

# Emerging Jobs: Singapore

The fastest growing jobs in the country

 Talent Solutions



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# Introduction: Sailing the changing tides

## New jobs are emerging more rapidly than at any other time in history.

One estimate says change is happening so fast that by the time a student graduates from their four-year technical degree, nearly 50 per cent of what they learnt in their first year will be outdated.<sup>1</sup> It's not just a case of old jobs dying and fresh jobs being born. Traditional roles are mutating and evolving into new hybrids before our eyes, and we now have to commit to a lifetime of learning.

Jobs that sounded obscure and niche yesterday are suddenly commonplace today. In Singapore there are many people who would have called themselves Head of Marketing five years ago, and who may now be found working as a Head of Digital.

For HR and talent acquisition professionals this poses significant challenges. How do you hire for jobs that did not exist five years ago? How can you predict where the gaps in your workforce will be? How do you upskill and reskill your existing workforce to rise to the challenge?

Perhaps better than any other country, Singapore understands the importance of

adaptability. A nation with limited arable land and natural resources, it famously worked to become the gateway to Asia. As a regional hub, it is at the forefront of global trends and developments, however, it has not let itself drift on the tides of change. Singapore's adaptability will become more relevant than ever as new jobs emerge at an increasingly faster pace.

It is no surprise when looking at Singapore's top five emerging jobs they all orbit around tech, but the actual roles are varied and diverse – painting a picture of a labour market that values both hard, technical skills as well as soft skills.

Understanding the macro trends and how they shape the world is key to understanding what your own workplace may soon be looking for.

This is where LinkedIn data comes in. Over 2 million people in Singapore have a LinkedIn profile – more than half the working-age population. This enormous dataset evolves in real-time, making it a powerful source of insight to any organisation strategising about the future of its workforce.

## The top five emerging jobs:

- 1 Data Scientist
- 2 Cyber Security Specialist
- 3 User Experience Designer
- 4 Head of Digital
- 5 Content Specialist

# About this report

This report has crunched LinkedIn's unique data from the last five years to identify the top up-and-coming roles and the skills needed for each.

It looks at what roles are on the rise, where the talent has come from, and where it resides today.

We hope this report will serve as a helpful resource that HR and TA teams can use to:

- **Educate hiring managers and business leaders about the challenges and opportunities that exist in the Singapore jobs market**
- **Reference in executive discussions to give a bird's eye view of the hiring marketplace**
- **Understand what skills to look for instead of job titles**
- **Glean insights into the nature of emerging roles**

## How LinkedIn data reveals what's emerging

### Our methodology for this report

We looked at all LinkedIn members in Singapore who included work experience on their profile.

We then grouped together the millions of unique, user-input job titles based on common job roles. This involved clustering job titles together.

For example, our category of 'machine learning engineer' includes user input titles such as 'machine learning software engineer' and 'machine learning engineer II.'

We then counted the frequencies of job titles that were held in 2013 and compared the results to job titles that were held in 2017.

Our 'emerging jobs' are the top five job titles that saw the largest growth in frequency over the five-year period.



01

## At a Glance: Key Takeaways



# You will soon be looking for hybrids (if you aren't already)

Singapore is still surfing the wave of digitisation, meaning the demand for hard technical skills is growing.

However, digitisation means more than just software engineers and coding experts. Just as the shift to automobiles generated demand for car salespeople and drive-throughs, the rise of tech is creating a demand for a diverse range of talents.

The top emerging jobs for Singapore are all related to tech, but many of them require management and communication skills making them hybrids of new and traditional roles—think of roles like Growth Marketers or User Experience Designers.

According to the World Economic Forum's The Future of Jobs Report, by 2020 more than a third of the desired core skill sets of most occupations will be comprised of skills that are not yet considered crucial to the job.<sup>2</sup>

In this landscape tech may dominate, but soft skills are vital to get the most from our digital world, whether it's understanding data, communicating clearly, or managing projects.

