



Executive Search & Career Forecast

Evolving Technology and Security Roles

This paper presents one-on-one interviews and commentary from leading executive search consultants, all members of the Association of Executive Search and Leadership Consultants, who specialize in placing executives in chief information officer, chief technology officer and chief information security officer roles.

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What trends are you witnessing in the technology function as it relates to executive search?

As vanguards of the ongoing digital transformation movement, technology executives are in extremely high demand to fill a constantly changing job description. We've seen technology roles evolve into that of culture change agent within an organization, significantly increasing the importance of finding the candidates with the right skill set.

The digital transformation has taken root across nearly all industries and markets, moving beyond consumer and technology, to include healthcare, financial services and industrial.

What would you rank as the major challenges for technology executives at the moment, and what executive skills are in high demand considering those current challenges?

The most effective technology executives bring a wide range of core competencies. First and foremost, they must possess business and analytics acumen. They must develop and demonstrate a deep understanding of their firm's competitive strategies, business models and underlying economics.

Learning agility and team building skills are another key area of focus. A technology executive must be results-driven combined with the agility to adapt and learn. The most effective leaders demonstrate the ability to develop and leverage relationships while building high-performance teams that contribute to both the short-term and long-term strategies of an organization.

Business communication skills are also critically important. For instance, leading CIOs and CTOs must be as comfortable describing the company's value proposition as they are describing the security architecture. For this, they need a high level of business insight, as well as the ability to communicate in business-relevant language. This will enable them to effectively weave security into the fabric of the company's overarching business strategy.

How has cyber security impacted the technology function? How are technology leaders managing these challenges?

Cyber security has had a huge impact on the technology function. With new threats come new leadership requirements, and technology leaders are adapting to what is now a central, strategic and operational concern for most organizations—cyber security. As companies look to prepare and respond to constantly changing cyber threats, they are evolving the responsibilities of top technology executives.



The role has traditionally required technology leaders to serve as urgent responders, but they must now be ahead of the curve, developing a clear vision of how hackers' tactics will evolve, becoming proactive innovators.

While technology roles always have and always will call for relentless attention to process and detail, they must also demonstrate real agility – the willingness and ability to pivot and respond to changes in the threat environment.

It has been shown that routine employee behavior often generates the greatest risk of cyber attacks, requiring technology executives to rely heavily on compliance management. However, rather than simply implementing a strict code of do's and don'ts, today's leadership must focus on education and influence in order to build a true culture of vigilance.

No longer just tactical operators, it is vital that technology leaders develop the ability to articulate cyber security strategy as a crucial enabler of business outcomes, rather than a simple line item or cost of doing business.

Have any new functional roles emerged due to cyber security at the executive level outside of the CIO/CTO role? If so, what are these new C-level titles and what are they mandated to do?

Many companies have created the role of Chief Information Security Officer (CISO), positioned as a direct report to the CIO, chief risk officer or general counsel.

A unique combination of technical and leadership capabilities, CISOs need to define a cyber security vision, secure support for that vision with the board and the C-suite, marshal the resources and talent required to translate that vision into reality and engage the broader employee population in becoming champions for information security. No small task, which is precisely why demand far outstrips talent for this relatively new role.

The US Securities and Exchange Commission (SEC) recently named Pamela C. Dyson CIO. Previously, she worked on big data projects that “make it easier for users to quickly search and access critical data from a centralized source.” Are big data professionals often called upon to fill cyber security positions?

Big data is not typically where companies mine for cyber talent. In our experience, there are four distinct categories describing the characteristics of executives best suited to fill the role of CIO/CTO.

The first group is what we refer to as corporate cyber security “lifers.” They often hold a technical degree in engineering or computer science and begin their careers in the cyber security function of a large organization, climbing their way to the top.

We also see a second group called general technologists who hold a degree in engineering or computer science as well, but begin their careers in corporate IT and then migrate to a specialization in cyber security.

“Technology leaders...must now be ahead of the curve, developing a clear vision of how hackers' tactics will evolve, becoming proactive innovators.”

Military or law enforcement professionals, our third group, are less likely to hold a technical degree, but gain technical expertise in the field and rise to a senior cyber security role before moving to a senior position within the cyber security function of a corporation.

Finally, we have cyber security product specialists who typically begin their career with a vendor of cyber security products. Similar to candidates with a military or law enforcement background, product specialists tend to gain expertise in the field and rise to a senior role before migrating to a senior position within the cyber security function of a corporation.

Has demand increased for senior technology leaders on corporate boards? If so, what specific skills should a board-ready technology executive bring to the table?

Looking at recent news headlines, large-scale online security breaches are becoming a key item on the agendas of boards and executive teams. As a result, there is an increased demand for technology experts on corporate boards.

