

Evolving the IT team

Reskill, recruit, resource: new strategies for CIOs to adapt and thrive in the age of the talent gap



Foreword

As we adjust to a new world of digital transformation, companies are having to adjust to unprecedented technological complexity which is affecting the way their entire organisation works. They are having to deliver new types of capability at pace. So it's no wonder that a talent gap has opened up within the team most responsible for delivering those capabilities: IT.

Businesses and IT departments are having to plan for a future that seems less and less certain. Do you reskill, redeploy, recruit or source? And how do you do it in the most effective and efficient way?

In this report we have gathered expert viewpoints from those on the front lines of the IT talent gap, both within Cisco's own IT organisation and other companies across the world. Together they paint a picture of what the future holds for skills, what works and what does not when it comes to building, retaining and applying talent to the IT function.

Every situation is different. Your strategy will be uniquely yours, and it will evolve from month to month. But this guide will show you some new tools and approaches you can draw on throughout your journey. It will also give you reassurance that CIOs are succeeding in building strong teams, even in today's challenging times.

Cisco's latest report on Next-Generation IT Talent Strategies shows 93% of executives say the talent gap is preventing them from transforming fast enough.



Colin Seward
Chief Information Officer,
Cisco EMEAR



Chintan Patel
Chief Technology Officer,
Cisco UK and Ireland

The CIO is in the eye of the storm

CIOs have always worried about IT talent shortages. But the situation is more drastic today than it has ever been.

If you've spent any time in IT you'll have seen the buzzwords evolve. Every year brings a new technology, language, methodology or discipline that's in demand, whether it's blockchain or virtual reality, python or R, DevOps or Agile, cybersecurity or Internet of Things (IoT). The business and the market don't stand still, so the IT function must keep evolving too. And sometimes it's not easy to find the right talent in the right place at the right time for the right price.

So why are things different now?

New skills requirements are emerging

After a period of relative stability, we're on the cusp of a step-change in how IT operates. You can see this in the rapid emergence of new technologies and skills areas, principally AI and analytics. A list from the World Economic Forum shows that seven out of the top 10 emerging job roles are IT-related, and the same keywords crop up time and again (see Figure 1). New IT methodologies like DevOps are also requiring fresh skills from IT practitioners.

The Jobs Landscape in 2022



Source: Future of Jobs Report 2018, World Economic Forum

Demand is intensifying as infrastructure complexity grows

In other areas of IT, urgent demand is the problem. Forbes describes the cybersecurity talent gap as an industry crisis, as the growth in data breaches and the burden of compliance drives companies to hire.

According to a Chief Information Security Officer (CISO) survey from Opus and research firm the Ponemon Institute, the human factor is the top security threat, with 70% of CISOs calling "lack of competent in-house staff" their number one concern and 65% stating "inadequate in-house expertise" as the top reason they are likely to have a data breach¹.

It's the same for cloud: now that most companies are moving along a multi-cloud journey as a central part of how applications are delivered within the business, everyone sees the need to have experts in-house to drive that strategy and execution. The growth in demand for these skills is not a surprise, but it has outpaced the talent market: there simply aren't enough relevant graduates out there, let alone seasoned experts, for recruiters to hire.

According to LinkedIn research, the two most in-demand role areas – cloud and AI – are also those with the greatest talent gap in the employment market²

In other areas of the IT landscape – networking, IoT, applications – infrastructure scale and complexity is growing at pace. Even with a degree of automation, it's challenging for teams to monitor, manage, change and govern IT estates that are growing by thousands or tens of thousands of devices each year (especially when those devices and their users are geographically distributed). Headcount will never keep pace with infrastructure expansion, but some scale is natural.

¹<https://www.prnewswire.com/news-releases/cisos-more-worried-than-ever-about-data-breaches-67-concerned-theyll-experience-a-data-breach-or-cyberattack-in-2018-new-opus-ponemon-institute-survey-shows-300581383.html>

²<https://learning.linkedin.com/blog/top-skills/the-skills-companies-need-most-in-2019--and-how-to-learn-them>

Top talent is being pursued from all sides

While demand for more people and new skills grows, supply is being stretched more than ever before. Organisations are battling against the “brain drain” effect, as IT giants in Silicon Valley and across the world lure tech talent with not just higher salaries, but more varied and challenging work. And IT teams are even finding themselves in competition for talent against their own businesses. Due to the pervasiveness of digital transformation and the criticality of technology to every area of business, technologists are more in demand across all departments, all industries and all countries.

