

Too old? Not a tech geek? The ICT sector welcomes you



This week, we focus on the fast-growing ICT sector, which has generated numerous jobs and seen many mid-career entrants — both young and old — successfully making the switch, and proving that age and a lack of familiarity with ICT are no significant barriers.

By Kenneth Cheng -
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Amid the slowing economy and uncertain job market, many Singaporeans have said they are unsure of where to start looking for opportunities in several growth industries. To that end, TODAY has launched an eight-part weekly series that looks at the openings available, the prospects and how workers can equip themselves with the skills for these positions. In the previous instalments, we looked at the logistics, food manufacturing, hotel and early childhood industries.

This week, in the fifth part of the series, we focus on the fast-growing information and communications technology (ICT) sector, which has generated numerous jobs and seen many mid-career entrants — both young and old — successfully making the switch, and proving that age and a lack of familiarity with ICT are no significant barriers.

SINGAPORE — In stark contrast to some industries which are going through tough times, the booming information and communications technology (ICT) sector is where the jobs are, with mid-career workers making a beeline for courses in skills such as website development to prepare themselves for new opportunities.

However, for some older workers like Mr Chong Hoi Ping, 56, who lost his job as a business manager in 2015 after failing to meet the sales target, there may be self-doubt over whether they are able to learn the necessary skills quickly enough to ride the wave.

But as Mr Chong has realised, his worry was unfounded. Having completed a five-day Certified Information Systems Auditor course run by NTUC LearningHub, he is preparing for an exam via self-study by global certification body Isaca in June.

Mr Chong, an electrical engineer by training, said deep technical expertise was not a pre-requisite for auditing. The course, which covered topics from evaluating project management to quality control, met his needs with a “broad but not very in-depth” IT element, said Mr Chong, who hopes that an Isaca certification would raise his chances of finding a job.

Mr Khoong Chan Meng, director and chief executive of the Institute of Systems Science (ISS) at the National University of Singapore (NUS), reiterated that age is not a huge barrier in learning ICT skills. The oldest trainee on its Professional Conversion Programme (PCP) class for data analytics, for instance, is 50.

“It depends ultimately on the attitude and work ethics of the individuals,” he said.

Singapore’s ICT sector is expanding at a rapid clip, fuelled by the Republic’s push to become a Smart Nation. Technological advancements have created a multitude of opportunities in the sector not only for those already in the field, but also mid-career entrants.

Another unlikely mid-career entrant is former business consulting associate manager Christopher Khoo, 32. The Cambridge University chemical engineering graduate joined online grocery retailer honestbee in November last year as a software engineer.

Driven by the desire to build more “tech empathy”, he attended a three-month web development immersive course last year at educational institution General Assembly, with subsidies from the Infocomm Media Development Authority (IMDA).

The course imparted basic technical skills but much hinged on an individual’s levels of perseverance and motivation to find out more. “You don’t even have time to stop and feel sorry for yourself... you just have to go on,” he said.

Plunging into a new sector came with an 80-per-cent pay cut, but Mr Khoo has bigger plans: He hopes to develop his coding skills and move on to managing projects or teams in the next few years. His company also provides room to those who want to start their own business, he said.

Indeed, having the right attitude is just as important, if not more, than possessing the aptitude for ICT, those in the industry said.

Ms Carolyn Foo, 26, never saw herself as an IT geek. She is currently a software engineer at gaming and e-commerce firm Garena. In a fast-changing industry such as ICT, the key is to never stop learning. “If you don’t learn, you can’t keep up with what the latest technologies are,” she said.

FAST-EXPANDING SECTOR

The wave of digitisation rippling through the economy has bolstered demand for ICT professionals over the years. In June 2015, 172,000 ICT professionals were employed in Singapore, with one in two working in the ICT sector and the remainder in sectors from finance to healthcare. The number had spiked about 20 per cent within four years, and it is set to increase at a faster rate: Another 53,200 — or about 31 per cent more — ICT jobs were expected to be added over three years, between last year and 2018, based on government projections.

Technical specialists are most sought after in four areas: IT development (including software developers and systems analysts), network and infrastructure (including IT infrastructure managers and network engineers), data analytics, and cyber-security.

honestbee is looking to enlarge its existing pool of about 40 software engineers in Singapore by at least 10 this year, particularly senior developers who specialise in back-end and mobile development, a company spokesperson said.