Besides technical expertise, board-ready CIOs and CTOs are business leaders with strong strategic and business acumen who are extremely adept at building relationships at the most senior level of an organization. They have the presence required to build and maintain credibility in the boardroom and executive suite.

How realistic is it today for a CIO/CTO to achieve CEO status, outside of the founder path?

It is definitely more realistic now than it might have been in the past and I think that is due to the growth of digital transformation and the increasingly important role technology plays across nearly all industries globally.

How are relationships within the C-suite changing and impacting technology executives?

With the growth of digital transformation and increased prominence of cyber security at leadership levels, it stands to reason that relationships with heads of other departments, such as the CMO are changing. More than simply technicians, CIOs and CTOs are now required to play a more central role in the development and implementation of overall business strategy. It is their role to effectively communicate cyber security architecture at the highest levels, building and maintaining credibility in the boardroom and C-suite.

How can a technology candidate best present him/herself to get noticed by executive recruiters in today's marketplace?

The short answer is "demonstrate leadership expertise in digital transformation."

The best candidates will not only possess the wide range of capabilities previously mentioned, but also be able to point to real world results. For example, were they able to create and fully integrate innovative cyber security strategies across all levels at their previous organization? What role did they play in the acquisition and development of a successful cyber security team able to protect their organization from cyber penetration? Did they foster relationships with key influencers from the C-suite to the shop floor and did they leverage these relationships to make cyber security a core feature of the business strategy? Answers to these questions are what distinguish leading technology candidates from average ones.

Paul Chau, Korn Ferry
Senior Client Partner, Global Technology Market

First of all, thank you for taking the time to speak with the AESC and BlueSteps about the technology and security executive trends in search. Would you share with us a bit about the work you do at Korn Ferry?

I focus on searches for CIOs and CTOs across different industries. As the head of the CIO center of excellence (COE) practice in Asia, I collect intelligence and exchange views on the market and industry with our practice leaders across the world so that we have a collective view and thought leadership.

How would you describe the outlook for technology executives in Hong Kong and the greater China region?

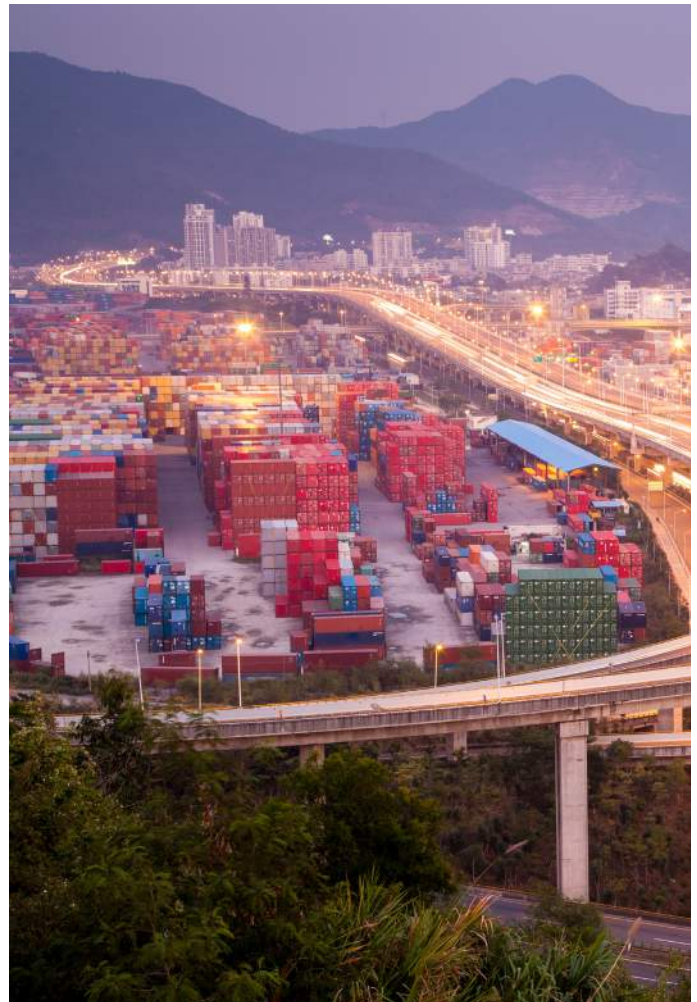
The CIO/CTO function will play an important role in organizations which embrace technology as one of the key drivers for change and business results. In this information-driven era, technology has become a necessity as it facilitates business leaders and consumers to make decisions based upon facts and numbers. Timely and accurate information from different means is extremely important in a fast-paced economy, like Hong Kong, a trading hub. Therefore, there are functional CIOs/CTOs making sure system performance is optimized, the network is reliable and secured, and applications are running smoothly.