Yet the problem with desirable soft skills – like adaptability, collaboration, and leadership – is they can be tough to identify. Candidates will often either oversell, or undersell, what they bring to the table. With business set to continue evolving fast, the challenge for HR and talent acquisition teams is to find reliable ways to identify individuals with soft skills that can be built upon at scale. Organisations need a workforce that is change-adaptable, responsive, and engaged.

<sup>2</sup> World Economic Forum: [The Future of Jobs Report](#)

# Content is Singapore's emerging niche

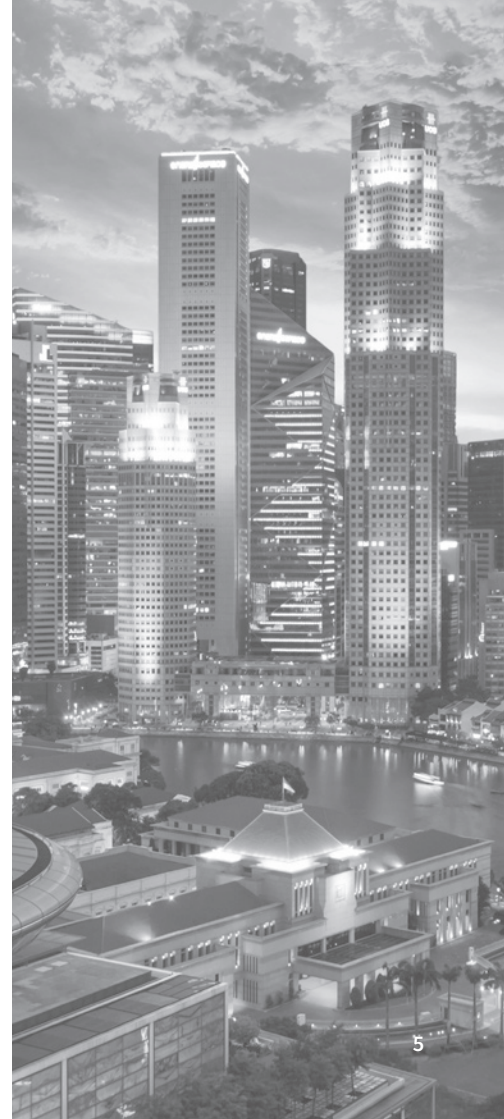
The emerging jobs data underscores Singapore's status as the gateway to Asia, and regional headquarters for global organisations across APAC.

Global businesses with regional headquarters in Singapore require content which can be readily localised for different markets across Asia.

Singapore's emerging content niche can be leveraged and scaled up across Asia – explaining why the role of Content Specialist is a top emerging job unique to this particular talent market.

Much content work is done in English, so while Content Specialist roles are being filled by locals, they are also being snapped up by professionals or international talent from the UK, Australia, and India.

The challenge for HR and TA teams is learning to understand the unique, and mostly soft skill set that is required for effective Content Specialists. Another factor to be conscious of is that an emphasis in Singapore schooling on STEM over humanities subjects may expose a gap in the future workforce amid the rising demand for content.





# The government's lead on education and training is a model that should be emulated

All governments understand that technology's advance will drive significant and unpredictable change. The Singapore Government, however, is a great example of how proactive policies can help create a flexible workforce in anticipation of a shifting landscape.

Singapore understands that skilled and adaptable people will be the key to keeping the nation's international standing as a global financial and innovation hub. Strong and targeted public investment in education is well-known. A key aspect of this is lifelong learning, with the government funding retraining and upskilling.

HR and TA teams can take their cues from the government's lead and global companies who leverage on analytics to predict their future needs. Working hard on anticipating where your organisation is going to have a skill gap in five years' time can give you a head start on in-house training today.