According to the European Commission, by 2020 there will be 500,000 unfilled vacancies for IT professionals, and already four out of ten businesses across Europe are finding it difficult to source people with the right digital skills³. It's not just IT that's competing for the best digital talent.

IT's chance to lead



Whilst other teams like finance, marketing and human resources (HR) may need their own digital experts, it's naturally the IT teams falling under the CIO that are feeling the shortage of tech talent most acutely.

CIOs in every sector are finding themselves facing more dramatic workforce change than nearly any other C-suite peer, just as the business turns to IT for help making digital transformation happen.

This is an opportunity to show leadership and drive overall business change. It's also a tremendous challenge. How do you start to solve it?

Tackle IT talent from the top

To lead IT talent change effectively, CIOs themselves need the right skills – and to be in the right position in an organisation that's ready for change. To find out more about how you can position yourself as a change leader, check out our research and perspectives here.



The public sector and the CIO

Perhaps more than in any other sector, public bodies need to recruit, nurture and retain top CIO talent. This of course can be challenging, with tight pay restraints and a history of IT outsourcing. But CIO leadership in the public sector is today an essential ingredient in helping to frame technology opportunity and risk in the context of digital transformation.

A capable CIO can also ensure that IT deployment is designed to support new ways of working and new service models, maximising efficiency through automation and self-service, often for highly complex and sensitive services. This includes having a central role in responding to and managing the risks inherent in digital transformation: cyber, data management, infrastructure resilience, business continuity and supplier governance.

Looking ahead, the public sector will therefore need to re-evaluate how it views its CIOs – as strategic leaders, not just as IT operational managers. This is partly about culture and the digital maturity of an organisation, resolving tensions between CIOs and digital leaders through considered design of IT governance and accountability. It is also about defining a CIO leadership role that allows sufficient scope and authority for delivering successful digital change.

By Jos Creese, Digital advisor and founder of CCL
(Creese Consulting Limited)

³<https://ec.europa.eu/digital-single-market/en/policies/digital-skills>

What does the IT talent gap mean to you?

At a macro level, the IT talent gap is universal and undeniable. But every CIO is facing a different situation, and the key to success is first understanding the particular dynamics you face.

Mind the gap

Naturally you want to start by working out what talent you need, what talent you have, and therefore what the gap is.

But “talent” isn’t a helpful term here. Recruitment analytics software company Burning Glass has identified that the unit of currency of the job market is skills, not jobs, roles or talent⁴ – understanding this is the key not just to recruitment, but to unlocking mobility within and between roles.

For example, engineering-type roles tend to prioritise “hard” technical skills. Everyone agrees there are clear gaps here today. A Learning@Cisco Technology Manager Survey in September 2018 ranked the top five technical training areas:

- Cloud
- Big data/analytics
- Cybersecurity
- IoT
- Application development

Familiarity with DevOps, Agile and other modern IT practices will also be high on the list.

But modern IT teams work more closely with the business; they may be involved in developing marketing apps for end users, optimizing supply-chain processes, having to work in agile (with a small ‘A’) teams to solve problems fast. These roles require a “hybrid” of hard skills and softer skills like business acumen, creative thinking, communications skills and other capabilities that help them collaborate effectively and forge partnerships with the wider business.

Establish a common language for skills

So what we have here is a fast pace of change in technical skills, with a continued need for focus on soft skills as well. There’s real potential for confusion and misunderstanding just in terminology and the clarity of how skills are defined.

Therefore a critical step is to develop a common language for skills that you can map to your job roles and use as a basis for your profiling and gap analysis.