Secondly, information also plays a big part in optimization and consolidation of systems and business processes when companies are looking to provide cost management and transformational initiatives. The CIO/CTO will be a transformational leader who aligns IT strategy with the business strategy and earns the trust of the C-suite executives in order to lead change and process improvement.

Lastly, some businesses leverage data to drive revenue, such as mobility and big data analytics, which increases the demand of emerging technology and consumer-level expectations. Thus, the CIO/CTO will be the business strategist who helps develop and refine business strategy for innovation and create competitive differentiation.

What trends are you witnessing in the technology function as it relates to executive search? In which markets and industries are most searches are being conducted?

The CIO role is evolving rapidly as business requirements, customer demands and emerging technologies outpace traditional IT skillsets. The talent demand is accelerating as different organizations at different development stages demand unique types of CIOs – functional, transformational and



business strategists. Therefore, compensation is increasing as there is a flight for talent in leading edge technology-based industries. Candidate validation is critical.

Currently, digital and eCommerce talent are sought after across different markets as organizations try to anticipate consumer demand based on data analytics, streamline supply chain management in order to be effective with inventory management, create a new channel for consumers with easy accessibility and develop logistics for efficient and timely fulfilment.



How has cyber security impacted the technology function? How are these leaders managing these challenges?

Cyber security has become a board-level issue in most companies and across all sectors, as a result of recent high profile attacks. More business value and company assets are being placed in online environments – intellectual property, sensitive customer information, financial data, employee records, etc. In addition, mobile devices, “Internet of Things” and ever expanding networks, increase vulnerability when coupled with

increased sharing of information with third parties and partners and complex supply chains. The recent sophistication of attacks and pace of development outstrips any single organization’s development of defenses.

Besides the U.S. Government, no other sector has experienced the number and complexity of cyber intrusions than the financial services industry. According to a Deloitte 2012 global financial services study, 25 percent of banking and 45 percent of insurance respondents experienced a security breach in the last 12 months. Therefore, threats are not just financial – they are also reputational, operational and regulatory – CEOs most fear reputational damage according to IBM’s 2013 CISO Assessment.

The response to this threat/challenge is not straightforward:

- A compliance based approach where everything must be protected is too overwhelming and also destroys more business value than it saves. McKinsey estimates banks are losing \$300 billion a year globally due to delays in product launches due to security compliance.
- Creating a robust perimeter defense is also not enough – organizations need to realize the importance of preparing for a breach and its potential impact.
- Few organizations have rehearsed and systemized their responses and hence often destroy more value through a poor business response.

Organizations are taking a more integrated view and are starting to focus on a more detailed assessment of risk – which in turn has led to the rise of the Chief Information Security Officer (CISO) as a new role – from 20% penetration in 2006 to around 80% today.

What are these new CISOs mandated to do?

Organizations have had IT Security heads for some time, but the CISO is different:

- It is not a “figure-head” who is unable to engage with the business on issues.

- The key to this role is the ability to manage a comprehensive analysis of risk and to assess the trade-offs between cost to protect assets, the damage if compromised and the correct protection and response strategies.
- Companies need a respected and energetic individual who can put in place the required strategy, processes, governance and structures whilst helping drive understanding and culture change across the organization.
- The CISO role has a strong governance component – security issues have to be recognized and owned through the line organization.
- Must be externally facing – able to deal with Government, law enforcement agencies, etc.

The CISO must be a strong communicator and business relationship builder, able to work and influence across business silos and get people to engage, “do the right thing” and understand the necessary trade-offs.

Another separate role, IT Security Head (often part of the CIO team), should know the technical details and know how to implement and run systems and tools, while working closely with the CISO. That said, CISOs need a strong awareness of the broad range of technology tools, including identity management, network intrusion, database security, intelligence analytics, mobile security, etc.

“Best-in-class CMOs and CIOs are taking it to the next level by integrating their teams to the point of intentionally blurring—and even overlapping—the boundaries between their respective departments ”

Has demand increased for senior technology leaders on corporate boards? If so, what specific skills should a board-ready technology executive bring to the table?

Senior technology leaders are on corporate boards of organizations that embrace technology as one of their key differentiators. These CIOs/CTOs are business strategists who understand market trends, help develop market and customer insights, develop and refine business strategy with innovation and create competitive differentiation.

How are relationships within the C-suite changing and impacting CIOs and CTOs?