Investing in individuals you already know and trust helps an organisation to develop the skills it needs, while retaining valuable institutional knowledge. Research shows investing in your workforce will deliver retention and loyalty.<sup>3</sup>

<sup>3</sup> CultureNext: Engagement and Loyalty: [How Employees Can Be Your Best Customer Advocates](#)





# Talent scarcity means HR needs to innovate faster

Data from Singapore's Ministry of Manpower reflects LinkedIn's own findings – demand for emerging roles is strong, but talent is thin, both locally and globally.<sup>4</sup>

When talent is sparse and competition is fierce the 'perfect candidate' will be highly discerning and very expensive. HR and TA teams already know the talent market is tight. But if necessity is the 'mother of invention,' then scarcity must be a favourite aunt.

The shift in thinking needs to involve hiring for skills instead of job titles, offering opportunities to learn and train, and developing bespoke strategies to retain top talent.

The emergence of privately funded institutions, like SingTel's Cyber Security institution, Google's Squared Data and Analytics Program or DBS Asia Hub 2 Centre, demonstrates that large organisations are taking training in-house and creating their own supply. It also reflects the government's own thinking – talent doesn't just appear, perfectly formed, it must be fostered and developed.

<sup>4</sup>Ministry of Manpower: [Job Vacancies 2017](#)

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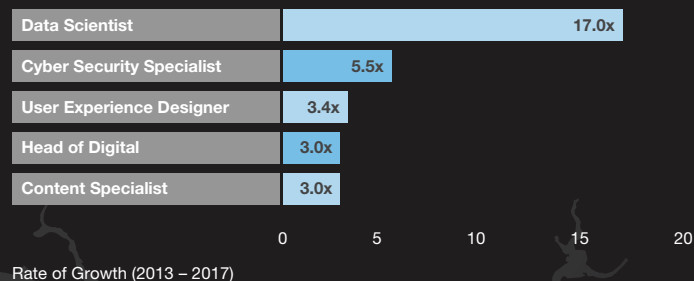
# Deep Dive:

## The top 5 emerging jobs

LinkedIn has crunched its enormous stack of data from the past five years to identify the **top emerging jobs in Singapore**. Our data shows us the career paths most people have taken into these roles, as well as the skills most commonly associated with the jobs.

Identifying these leading emerging jobs offers HR and talent acquisition teams a unique insight into where the jobs market is heading.

### GROWTH IN THE TOP 5 EMERGING JOBS



# 1 Data Scientist

Business is now driven by data. Whether it's financial or customer insights, companies are looking to people who can make sense of data to boost value and drive growth.

Today, Data Scientists are being presented with excellent opportunities right across the globe, and in Singapore they're not only the fastest emerging job, but also the most in demand, according to LinkedIn's data. India continues to be a top source of talent for filling technical roles in Singapore.

Looking at the career path of Data Scientists, many of them come through academia. This academic history poses challenges for HR and talent acquisition teams. Will these candidates be the right fit for the company and its commercial objectives?

Qualitative research by LinkedIn indicates Data Scientists coming from academia can be motivated by the lure of working on stimulating or influential projects.

The promise of engaging work, and the scope to drill down into interesting data, can be powerful drawcards for curious and intelligent candidates.

## WHERE THEY WERE FIVE YEARS AGO

Researcher

Data  
Scientist

PhD

Software  
Engineer

Research  
Assistant

We looked back at the career paths of professionals who hold these top 5 roles to get a sense for where they were in their careers 5 years ago.

## 2 Cyber Security Specialist



Our lives and workspaces are now digital by default – in 2017, there were 8.4 billion connected smart devices. In 2020 that number is forecasted to reach 20.4 billion.<sup>5</sup>

The advent of the Internet of Things further widens the digital landscape, but also exposes our work and data to additional hacking risks and breaches. The boom in cybercrime, which is predicted to cost \$US6 trillion by 2021, double what it cost in 2015, is the very real downside of being able to carry much of your life on a device in your pocket.<sup>6</sup>

Cyber Security Specialists are in rising demand as organisations and individuals become increasingly aware of the huge threat that cybercrime and cyber espionage potentially poses.