For us at Cisco, it has been important to adopt a standard skills vocabulary when looking at our job roles across IT to identify and define future requirements. To do this, we’re piloting the Skills for the Information Age (SFIA) framework to give us a standard vocabulary that we can use to better define jobs inside our IT organisation.

Use data to audit what you’ve got and what you need



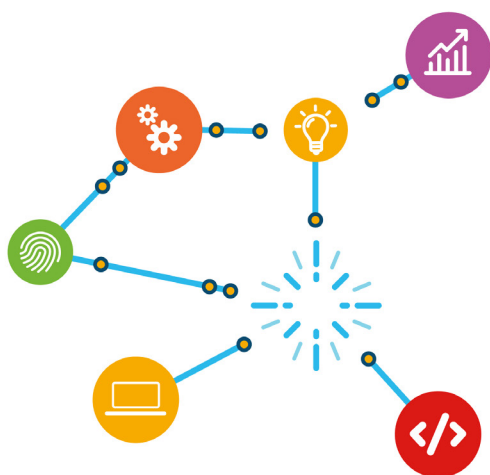
It’s easy to resort to gut feel, corridor conversations, immediate project pain-points, anecdotes and media articles when discussing topics around skills and talent. Every hiring manager intuitively knows the roles they think they will need in their particular team, and every HR professional can tell tales of the role that was left open and unfilled for a year, or the hiring manager with the impossible-to-define “team fit” requirement that meant great candidates got rejected.

It doesn’t have to be that way. There’s never been so much data available that can help you understand your situation, understand the job market, benchmark yourself, and model future trends.

⁴<https://www.nousgroup.com/insights/how-can-we-anticipate-and-respond-to-future-skills-needs-in-an-uncertain-world/>

This includes:

- Internal data sets around engineer activity and expertise, training courses taken, patents filed, tasks assigned, contributions made to open-source code bases, support cases resolved, CV keywords, 360s and other performance reviews.
- Details about your open roles, salary grades, job description keywords, role locations, impending restructures and redundancies.
- External sources such as salary benchmarks, CV databases, educational statistics, job description keyword databases, and analytics about volumes and trends in open postings.



With the right HR tools – and many are out there for you to evaluate – you can crunch this data and get a view of your true situation. You can map between the realities of the people you have, the skills you need and the talent available in the market. You can also benchmark against the competition you're facing and understand not just how other organisations are filling individual roles, but how they're assembling whole teams and functions.

Ruthlessly prioritise the most critical gaps against strategy

As CIO, your goal is to deliver as much value to the business as possible using the people and budget you have available. If you're spreading your investment and attention right across your function, you're diluting your impact.

Work with your CEO to understand your business priorities. Then ask yourself: which roles, and which skills, are most critical to those strategic priorities and the future of your business at the furthest possible planning horizon? Maybe it's AI to drive product innovation. Maybe it's security to protect your brand. Or maybe it's just getting infrastructure releases to production at the right standard, on time (after all, there's always a need for good project management and quality assurance (QA) people). Treat the transformation of your talent and skills efforts like any project: look for quick wins, look for value, and start with a few use cases, a proof of concept, a pilot. Don't try to boil the ocean. But keep your eye on the end goal.

Prepare to adapt

You won't have all the answers at first. You will be making decisions based on hazy information. And the situation will change, probably quickly. Be prepared to revisit your plan with subject-matter experts, with further data and in consideration of alternative scenarios.

You should build this test-and-learn mentality in from the start, ensuring you are measuring the right factors and have built a process that allows you to learn and evolve your approach.

And that approach can be embedded as part of the normal flow of work by what we call 'performing and transforming.' There is always a need to perform, to execute an immediate task, but it should be done in a way that challenges and innovates, thereby contributing to a broader long-term transformation.