It is no secret that chief marketing officers (CMOs) and chief information officers (CIOs) must work closely together. They realize it and have been talking about it extensively. Korn Ferry recently did a survey with the CMO and CIO community, which

found that in the most progressive customer-focused companies, best-in-class CMOs and CIOs are taking it to the next level by integrating their teams to the point of intentionally blurring—and even overlapping—the boundaries between their respective departments in pursuit of enterprise-wide goals. As more enterprises create hybrid teams and roles, the technology and marketing leaders of tomorrow are living in both worlds, seamlessly integrated.

The catalyst is digital transformation, which is being closely watched as it fundamentally changes the way organizations do business. Going well beyond big data, digital transformation facilitates more accurate and specific customer insights, enabling new ways of engaging customers. These customized solutions are being deployed not only in what have historically been consumer-led businesses, but also in B-to-B (business to business) organizations that were traditionally led by operations and sales.

The integrated world of technology and marketing is a far cry from the past. For years, CMOs and CIOs each spoke their own unique language. This was often a significant obstacle as brand-driven marketing conversed in ideas, while technology tended to be largely process driven. In some cases, marketing and technology were polarized to the point of competing against each other internally.

Now, best-in-class CMOs and CIOs are fluent in each other's vocabulary: CMOs exhibit greater appreciation for what technology can do, while CIOs are savvier about the need for customer-centric solutions. These two are using a progressive and integrated third language that is closely aligned with the enterprise-wide goals and priorities of the CEO and board.

How can a technology candidate best present him/herself to get noticed by executive recruiters in today's marketplace?

Having a proven track record would definitely make executive recruiters take notice of a great technology candidate. Executive recruiters constantly talk with business leaders and are made aware of the contribution the CIO/CTO has made to the organization, or, in many cases, complaints such as running over budget, project not meeting timeline, etc.



Vasiliy Kryuchkov, Ward Howell
Head of Hi-Tech Practice

First of all, thank you for taking the time to speak with the AESC and BlueSteps about the information and technology function trends in executive search. Would you share with us a bit about the work you do at Ward Howell?

Ward Howell is the largest and one of the most successful executive search and leadership development consulting companies in Russia and the Commonwealth of Independent States. I'm responsible for the Information Technology practice and specialize in executive search contracts within this field, including software, solutions and systems integration. My clients include hardware manufacturers, Internet and technology consulting services, as well as telecom operators and content providers. One of my largest areas of focus is the functional CIO practice.

How would you describe the outlook for the technology function in Russia and your region?

CIOs and CTOs are becoming more visible at the board level and as part of core management teams. Technology is one of the key enablers for business growth; especially since the ability to handle big data has opened so many doors to significant opportunities to understand customer needs and produce tailor-made solutions, even in a mass market. However, the role of technology leaders is sometimes considered to be of lesser importance in the current circumstances confronting Russia. The importance of advanced technology is not obvious in industry segments that are simply struggling to survive.

What would you rank as the major challenges for technology executives at the moment, and what executive skills are in high demand considering those current challenges?

It all boils down to the economic and political situation. If you had asked this question a year ago, my answer would have been totally different. Today, I would say that the major challenge businesses are facing is juggling significant budget reductions while maintaining high overall business performance and a core competitive advantage.

Another challenge also stems from political risks, especially in government-related areas: the necessity to protect vital systems from the threat of disabled support from international technological vendors due to the possible tightening of IT sanctions. The trend and, in some cases, the demand for import substitution is also a big challenge as it is often nearly impossible to replace some technologies with others without a serious loss of stability and productivity.

Executives must be resistant to stress, flexible and be able to focus on the most important business needs. I would also add that there is a very high demand not only for ability, but for a willingness to learn and to change.

How has cyber security impacted the technology function? How are technology leaders managing these challenges?

Cyber security has become quite a hot subject and can no longer be ignored or given low priority. CIOs have to be much more aware in this area or, at least, have a great deal of attention paid to it. There are two basic approaches to dealing with cyber security: 1) either becoming involved in it personally or 2) outsourcing security protection to a service partner.

The most highly developed companies usually have a separate chief information security officer (CISO) who doesn't report to the CIO; and that role is increasing in popularity. For example, it's much harder to implement any large solution, such as an enterprise resource planning software (ERP), customer relationship management software (CRM), or core banking system, without the additional means of

protecting the data and business critical systems from cyber threats. The importance of cyber security is even increasing in response to the current situation of political conflict.

Has demand increased for senior technology leaders on corporate boards? If so, what specific skills should a board-ready technology executive bring to the table?

There is a strong demand for senior technology leaders who are able to become true business partners. Unfortunately, we have a fairly limited number of such executives in our market. Corporate boards need leaders who are able to convert the approach to technology from that of a support function and cost center into that of a business driver and a source of additional competitive advantages.