Software engineers in a technical role develop systems, while those who choose the management path have increased responsibility for mentoring or could even manage the product roadmap.

“With the advancement of online services, such as ours, the utilisation of mobile applications, mobile web or web usage increases,” said the honestbee spokesperson. “Therefore, there’s a consistent need for such roles.”

Likewise, at Garena, demand for software engineers is also rising. Mr Lucas Jiang, vice-president and head of its people team, said the firm — which has around 150 software engineers — is always on the lookout for exceptional workers, especially software engineers.

The 5,000-strong company has a presence across South-east Asia and Taiwan. Mr Jiang said Singapore’s strategic location afforded it an “incredible advantage”, where talent here can be tapped to serve the needs of users beyond the Republic’s borders. “With increasing median income, and Internet and smartphone penetration in the region, we’re witnessing a growing demand for localised products,” he said.

Mr Luo Siao Ping, Singtel subsidiary NCS’ human resources director, said the firm will hire about 200 to 300 more software engineers, as well as data analytics and cybersecurity professionals in the next five years.

Data scientists, for instance, help make sense of large amounts of data and build systems to analyse information, while software engineers build links between different equipment, such as allowing mobile phones to control washing machines.

NCS is developing a career roadmap - set to be rolled out this year - to give employees an idea of progression paths, said Mr Luo. Software engineers can become senior and lead software engineers, or even cross over to management as project or service delivery directors.

DEMAND FOR CYBERSECURITY PROFESSIONALS

As cyberattacks become increasingly sophisticated and deal severe blows to businesses, cybersecurity has also emerged as a significant growth area in the ICT sector.

Mr Goh Eng Choon, cybersecurity firm ST Electronics (Info-Security)’s senior vice-president and general manager, pointed to Singapore’s Smart Nation effort, coupled with the increasing impact of cyberthreats.

In 2014, the company launched the ST Electronics Cyber Security Centre to address a “quite significant gap” in the skills of cybersecurity professionals, said Mr Goh.

The 200-strong firm hopes to double its staff in the next two years. Since the middle of last year, it has committed to training 120 individuals over two years under the Cyber Security Associates and Technologists (CSAT) programme, a joint initiative of the IMDA and the Cyber Security Agency of Singapore.

Mr Alvin Koh, 54, is one of those who have completed on-the-job training under the CSAT programme. He joined ST Electronics (Info-Security) as a security consultant in July after being laid off about three months earlier.

The ICT veteran has worked in various capacities before, from systems administration to technical support, but cybersecurity was a new field to him.

His work now includes assessing applications or servers, both for clients and internally, for vulnerabilities such as information leaks and the transmission of log-in credentials.

He tries to take advantage of the loopholes to gain access to the systems. Alongside automated tools, professionals such as Mr Koh help clients plug the gaps to reduce the risk of cyberattacks.

“When you’re doing the testing... you get an ‘aha’ moment... ‘aha, I’ve found this (vulnerability),” said Mr Koh, on the sense of excitement he derives from his work.

TRAINING COURSES GALORE

As new technological trends emerge, the range of training courses open to those keen to join the sector is set to widen.

The ISS at NUS, for instance, will roll out 30 new courses over the next three years, spanning topics from artificial intelligence to deep machine learning and robotics, on top of its current stable of courses on cybersecurity, data analytics and user experience.

Last year alone, its programmes in disciplines such as design thinking and cybersecurity trained 2,205 professionals, managers and executives, with 2,420 others undergoing courses leading to international and national certification. Its cyber-security courses, for example, saw enrolment jump by more than a third last year, compared with 2015.

At NTUC LearningHub, chief executive Kwek Kok Kwong said it works with industry players, such as Microsoft and Apple, to offer the most up-to-date curriculum.

While schools churn out more IT professionals to address future needs, Mr Kwek said there is still a need to convert some workers from other sectors to meet present demand.

“This conversion requires a mindset change and substantive learning efforts from the individuals,” said Mr Kwek. “The other part of the challenge is for companies to... accept these mid-career switchers with limited IT working experience.”

As many including Mr Chong and Mr Khoo have shown, age, a lack of experience or unfamiliarity with the sector are no insurmountable barriers — as long as one possesses the hunger and desire to keep learning, qualities that are required to thrive in the ICT sector in the first place.

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