (20%); a lack of fit with company culture (19%); the fact that the organization hadn't clearly defined the CDO role (18%); and members of the C-suite being difficult to work with (14 %) as key issues influencing their desire to move on.

**17%**

*How many years do CDOs stay in the role?*

1 - 2

3 -5

5+

**24%**

**30%**

*"The first generation CDO is finding their way at the moment, and has to justify why they are there. It can be easier to just move to another role, however tenures will likely increase as the role continues to evolve,"*

Tony Zona | CDO Summer School participant and Director of Business Insights at Grant Thornton UK LLP.

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# Three top tips for upcoming CDOs

**Our research has uncovered some key takeaways that can help those on the path to becoming CDO increase their chances of success:**

## 1.

### Make sure your role is clearly specified

Educate yourself on what the CDO role in the company you are joining really entails. It's no longer about simply governing data – it's about liberating it. Work with other members of the C-suite to set realistic expectations around this, along with achievable goals.

## 2.

### Don't discount your non-technical experience

Recruiters are increasingly seeing value in hiring from diverse, non-technical backgrounds. Experience in roles such as HR, marketing and the arts can bring a lot to the position.

## 3.

### Hone your storytelling skills

The most successful CDOs can translate data into business results and are inclined to focus on people rather than technology. Become a great data storyteller so that you can a) engage and influence stakeholders and b) improve data literacy at all levels of an organization.

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## About Exasol

The Exasol high-performance analytics database is built to run faster than any other database, delivering next-level performance, scale and ease of use. Analyze billions of rows in seconds; run high-performance analytics securely in the cloud or on-premises; deliver frictionless analytics with self-indexing that automatically tunes performance; and scale out analytics for one transparent price.

To learn more about Exasol, please visit: **https://www.exasol.com/**

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| Exasol AG | Exasol UK Limited | Exasol, INC. |
| Neumeyerstr. 22–26 90411 Nuremberg | Parkshot House 5 Kew Road Richmond, London Greater London TW9 2PR | c/o WeWork 1372 Peachtree Street Atlanta, GA, 30309 |
| T: +49 911 23991-0 F: +49 911 239 91 24 E: info@exasol.com | T: +44 20 3813 8310 E: info@exasol.com | T: +1 415 363 5500 E: info@exasol.com |