Partner with HR and workforce development teams

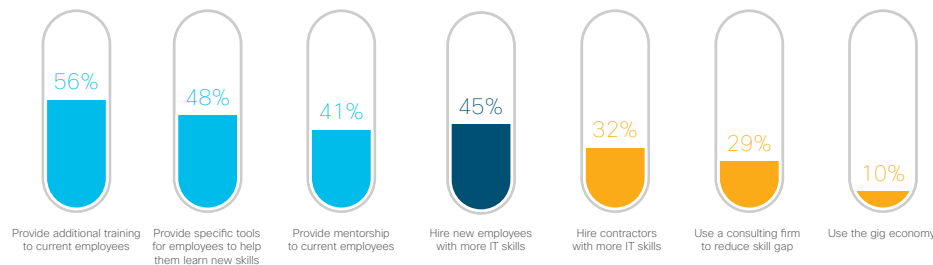
It won't come as a surprise, but you can't do any of this alone. You probably already meet regularly with your HR and finance counterparts, but from now on you'll be joined at the hip. They'll help you understand the tools and data available to you, and advise you on regulations, funding and best practices.

You'll be able to inform them of your organisation's strategy and most pressing needs.

In Cisco's IT organisation, we see HR as a strong partner. When we began our workforce transformation, we talked with our HR contacts, and they started to help us with workforce planning frameworks, introducing us to some of the tools they use within HR to get information from the market about different locations where there were talent pools. They had a huge amount of data already.

Together with your HR partners, you'll manipulate the three strategic levers that can help you navigate this talent crisis: reskilling, recruiting, and sourcing.

It's these three strategies that we examine in more detail in the following pages.



Source: Reproduced from Forrester Analytics Global Business Technographics Priorities And Journey Survey, 2018.



A bridge to the bank of the future

Banks and financial services have seen first-hand the impact of digital transformation on their business, as FinTechs and start-ups continue to threaten incumbent market leaders. While these challengers are stealing revenue, they're also stealing talent, and banks must

take steps to make sure they don't get locked into a spiral of decline.

To keep up, they must have the right talent mix of employees, who can identify sources of new value and determine how data can deliver them. To do so, they need to take a number of steps. This will include identifying gaps in talent, and understanding how best to fill these, either through retraining or hiring. Banks may need to create new roles, such as Digital Transformation Directors, who will be able to explore how to share digital knowledge across an organization.

In order to attract and develop the best talent, banks must not be shy about communicating their digital transformation both internally and externally and must do so with strong leadership support. Doing so will make sure that they can face down the threat posed to their talent pipeline by less well-known brands.

By David Maireles, Country Head Spain, RaisinGmbH

Reskill your current workforce

Your employees are your biggest asset. Give them the right skills, and they can thrive in the business of the future.

Your goal: build the right skills for the right roles



Every role within IT has a set of essential skills and knowledge that your engineers must possess if they're to be successful. The reality is that this list of skills and knowledge is changing all the time; for example, what it means to be a network engineer today is very different from how it would have been ten or even five years ago. Today's network engineers must know scripting and programmability, and be much more versed in security.

Your top priority is to make sure your teams keep pace with the evolution of skills required in their roles.

But there's a second scenario where reskilling is needed: when people move between roles. Every IT organisation (in fact, every department generally) has a set of skills and roles that are in decline, and a set that are in demand. You should strive to match up, using your skills profiles, those people who are in declining roles against their most suitable open requisitions, and get them ready to make the transition to that new role where they can start adding more value to the organisation.

In the vast majority of cases, reskilling is less costly than turning to the outside market to hire a new specialist, certainly in terms of salary and recruitment fee, but also in terms of the cost of onboarding, transferring organisational tacit knowledge, and process familiarity. Your existing people may lack certain new skills and capabilities, but they likely have a lot of what you need to give you a head start.

Make every act of reskilling a step on a learning path to role development

In both of these scenarios, the principle is the same: it's to match the skills available to those in demand, identify the gap, and bridge it. The key here is not to throw training at your engineering, development, operations and architecture teams for its own sake; every training moment should be a step on a learning path to a new role, or to a new level within their current role. You certainly don't want to train people in new skills they have no chance to use – they'll simply leave.

Cisco is currently piloting SFIA to allow us to bring in standardised job descriptions and skills taxonomy, creating the potential for all employees in our IT organisation to look at their particular job role, or the role they're interested in moving to, and have a clear, precise sense of the skills they need for future development. They can see the skills they've got and at which level. If they're planning to transition to a different role or even a different team within IT, we know that they'll be talking about the skills needed in exactly the same way. Every employee can have a clear conversation with their manager and find the right development to get them where they need to go.