### WHERE THEY WERE FIVE YEARS AGO

Cyber  
Security  
Specialist

Security  
Specialist

Information  
Specialist

Information  
Technology  
Security  
Specialist

Security  
Consultant

<sup>5</sup> Gartner: Gartner Says 8.4 Billion Connected "Things" Will Be in Use in 2017, Up 31 Percent From 2016

<sup>6</sup> Herjavec Group: 2017 Cybercrime Report

## 2 Cyber Security Specialist

### Singapore's response to a global priority

Our exposure to cyber threats is not only increasing, but the threats themselves are rapidly evolving. Cyber criminals have shifted from tech-based attacks, such as hacking or malware, to attacks which exploit the human on the other end of the device – such as phishing, social engineering, and ransomware.

The ransomware attack of WannaCry in May 2017, which affected 300,000 computers and caused billions of dollars in damage, demonstrated our beloved devices can be weaponised against us.

The threat is growing and evolving, and so is demand for protection – in Singapore, the cybersecurity market is projected to grow to over US\$678 million by 2020.<sup>7</sup>

Singapore's own Cyber Security Agency (CSA) predicts a demand for 3400 cyber security professionals to support our projected growth and a global shortage may severely constrain the industry.<sup>7</sup> Singapore is funding cyber security programs, to upskill existing IT talent and train future experts.<sup>7</sup> The state is also investing in research, after identifying a niche for the nation to develop its expertise in.

SingTel has heard the call and launched its own Cyber Security Institute, after discovering 85 per cent of Singapore companies didn't have any cyber security response plan.<sup>8</sup>

The institute's aim is to test and train organisations, from technical responses to crisis communications, so that they are ready to confront sophisticated cyber threats.

<sup>7</sup> GovInsider: Exclusive interview: Singapore's cyber security czar

<sup>8</sup> SingTel: SingTel launches first-of-its-kind cyber security institute in Asia Pacific to hone cyber skills and preparedness

# 3 User Experience Designer



“How can I make the user’s experience better?”  
That is the fundamental question that drives User Experience Designers.

Whether it’s improving an app, developing a website, or making products easier to use – the User Experience Designer role requires talent with a hybrid of soft skills – like analysis, collaboration, and prioritisation – with hard skills, like coding and prototyping.

Increasingly UX Designers are breaking out of their tech company silos and spreading across the workforce. The emergence of this role in Singapore is being driven, in part, with the financial sector looking to revamp apps and improve digital offerings.

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## WHERE THEY WERE FIVE YEARS AGO

User  
Experience  
Designer

User Interface  
Designer

Graphic  
Designer

Web  
Designer

Art  
Director

# 4 Head of Digital

We've got the tech capability, but how can we make the most of it? Enter the Head of Digital.

A blend of marketing and digital, they lead projects in large organisations often stewarding complete digital transformations, like bringing a traditional business into the digital age.

While the role sounds tech heavy, it also requires excellent soft skills, especially communication and management. Similar to User Experience Designers, the emergence of this role may in part be attributed to more financial institutions investing in online and digital.

A rise in the numbers of Heads of Digital at these large financial institutions is a strong signal that further digitisation is on the way, given that banks in Singapore are some of the best internationally-connected operations.

## WHERE THEY WERE FIVE YEARS AGO

Head of Digital

Digital Specialist

Head of Marketing

Marketing Specialist

Head of Information Technology



# 5 Content Specialist



Companies need to produce relevant content that engages the target audience and ensures key messages are heard.

The Content Specialist role requires excellent soft skills, especially communication. Singapore is proving to be a Content Specialist hub, for organisations with regional offices.

Think of it as the role that has evolved out of the demand for content that social media and digital created. Building thought leaders and influencers continues to be an important strategy for many companies.

Contrary to common perceptions, a good Content Specialist does not necessarily have the same skills as a good Copywriter. Many Content Specialists are coming out of journalism and publishing, because they're able to tell a compelling story that resonates with their audience.