At the same time, it's very important for a leader to hold a strong position with the ability to defend it. Business leaders tend to be strict in terms of demanding the best effort in zero time, but it's often impossible or even senseless to do everything for everyone. Board-level technology executives have to be ready to provide the best client-oriented approach for internal customers while retaining a reasonable attitude towards the prioritization of execution according to business needs.

How realistic is it today for a technology-focused executive to achieve CEO status?

The answer differs when considering a CIO versus a CTO role. It's natural to progress to CEO from CTO, especially in technologically oriented industries. The prospects for a CIO, however, are another story. A CTO often shares responsibility for the main competitive advantage of a company, while a CIO's function, as it originated, is primarily one of technological acquisition, implementation and support. Yes, IT can be a real enabler for business growth, but even then, a CIO's chances to rise to the rank of CEO are inferior compared to those of financial or commercial leaders. I hope this will change someday, but, at least in our region, this is clearly how it stands now.

How are relationships within the C-suite changing and impacting C-suite technology leaders? For example, the CTO-CMO relationship?

The CMO is a huge consumer of technological products and services. In my opinion, the CTO-CMO relationship could produce a really productive duo; but at the same time, it's a serious challenge to fulfill the executive skills required by each function. It is a quite common situation to have a strong CTO absorb the most crucial marketing functions within their own structure, and vice versa – a senior marketing leader may have an additional budget, apart from the consolidated IT budget, as they are apt to consume a large amount of IT services from the market without requiring the direct cooperation of the CIO. The key to such C-suite synergies is the development of cross-functional skills in top management, specifically, a high level of business acumen in technical leaders, and a better understanding of technological possibilities and limitations for marketing leaders.

How can a technology candidate best present him/herself to get noticed by executive recruiters?

There is no significant difference in positioning between technology and any other C-level leader. Candidates should clearly highlight their accomplishments, notable achievements and key competencies. It's always a good idea to build a personal brand within the executive search community, not only when seeking employment, but proactively as an activity for overall career development. You will always be on the priority list of contacts if you stay in touch.

If you could offer one key piece of advice to today's senior technology leaders, what would that be?

The main problem for many technological leaders is an arrogant, technocratic approach exacerbated by a reluctance to dive into business strategy. I would strongly advise a business-oriented and proactive approach, as this is in highest demand in our current market.

Matt Aiello, Heidrick & Struggles
Partner, Global Cybersecurity Practice Leader and
Americas Information & Technology Practice Leader

What are some emerging trends you are witnessing in the technology function? Where are you seeing the most growth and the least growth?

We're seeing a tremendous amount of variation in the role from company to company. We're seeing an uptick in product security CISOs who may even have software engineering backgrounds and can embed security into customer-facing products. Cyber security experience - defined here as working with a three-letter agency in Washington, D.C., or on the offensive side of cyber security - is also in demand. Ethical/ White Hat hackers are also in demand, but they often do not have the executive/C-level skills needed to answer to the board. If we're seeing a declining role, it's the compliance-oriented cyber security professionals who deal mainly with adherence to regulatory guidelines or mandates. Companies still need someone doing this, but that person is now reporting to the CISO who has a broader focus.

Given the importance of technology across the business, we're seeing CIO roles expanding to broader CIO-plus roles as well - CIO + customer facing technology, CIO + business services, etc. And new roles are emerging in between IT and the business, such as Chief Digital Officer and Chief Data Officer. These may or may not report to the CIO.

How has cyber security impacted the technology function? How are technology leaders managing these challenges?

By and large, the role still reports to either the CIO, the CTO or the General Counsel, though an increasing number also report to the Audit Committee.

Have any new functional roles emerged due to cyber security at the executive level outside of the CIO/CTO role? If so, what are these new C-level titles and what are they mandated to do?

We've seen a rise in the vice president, security engineering title versus the chief information security officer (CISO), though sometimes they are combined. Many security leaders don't want the CISO title as it can denote a more compliance role.

The U.S. Securities and Exchange Commission (SEC) recently named Pamela C. Dyson to its CIO post. Previously, she worked on big data projects that "make it easier for users to quickly search and access critical data from a centralized source." Are big data professionals often called upon to fill cyber security positions? Although data security is an increasingly hot space, so far we would not say that we are seeing data professionals become CISOs. Data and security are, of course, related, and the data organization may have



someone specifically focused on data security who has a dotted line to the CISO, but that's not yet an executive level role broadly. I think we will see a higher need for improvement in security intelligence analytics, discovery, data classification, etc.

Has demand increased for senior technology leaders on corporate boards? If so, what specific skills should a board-ready technology executive bring to the table?