Use the “three Es” for effective skills development

Training is not the only way to help your talent gain new skills. At Cisco we follow the well-established ‘three E’ model, also known as the 70:20:10 framework, which emphasises learning by doing ([Experience](#)) and learning from others ([Exposure](#)) over formal learning ([Education](#)).

In the Experience part of the model, we encourage on-the-job learning in a number of ways, including departmental rotations and stretch assignments. These put an employee into a team where they're exposed to new activities for a period of a few months – potentially even in functions outside of IT, where they can pick up a broader understanding of how the business works and learn soft skills.

Exposure to new skills is a very important tool in skills development, particularly in an organisation where new roles and talent are being injected into the team on a regular basis. As the talent mix of your organisation evolves – for example, as new graduates join, or as people switch departments – you have a huge opportunity to foster cross-pollination of skills and knowledge.

As well as the familiar mentoring and shadowing models, we use a “buddy system”, where individuals from very different backgrounds are matched to learn equally from each other. For example, in Cisco a newly-qualified network engineer learns a lot about network design and implementation from someone who has been doing that for years. Meanwhile the experienced network engineer learns about software programming from the new graduate.

At a group level, we encourage best-practice sharing from early adopters to the rest of the organisation. Identify your true pioneers and give them time to experiment. Then form working groups to share and refine best practice that can then be rolled out as training to the rest of IT. You can also make time in regular team meetings for best practice sharing, or set up a group space in your collaboration apps for people to share articles, code snippets, and other useful content they find.

Look beyond traditional training courses

We are supplementing our model so that, rather than employees waiting to receive formalised learning courses, they are given the opportunity to take charge and shape their own unique training programme. At Cisco we’re piloting the use of an online learning platform called Degreed. Individuals have a training plan for the skills they want to develop and that they need in their role, and the platform recommends specific courses to take them to the next level.

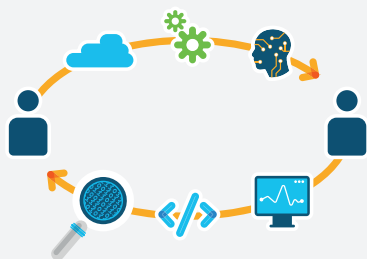
Employees will become increasingly independent, but there is still a crucial role for you in creating the right environment for learning to happen. For example, carving out time in the team calendar for individual and group training activities; incentivising and rewarding training; and deploying new tools that make it easier for employees to fit training into their commutes or downtime. You can lead by example by reporting on the training you do, and by ringfencing budget for training and development.

66% of Cisco-certified professionals prefer self-paced eLearning for training⁵.

⁵Learning@Cisco Customer Insights Survey, Cisco, January 2018



Invest in training as a recruitment and retention benefit



Investing in training and skills development has value beyond the immediate pressure of the skills gap. It is instrumental in driving employee engagement and retention, as well as helping persuade talent to join your business – both critical factors in such a competitive market.

87% of millennials rate “professional or career growth and development opportunities” as important to them in a job⁶.



For more research on the future workforce, and to learn more about the different kinds of training available, check out our Training Services site.

Recruit new talent

Some of the roles and skills you need in your organisation can't be filled by training alone. How can you get the people you need in a competitive market?

Target the skills you need precisely

Start by knowing exactly what you're looking for. Once you've agreed on a skills vocabulary and have mapped out your role requirements, get sharp about your job descriptions. Clearly defined roles with industry-standard terminology (instead of company-specific jargon) will make it easy for recruiters and talent to understand what skills you're looking for, and at what level. Keyword-stuffing your job descriptions will just inflate salary expectations. If you're struggling to hire for a particular job description, look at how you might split up that role's responsibilities into multiple lower-grade recruits, or even combine roles (and salary budget) to reach top talent.