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## WHERE THEY WERE FIVE YEARS AGO

Content Specialist

Digital Specialist

Marketing Specialist

Content Manager

Editor

03

## Talent Migration



# Where is talent coming from?

The reality is a global hub requires global talent. While Singapore is committed to upskilling its local workforce, there remains a shortage of technical talent in the market.

In 2017 Singapore's Ministry of Manpower found that Professional, Manager, Executive, and Technician (PMET) roles were the fastest growing segment of the labour market. The roles included software, web, and multimedia developers; teaching and training professionals; marketing and sales executives; and management executives – all of which reflect LinkedIn's new data on emerging jobs.

According to the Ministry of Manpower, employers are citing that a lack of necessary skills and work experience is the biggest hurdle to finding suitable talent, particularly in IT-related roles.<sup>9</sup>

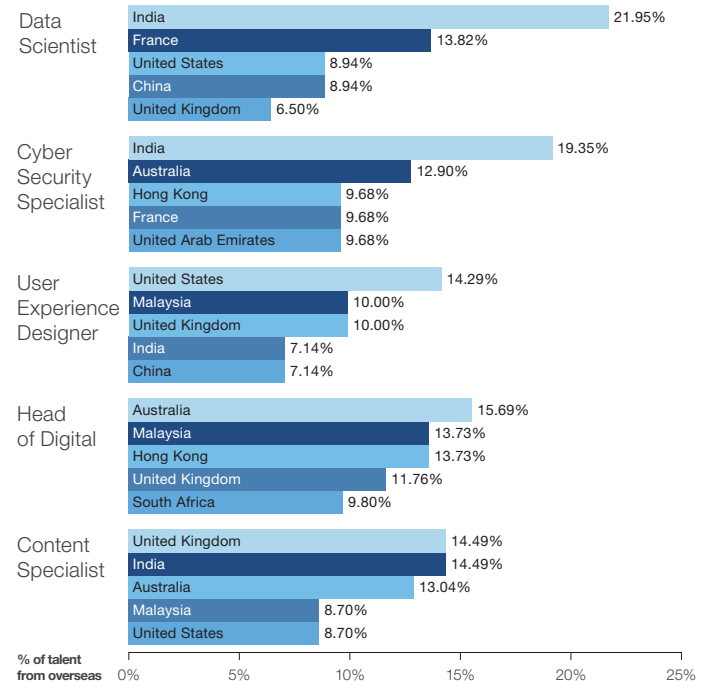
<sup>9</sup> Ministry of Manpower; [Job Vacancies 2017](#)

\* Migration in this report is defined by a change in country location as indicated by members on their LinkedIn profile. We looked at members that changed their location to Singapore from 1st January 2017 onwards and their previous location.

## Talent Migration to Singapore

This graph shows the previous locations (Top 5) of talent that migrated to Singapore since Jan 2017. For example, out of all data scientists that migrated to Singapore, 22% were previously based in India and 14% were previously based in France.

### Talent Migration into Singapore\*



04

## Skills Matter



# Hire for skills, not job titles

As the blurring and melding of job titles picks up pace, the key to attracting the best people will be to focus on a candidate's skills over their previous job titles.

In-house training can help upskill your Data Analyst to a Data Scientist. There are several shared transferable skills that the emerging jobs have in common: management, digital literacy, critical thinking, creativity and presentation. These broad brush strokes paint a picture of talent that is adaptable and able to meet the demand of an evolving workforce.

HR and TA teams could benefit from looking for aptitudes such as adaptability, resilience, and entrepreneurial skills, rather than cookie-cutter resumes filled with previous job titles.

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“ I think the skills in demand today will still be prevalent in five years time, but new technologies will change how these roles evolve over time.

We tend to hire a mix of specialists and people with diverse skill sets as we find both have different strengths for helping our business grow.

Specialists are acutely aware of new and emerging technologies in their area so they help us to be early adopters, whereas people with diverse skill sets are more nimble when it comes to moving between different projects or areas.”