“Boards should strongly consider a CIO/CTO for boards, but there are also many other cyber security experts who can provide an even more holistic view of the issue.”

Boards are certainly paying more attention to cyber security, but that has not yet resulted in a marked increase in CIO/CTOs on boards (though those numbers are generally increasing). We think boards should strongly consider a CIO/CTO a seat at the table, but there are also many other cyber security experts who can provide amore holistic view of the issue.

How realistic is it today for a CIO/CTO to achieve CEO status, outside of the founder path?

For CIOs, it's still fairly unrealistic though as noted above CIOs are graduating to broader shared services or customer facing roles more commonly. However, we do foresee that many CISOs will probably migrate to the business side of cyber and perhaps become CEOs of smaller cyber entities. The CISO at CSC for example

is now running their large cyber security line of business, and the CISO of IBM followed the same path. The CISO role is incredibly demanding and high risk, so we see CISOs considering other career paths and viewing the role as a tour of duty.

How are relationships within the C-suite changing and impacting technology executives? For example, the CTO-CMO relationship and how these two roles must work together to lead digital evolution of enterprises?

The CIO and CMO have been working closely together for many years actually. The shift we've seen has been from cautious collaboration to more deliberate integration of these roles. Witness, for example, in a few large retailers, the creation of a Chief OmniChannel Officer where both the CIO and CMO report to that person.

**Gerard Ketelaar, Quaestus
Managing Partner**

First of all, thank you for taking the time to speak with the AESC and BlueSteps about the technology function trends in executive search. Would you share with us a bit about the work you do at Quaestus/IMD?

At Quaestus, we integrate executive search and leadership consultancy to help organizations make changes proactively. We do this by thoroughly immersing ourselves in the organization and gaining a deep understanding of the company's structure, as well as the boardroom dynamics. Directly afterwards we approach those leaders, found and selected via our extensive network contacts and a unique multi-channel approach. After installment, we carefully support them during their first period in their new environment (onboarding). All of them are leaders with the ability to establish a safe and secure base environment, characterized by respect and trust, who are inspiring and can take an organization to the next level. Quaestus is part of an international network, (IMD International Search Group) and also conforms to code of conduct and professional practice guidelines as a member of the AESC.

How would you describe the outlook for the technology function in the Netherlands and your region?

The outlook is very positive. This function has seen high growth in corporate organizations due to technology disrupting a wide range of industries. We've also see an increasing demand coming from startup companies that are growing into a second phase scaling.

What would you rank as the major challenges for technology executives at the moment, and what skills are in high demand considering those current challenges?

Next to the more in-depth digital transformation skills and deep technological developments, we've see an unbelievable increase in the demand for candidates with marketing automation experience. In the Netherlands, we see that both the big corporations as well as the mid-size companies are placing an enormous investment in marketing automation this year.

Has demand increased for senior technology leaders on corporate boards? If so, what specific skills should a board-ready technology executive bring to the table?

We see an upcoming demand for supervisory board members that understand the disruption that comes from technology developments.

New skills for CTO/CIO executives are secure transactions system knowledge. Also, experience in unleashing the legacy systems to the new world of integrated phones, tablets and computers.

Graham Willis, Watermark Search International Managing Partner

First of all, thank you for taking the time to speak with the AESC and BlueSteps about the technology and security function trends in executive search. Would you share with us a bit about the work you do at Watermark Search International?

I am the Managing Partner at Watermark, and apart from executing on the firm's exciting growth prospects, I am also in the market working with boards on a range of projects as well as with CIOs on some of their technology resourcing challenges. Watermark as a whole has significant depth in the Government sector, Local, State and Federal, and the reform agenda in Government has kept the team very busy. Add to that a strong Corporate Officers practice and you have a good boutique business.

How would you describe the outlook for the technology function in Australia and surrounding regions?

The function is only going to grow in importance as businesses of all scales rely on their IT systems and processes to not only continue what might be considered the day-to-day business but also the business of creating insight from data that the organization has access to. We see those with core IT experience as seriously underrepresented on boards in Australia. This is slowly starting to change, but the pace of appointments of those with core IT skills will increase. As the reliance on technology has expanded, this has become a more common topic of conversation in the boardroom.

One of the other things happening with the CIO function is the rise of the chief digital officer. Is it just a re-badging or is it a fundamental shift? Hard to tell; and in Australia we have not seen the same rise in demand for specific skills in that area as in the United States.

What would you rank as the major challenges for technology leaders at the moment, and what executive skills are in high demand considering those current challenges?