Go where the talent is



Every country has a primary hub for tech talent, whether it's London in the UK or Silicon Valley in the US. If you want the best people, these hubs are a good place to start. But these hubs also have the fiercest competition and the highest salary expectations, and you may benefit from a multi-location talent strategy. This could involve tapping into secondary concentrations of talent that you can access by establishing satellite offices (even if they're in a temporary co-working space). If your team culture and productivity tools are up to the challenge, you can also expand your remote working policies and start to recruit talent on a national, regional or global basis, giving you access to the widest possible pool of candidates, potentially at a much lower cost.

And remember: not everyone wants a full-time permanent job, either. Contractors, part-timers, freelancers, fixed-term hires and “gig economy” workers all have something to offer. Don't rule them out automatically just because you assume you need an on-site full-time employee (FTE).

⁶<https://www.gallup.com/workplace/236438/millennials-jobs-development-opportunities.aspx>

Research from Capgemini found that 59% of businesses were opening branch offices in areas with the best supply of digital talent.

Compete on more than just salary



When you get to the stage of making offers, the first thing you and your hiring managers need to know is that competing on salary alone isn't an effective strategy. Not least, overpaying for key staff would strangle your Operating Expenses (OPEX) budget for every quarter that follows. If you're having trouble getting applicants, throwing more money at them is a dangerous strategy.

Remember that talent doesn't just follow money.

Top performers want to work on interesting projects, alongside other bright minds. If you have a powerful company mission, great perks, operate in an area with a low cost of living, or have won awards for culture, use all of those factors to increase your appeal.



In order to attract and develop the best talent, banks must not be shy about communicating their digital transformation both internally and externally and must do so with strong leadership support. Doing so will make sure that they can face down the threat posed to their talent pipeline by less well-known brands.

By David Maireles, Country Head Spain, RaisinGmbH

Streamline the process

When you're looking for the best, and paying top-dollar, it's natural that you want to minimize your risk and be absolutely certain about who you extend an offer to. But in a fast-paced talent market, you will lose the best candidates to more decisive competitors. If you require every IT recruit to go through a multi-week cycle of interviews and tests you will weed out not just the weak talent, but the best. You'll also delay the start date of a potentially critical hire.

Some organisations have experienced success with faster recruitment but more active onboarding and performance management to minimise risk to the organisation. In addition to the standard interviews and tests, you can quickly identify top talent by posting online challenges or hosting group events like hackathons. Start adopting the mindset of a sports team's talent scout.

According to Glassdoor, the average length of the interview process in France is 39 days and 27.5 in the UK, compared to just 16 days in India⁷

⁷<https://www.glassdoor.com/research/time-to-hire-in-25-countries/>

Contribute to the flow of talent



As a business, you're ultimately dependent on graduates emerging from university with the right skills that the job market needs. You're in a position to form relationships with your local educational establishments, to be represented in the syllabuses they're teaching, and to lobby government to make them aware of the kinds of skills you're looking for. The more you can contribute to educational institutions – in terms of

work experience schemes, for example – the greater your awareness will be with their student base and the more successful your intake when the annual careers fair rolls around.

Remember to retain, not just recruit

It takes twice as long to fill a leaky bucket. If you have talent with skills in key areas, work hard to keep it. Benchmarking salaries and ensuring your top talent is fairly compensated is a start. Just as important is building a management culture where your best people feel they can come to you for a chat when a recruiter is trying to poach them or when they're feeling burned out.



A recruitment strategy to bridge the technology skills gap



Talent is no longer a commodity that you can acquire readily and easily but there is a wealth of unskilled resources waiting to be tapped. Businesses and CIOs especially need to have a comprehensive talent acquisition strategy that includes most if not all of the following:

- Trusted and strategic talent acquisition partners in the key niche recruitment sectors they operate in, with good market intelligence to source mission critical skill sets.
- Flexible working policies to attract a diverse workforce.
- Understanding of the key competencies that new recruits and employees must possess plus proactive alignment of individual's values set to the core values of the business.
- Strong relationships with educational establishments to attract the top talent locally and tap into the 44% low skilled population.
- Comprehensive retraining and reskilling programmes to ensure existing employees are constantly up-skilling themselves.
- A culture of continuous learning.