**Katie Noakes**

Talent Acquisition and  
Employer Brand Lead,  
The Iconic

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## The soft skills in demand

In the US, LinkedIn recently surveyed more than 1,200 hiring managers to find out the most desirable soft skills they are looking for in a candidate.

### The top six:

- **Adaptability**
- **Culture fit**
- **Collaboration**
- **Leadership**
- **Growth potential**
- **Prioritisation**

The top tool hiring managers are using to evaluate soft skills is the behavioural interview question – “tell me about the time when...”

# Top skills for the top 5 emerging jobs

## DATA SCIENTIST

- Data science
- Machine learning
- Analytics
- Data mining
- Big data
- Hadoop
- Data analytics
- Matlab
- Management
- e-Commerce
- Business analytics

## CYBER SECURITY SPECIALIST

- Computer security
- Security
- Cyber
- Consulting
- Management
- Information security
- Cisco Systems products
- Sales
- Research

## USER EXPERIENCE DESIGNER

- User experience design
- User experience
- Design
- User interface design
- Wireframing
- Banking
- e-Business
- Mobile devices
- Adobe Illustrator
- Web design

## HEAD OF DIGITAL

- Digital marketing
- Internet banking
- Management
- Communication
- Leadership
- Digital strategy
- Digital transformation
- Business
- Digital economy

## CONTENT SPECIALIST

- Content marketing
- Digital production
- Management
- Marketing
- Sales enablement
- Communication
- Content delivery
- Research
- Messaging
- Project management

## Upskilling locally and hiring globally

Grab is one of Southeast Asia's fastest growing and most successful tech startups, and was recently ranked #6 in CNBC's 2018 Disruptor 50 global list.



Grab, like many other organisations in Singapore, notes technical roles are the hardest to fill. They have adopted in-house learning to try and help bolster their own workforce.

"We have peer-to-peer learning programs. There's one we call "embedding", where we place people to work in different teams for a period of time so they can experience what it's like to be in engineering, tech or other teams."

With more than 40 nationalities in the Singapore-headquartered office, Grab also looks for talent globally. But that poses a challenge in attracting in-demand people to move, especially when talent may not be familiar with their brand.

As part of their hiring strategy, they've opened offices in Seattle, Beijing and Bangalore to tap into these cities' tech talent. Grab has adopted a multi-pronged, long term view on cultivating tech talent in the region, including offering scholarships and using their global talent to mentor younger people still in training.<sup>10</sup>

“Grab is committed to growing talent in the local market. We will continue building our R&D hub in Singapore while growing our talent hubs in Indonesia and Vietnam because we believe we are growing the next generation of tech leaders there.

We want to hire the brightest and smartest people who also fit in Grab's culture. We want to make sure there is a lot of interaction between our talent across different hubs. Coaching and mentoring is a big part of Grab's culture.”



**Chin Yin Ong**

Chief People Officer,  
Grab.

<sup>10</sup> Excerpts taken from a LinkedIn interview conducted for this report



# Using these findings in your talent strategy

Savvy leaders believe that planning for the future workforce to meet technology and market demands, means being ready for change.

So the long-term challenge for HR and TA teams is to identify talent with agility, versatility, and the capacity for retraining. At the same time HR and TA needs to educate these same leaders and hiring managers about the real state of the market. When it comes to emerging jobs, realistic expectations need to be set and different attraction and retention strategies employed.

Practically, hiring for these emerging jobs is difficult when demand is high and growing. Consider searching for people by top previous jobs, or those with experience at the organisations on LinkedIn that employ the most emerging job professionals. Hiring for actual and adjacent skills and not job roles also makes sense.

For organisations with the resources, another approach might be to open offices in global locations where talent can be identified.

Re-skilling is another logical option and a great contributor to employee engagement and retention. The key is to think beyond an employee's current role, to adjacent and current hard skills and their soft skill fit.