For CIOs and CTOs, somewhere at the top of the list is the constant challenge of keeping up with new technologies and their application. If for no other reason than the fact that technology is ubiquitous in the home and workplace. Everyone has a point of view on technology now. More often than not the ability to use consumer technologies is not a good indicator of the way technology can be used within a business....but that is the new normal.

The CIO can expect a much higher degree of technology awareness, even if it is not applicable to the business. Another major challenge, which has always been there but now has a shorter lifecycle, is the commercial advantage that can be gained through the smart use of technology. Following is not good enough; the CEO and the board are looking for technology to provide a business advantage not a business constraint.

How has cyber security impacted the technology function? How are technology leaders managing these challenges?

It keeps them awake at night is the short answer! The growth of big data sets and the technologies to interrogate this data, means that the risks associated with third party illegal access have risen exponentially. The roles of those responsible for cyber security within organizations are very much in the spotlight. This is the area that boards are likely to drill down on to understand the potential exposure of the organization and steps in place to protect them. Increased funding for security solutions, increased reporting mechanisms and a growing maturity to realize that no one is immune are all responses to the potential impacts of poor cyber security.

Have any new functional roles emerged due to cyber security at the executive level? If so, what are these new C-level titles and what are they mandated to do?

The CSO (chief security officer) is a reality, and in larger businesses with heavy data requirements, they are at the top of the executive tree. If this role is not a direct report to the CIO, then, quite simply, the organization is not taking it seriously. Equally if this role does not have a direct line to the Board's Audit and Risk committee, there needs to be a rethink. Titles we see include chief information security officer (CISO), director of security (which rather wittily makes that DOS) and recently the chief information security and trust officer.

Has demand increased for senior technology leaders on corporate boards? If so, what specific skills should a board-ready technology executive bring to the table?

In Australia, very slowly. The representation of non-executive directors (NEDs) with technology backgrounds in Australia's top 200 companies is around 3% (45 people). The larger companies and the technology companies have the largest share of those 45 NEDs with technology depth. There is plenty of room to add technology expertise to Australian boardrooms.

Apart from their obvious technology expertise, they also need to bring strong commercial skills to the board and an appreciation of the governance environment. Technology executives should bring some form of accreditation with them to show that they appreciate the role and the way that the board needs to operate, which is different from a line role. I also believe they need to be good communicators and able to translate the technology implications or risks of a certain path to the other board members.

How realistic is it today for a technology executive to achieve CEO status, outside of the founder path?

Outside of a technology based firm...pretty difficult. CIOs suffer from the perception of having a lack of business breadth. It of course makes some sense that some of the CIO's core expertise is reflected in the industry and sector that they know most about, but more often than not, the technology CEO roles are more likely to go to ex-CFOs or ex-GMs of sales. So the career advice has to be to try and break out of just being a good CIO. For example, see if you can move to a COO role and gain knowledge of more of the business.

How are relationships within the C-suite changing and impacting technology executives? For example, the CTO-CMO relationship and how these two roles must work together to lead digital evolution of enterprises?

The ones you have picked are the key roles that are shifting. Who owns the digital space? Is it the area that enables the collection and subsequent analysis of the data or the area that uses the data to drive products and services? The reality is that the CMO/CIO/CTO role is exactly why a more mature integrated approach to management has to be a consideration in an organization. Creating silos in this area is unlikely to end well.

How can a technology candidate best present him/herself to get noticed by executive recruiters in today's marketplace?

It sounds a little obvious, but be visible. Speak at conferences, write articles, create a blog and make sure you are current. Keep your CV, BlueSteps profile and LinkedIn profile up to date. The recruiters will go looking. We are in the search business, but if you aren't visible to some degree you make life harder than it needs to be.

Apart from being visible, the candidate needs to be contactable, so provide an email or contact number where the recruiter can get in touch. Apart from facilitating the direct approach from a recruiter, keep your own networks up and don't be an island. If we don't know or can't see you, we will find you through sourcing and recommendations from your colleagues and managers.

After you've been noticed by executive recruiters, it's a case of building relationships with the recruiters best able to facilitate your career progression. Think of it as a long term relationship not a one off transaction and you'll find the relationship will deepen to the point where you are top of mind.

If you could offer one key piece of advice to today's senior technology leaders, what would that be?
Get commercial or get more commercial. If you want to progress and be the CEO, or even a board member, finance and commercial skills are an absolute must. More and more technology roles are less about the specific technology and more about your understanding of the commercial application, and accompanying risks, of the technologies that exist.