Rapid technological change shortens the shelf-life of hard skills. This means that soft skills such as problem-solving, critical thinking, emotional intelligence, abstract concepts, original thoughts, persuasion and the ability to rationalise conflicting concepts will all become more important.

Ian Knowlson, recruitment expert and founder of Global Recruitment Thought Leaders

Smart sourcing for better outcomes

If you limit yourself only to recruiting and retraining your in-house IT teams, you're missing a trick. Your vendor partners can be a valuable part of your skills mix.

Are you using your vendors as a source of skills?

Use of third-party vendors as service providers in the realm of IT is not new – in fact, it's extremely widespread. But you may not be evaluating and utilising your vendors from the perspective of how they can help you address skills shortages.

As CIO, your goal is to deliver the best value to the business: the most effective outcomes, sustainably, for the lowest cost. In certain circumstances, recruiting or training are the optimal solutions. In others, engaging a vendor might be the right strategic approach – especially if you look at the big picture.

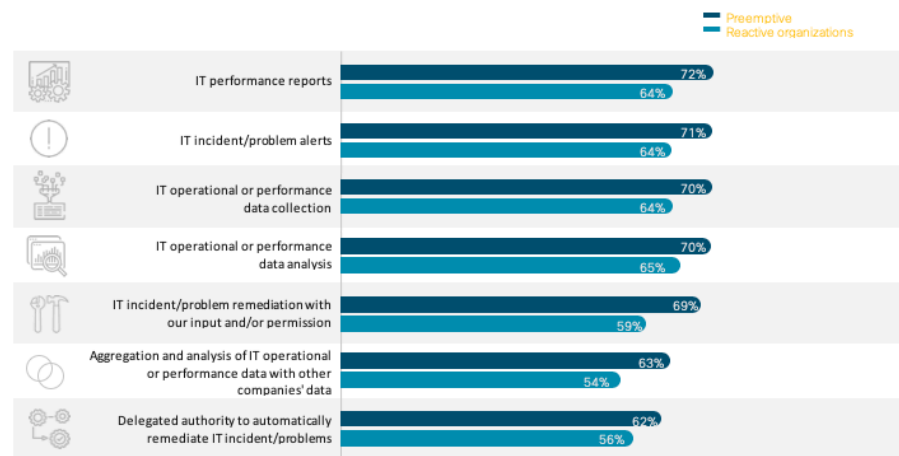


Use outsourcing to shed declining skills roles

Take outsourcing, for example. The conventional application of IT outsourcing (ITO) and Business Processing Outsourcing (BPO) models is to offload non-strategic, mature functions (like helpdesk or client-device parts management) to a provider that can deliver measurable results at a lower cost. As a model, outsourcing is not designed to bring strategic talent into your team, but it may well free up internal roles, headcount or budget that can be applied to more strategic skills areas.

'Managed services' is a less loaded term than outsourcing, although it has the same benefit of giving you access to skills and results without bringing on board additional headcount. And you can often find managed services covering certain strategic activities, even with cutting-edge technologies.

In research we recently conducted as part of the Cisco IT Operations Readiness Index, we asked 1,522 senior IT leaders from around the world how they used vendors for activities related to analytics and automation of their IT infrastructure. Most organisations used vendors to perform multiple key tasks in this value chain, from data collection and aggregation to reporting and remediation. The more advanced organisations (which we called "pre-emptive" organisations) used vendors more extensively.



Q. Is your organization currently relying on or planning to rely on external vendors for any of the following capabilities?

For many organisations, as we have seen, data analytics is a key growth area for skills – the best organisations are realising that, while they need to employ data scientists and fill other roles, they can also engage outside vendors to contribute to performing many strategic tasks.

Engage outside experts for technology transitions

Skills crunches often occur when you're looking to run a significant technology transformation – say, a network upgrade or opening up a new Security Operations Centre (SOC). In these situations, you'll find yourself lacking both cutting-edge technology skills, but also capacity – possibly only for a duration of a few months or quarters.