Whichever approach is taken, remember hiring is a competitive sport. You need to clearly articulate why candidates would want to join your organisation, whether it's programs that cater to wellness, flexibility, mobility or interesting data sets in the case of Data Scientists and make sure this is reflected in your employer brand.

And bonus points if you have a rockstar CEO who lives and breathes your purpose or has a relevant career path that you can use as a talent magnet.

05

# Talent Intelligence

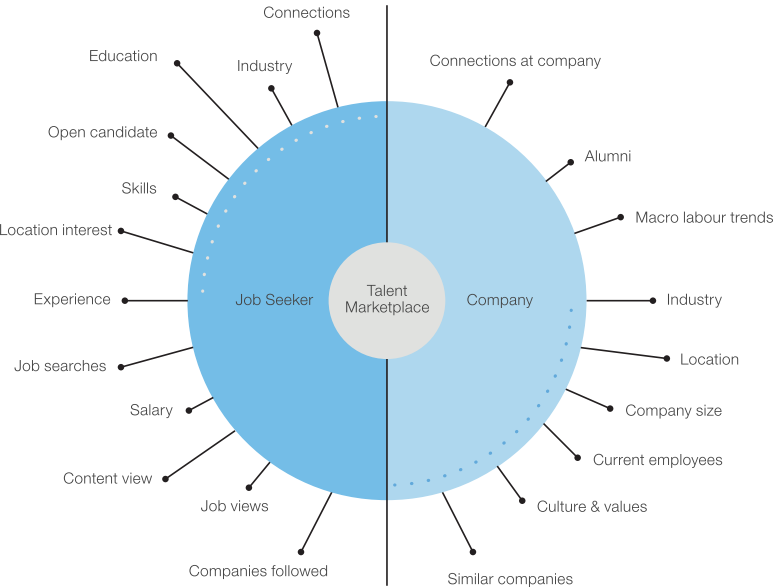


LinkedIn’s vision is to create economic opportunity for every member of the global workforce. Executing on that vision begins with mapping the digital economy – or creating the world’s first economic graph.

LinkedIn’s Economic Graph is a digital representation of the global economy based on data generated from 575 million members, 50,000 skills, 26 million companies, more than 15 million open jobs, and 60,000 educational institutions. LinkedIn has created the world’s largest talent marketplace where candidates and companies are interacting every single day. While 10 years ago we had a relatively small collection of profiles and some engagement, we now have a robust community where billions of interactions are taking place every day.

The insights generated from these billions of interactions can enable today’s HR leaders to answer some of the most deep and complex questions raised by the CEO and senior business leaders.

LinkedIn has created the world’s largest talent marketplace where candidates and companies interact every day.



# Final thoughts for HR and TA teams

1

KNOW THE  
SKILL NOT JUST  
THE JOB TITLE

Finding candidates ready to move into one of the emerging jobs means looking beyond their current title, hiring for the future state of the business means hiring for potential – potential to learn, grow and adapt in a world of digital transformation.

2

IT'S ABOUT  
SOFT AND HARD  
SKILLS

Foundational or adjacent hard skills are table stakes, but no matter how technical the role, it's the soft skills that will show you who's good versus who's great.

3

GET READY  
TO COMPETE

It's about supply and demand, know your unique differentiators, preferably by job group and articulate consistently through your employer brand.

# About LinkedIn's Economic Graph

LinkedIn's Economic Graph is a digital representation of the global economy based on data generated from 575 million members, 50,000 skills, 26 million companies, more than 15 million open jobs, and 60,000 educational institutions. In short: it's all the data on LinkedIn.

Through mapping every member, company, job and school, we're able to spot trends like talent migration, hiring rates and in-demand skills by region. These insights help us connect people to economic opportunity in new ways. By partnering with governments and organisations around the world we help them better connect people to opportunities.

[Read more about the Economic Graph](#)

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575M MEMBERS



50K SKILLS



26M COMPANIES



15M OPEN JOBS



60K EDUCATIONAL  
INSTITUTIONS

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