About Our AESC Member Search Consultants



**Matt Comyns, Russell Reynolds Associates
Global Cyber Security Practice Leader**

Matt Comyns is the global Cyber Security practice leader within the firm's Technology sector. Matt recruits Chief Information Security Officers and next level down top lieutenants in Information Security for large global corporations and fast-growing private companies. He also recruits cyber security consultants for leading professional services firm's and top executives for cyber security technology companies. Additionally, Matt is a leader within the firm's Consumer, Digital & Media practice. Matt has a successful track record of recruiting digital leaders for public and private technology companies and non-tech companies who are seeking transformative digital talent. Matt also has experience recruiting technology and digital leaders in the e-commerce and B2B information sectors. He is based in Stamford, Connecticut.



**Paul Chau, Korn Ferry
Senior Client Partner, Global Technology Market**

Mr. Chau has over a decade of executive search experience, and is highly regarded by clients of his expertise in the technology sector.

Mr. Chau focuses on leading senior-level searches with a wide range of clients across multiple industries that include consumer, retail, technology & services, industrial, healthcare and financial services.

Prior to joining Korn Ferry, Mr. Chau was head of technology practice for a boutique search firm in Asia. Previously, he spent over 10 years with an international search firm in Hong Kong where he worked with high-profile clients in the technology, media and telecommunications sectors.



**Vasiliy Kryuchkov, Ward Howell
Head of Hi-Tech Practice**

Vasiliy specializes in executive search assignments in information technologies, including software, solutions, and system integration. His clients also include hardware manufacturers, Internet and technology consulting services, as well as telecom operators and content providers. His other area of focus is the functional CIO practice.

Vasiliy has 10+ years of recruitment experience in the IT/Technology vertical. His functional expertise includes general management, sales and marketing, technical, development and other functional area heads.



Matt Aiello, Heidrick & Struggles
Partner, Global Cybersecurity Practice Leader and Americas Information & Technology Practice Leader

Matt Aiello is a Partner in Heidrick & Struggles' Washington, D.C. office, specializing in the recruitment of national and global senior-level technology, engineering and operations executives. He currently co-leads the firm's Cyber Security Practice and leads the Americas Information and Technology Officers Practice.

With more than a decade of executive search experience, Matt has led numerous chief information and technology officer searches – and direct reports such as security, applications, infrastructure, architecture and engineering – across industries including software/SaaS, IT services, hospitality, retail, media/entertainment, financial services, manufacturing, automotive, higher education and others.



Gerard Ketelaar, Quaestus
Managing Partner

Over a period of more than 20 years Gerard has held several leading positions at, among others Philips, KPN Telecom, Sylvan Prometric and PiMedia. In the middle of the 1990's he worked as the manager of the Business Unit Interactive Services of KPN Telecom where he became the driving force behind the introduction of leading telephone and chipcard concepts and innovative internet activities.

For the American enterprise Sylvan Prometric, the global market leader in the field of Computer Based Testing, he was responsible as EMEA Director for their new business activities in Europe, North Africa and the Middle East.



Graham Willis, Watermark Search International
Managing Partner

Graham has been in the Executive Search profession for the past 14 years. He previously worked with one of the premier global search firms, initially as a consultant with a focus on the Technology and Professional Services sectors and he also had the opportunity to work with a number of Chairs in helping fill their board vacancies. Most recently Graham held the role of Director of Human Capital and Head of Research for Asia-Pacific, giving him a good understanding of the major markets in Asia and India.

Prior to his career in Executive Search Graham was a Senior Executive with Computer Sciences Corporation (CSC) with roles as the VP of Consulting and Systems Integration, VP of Account Management and VP of Mergers and Integration.

About The Association of Executive Search and Leadership Consultants

Since 1959, the AESC has set the standard for quality and ethics in executive search and leadership consulting worldwide. Because AESC members must commit and adhere to the AESC's industry and government recognized Code of Professional Practice and Professional Practice Guidelines, clients can be assured that AESC members are able to serve as trusted advisors for their most important engagements. As the voice for executive search and leadership consulting worldwide, today the AESC is comprised of more than 350 member firms, representing 8,000 executive search professionals in 75 countries. To learn more about the AESC and its membership, visit www.aesc.org.

About BlueSteps

BlueSteps is an online career management service for global senior executives. As an exclusive service of the AESC, BlueSteps enables senior executives to make their career profile accessible to over 8,000 retained executive search professionals in more than 75 countries who are members of the AESC, and use the database as an additional resource in their candidate and source identification process.

As a member of BlueSteps, your career details will be confidentially provided to hundreds of the world's leading retained executive search firms in over 75 countries. Benefits include:

- Confidentially increase your visibility to top executive recruiters.
- Build stronger connections using a fully searchable directory of executive search consultants who are AESC members.
- Explore executive job opportunities being filled by AESC member executive search firms.
- Elevate your personal brand.
- Plan your executive career management strategy.

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