Whether it's top-level strategic consulting from a Big Four firm, or a more tactical engagement for new technology deployment, a third party provider can give you temporary access to specialist expertise without you having to hire or train for it. You may also get the benefit of an external perspective, best practice methodologies, and other intellectual property. And a quality vendor will work hard on knowledge transfer, onboarding and documentation during the project, thereby contributing to your reskilling goals at the same time.

The benefits of sourcing expertise from outside vendors extend beyond simply the access they give you to skills, anywhere in the world. Depending on how your business manages and reports on IT costs, you might find it beneficial to spend budget on vendor experts than on in-house headcount, as well as the ability to scale capacity when needed.

For an example of knowledge transfer between vendor and customer in action, take a look at our engineering Talent Exchange project with leading bank BBVA.

Push the boundaries of engagement models

But alternative sourcing models don't stop there. Alongside traditional outsourcing and managed services contracts, many vendors offer staff augmentation services, where experts in specific skills, technologies or development languages come and sit onsite as an extension of your team. Platform or marketplace models give you access to crowdsourced talent on a temporary or ad hoc basis, without the formality and friction of recruiting an individual contractor.

Percolate, a marketing technology software as-a-service (SaaS) company, tried many different approaches to recruit software engineers (including opening new offices and employing remote workers) but struggled with the talent gap. It partnered with a company called Andela, which gives companies access to developers in Africa as a distributed extension to their engineering teams.

"We are in constant competition ... and the pool of qualified people to join our team never seems big enough. When we decided to move forward with Andela, I was sceptical at first ... so we decided to try a pilot with them. We brought on two engineers into a team that was already pretty distributed ... the pilot went really well, and we got to know Eric and Angie and they became a part of our team... From there, we scaled up to 6 developers from Andela and we couldn't be happier with the arrangement."

Zach Haehn, VP of Engineering, Percolate⁸

Cisco offers a full lifecycle of professional, managed, support and training services across the technology landscape. To find out more about these services, check out our website.

⁸<https://blog.percolate.com/2019/01/4-questions-zach-haehn-building-optimal-engineering-team/>

The IT team of the future

Where will the talent gap take us over the medium term? The role of the IT team is clearly changing at pace, and those that embrace change will be marked out from those that don't.

As all businesses become digital and tech-first, there is a huge opportunity to recast the role of the IT function and place it at the heart of the business, interpreting and leading digital change:

The IT practitioner of the future

Fluent in the language of business

The IT teams of the past had narrow, transactional roles, focusing on infrastructure. The implications of digital are so widespread, that they now need to be as comfortable talking about marketing as networks.

Focused on value not cost

As digital becomes increasingly core to business strategy, the CIO will become a more important commercial partner, helping to drive growth

Data-driven

In this fast-changing area no-one has all the answers yet – this means the IT organisation needs to be data-driven and iterative, demonstrating what works and what doesn't with hard evidence.

Continuously learning

The future is hard to predict and so continuous learning that enhances new skills to keep up with new technologies as much as requirements in the business will be critical.

Practiced in soft skills

As digital transformation pushes the IT team to the heart of the business, they will need to find new levels of diplomacy and teamwork to allow them to find connections across functions.

Part of fluid teams

As CIOs adjust to the changing pattern of skills and job roles, teams will need to become more mixed between vendors, partners and agencies.



Keep the debate going

It is clear from our own experience and all the experts we talked to while compiling this report that there is no silver bullet for solving the IT talent gap.

Businesses need to find their own mix between redeployment, retraining, new hires and strategic sourcing from external vendors. Some will be affected by digital transformation more than others. Levels of preparation vary hugely between and within sectors.

We hope, though, that we have started a debate and can inspire others to share their own tips and experiences.

Technological progress and the disruption that comes with it is too often framed as a threat to be managed. As we hope we have shown – by taking the right steps to get ahead of and manage the change, it can open up huge opportunity within the IT function and beyond.

We will be carrying on the conversation on our LinkedIn feeds and we welcome observations, problems and challenges from readers. We look forward to hearing from you. In the meantime, keep up to date with our coverage of the bridging the talent and skills gap on our Executive Perspectives page.



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