

Seeing the big picture

Technology professionals need technical depth and business skills to succeed as IT leaders.
AARON TAN reports

The roles of architects and engineers in the building industry have been defined for more than 6,000 years. Not so the role of professionals in the IT industry.

This is Mr Ong Whee Teck's preamble to the software architecture course he teaches undergraduates at the National University of Singapore (NUS).

Mr Ong, 45, who is a partner at PriceWaterhouseCoopers Consulting, said: "Humans built the pyramids about 6,000 years ago, while we've been building IT systems for only about 60 years... We haven't really fully figured out our roles, as the IT industry is not as mature as the building industry."

The jury is still out on what data scientists do. He said: "To some people, a data scientist is someone who crunches data using statistical software, but it's actually more than that. So, who's defining the role of a data scientist?"

The fast-moving nature of the IT industry in which new technologies keep surfacing all the time – social, mobile, analytics and cloud, among them – make it difficult for IT roles to be clearly defined, he said.

But this also offers opportunities for IT professionals, because more architects are needed for IT systems that combine the latest technologies so that they can help organisations stay ahead of the competition.

This has to be done quickly on the

ground in Singapore and within a shorter business cycle. It means that the job has to be done onshore, not outsourced to "delivery centres" such as China, India and the Philippines.

This requires IT professionals to acquire deep technology skills that serve as a foundation for their careers, he said, adding: "I always tell my students not to start off with sales jobs as they will not have the technical depth to work with business stakeholders later on."

Mr Ong should know. Starting as a programmer early in his career, he led a project management team in 2002 at Accenture, a tech consulting firm, to combine the IT systems of two banks being merged.

The technical depth he had acquired as a programmer and, later, as an IT architect and strategist at Accenture, helped him to fit together different pieces of technology, whether they were backend servers or customer-facing ATM services.

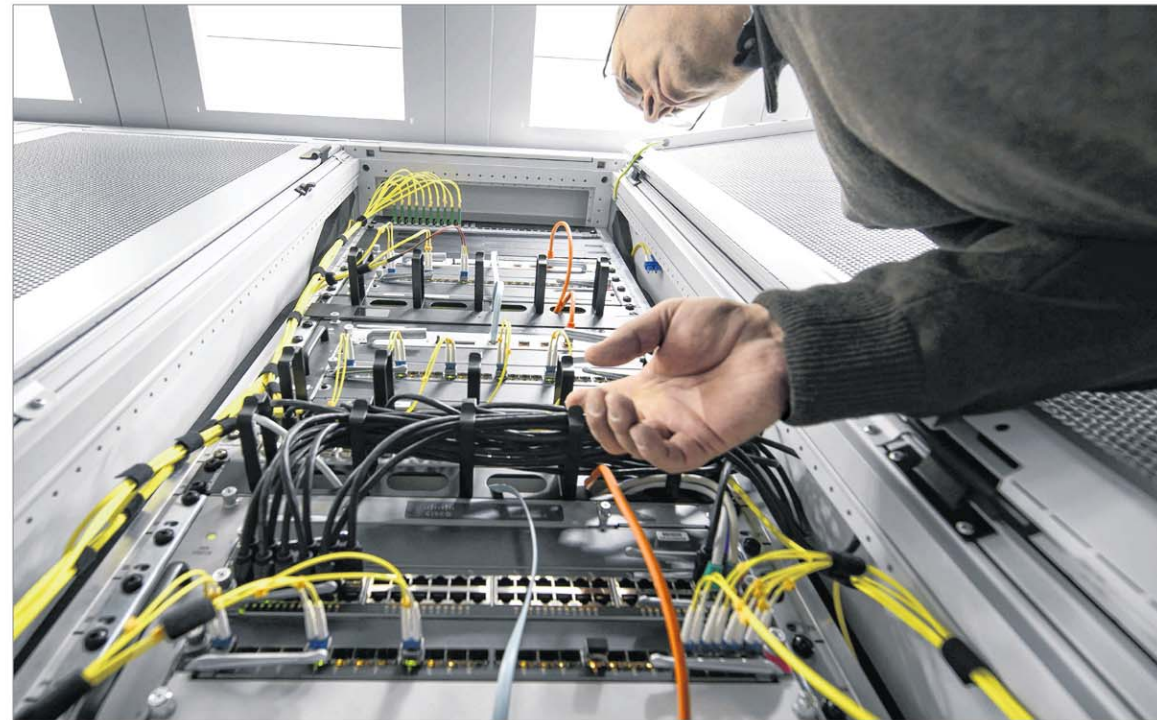


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IT professionals should acquire deep technology skills that serve as a foundation for their careers, before acquiring skills in other IT domains, said Mr Ong Whee Teck, a partner at PriceWaterhouseCoopers Consulting who also teaches at NUS.

He explained: "One system had to be shut down and its data brought over to another system. I had to look at changes in both systems, manage teams that write software interfaces, and reconcile the numbers, right down to the last cent. It was all very intense but I loved it!"

At the same time, he and his team were able to advise the merging banks about the implications of business decisions on their IT systems. So, he had to understand the big picture of how IT systems work, including banking processes. "IT leaders should serve business needs," he said, adding that they should also be involved in business planning, and deliver projects on time and within budget.

To keep up with developments in the field, he reads widely and meets technology vendors to learn more about new IT developments. He plans to pick up a new programming language such as Lambda. "Through

coding, you'll know how to harness technology and understand the basic principles of IT systems, which have largely remained the same over time," he said.

"Many young people don't understand those fundamentals, so I advise my students to dig deeper, open up the hood and see what's inside," he added.

He advises students and young IT professionals to work towards being IT architects, because such expertise is in short supply here. "But first, they need to gain deep technical skills for three to four years, before acquiring skills in other IT domains such as networks and infrastructure."

"Over time, you'll become an IT architect with broad skills," he promised. His strong belief in the need to groom a new generation of IT architects led him to invite two professional IT architects to address his students earlier this year.

"The students enjoyed it and asked questions about what it takes to become an IT architect," he said. "We're all learning from one another and I believe in adult learning, which I'm writing a book on."

Aaron Tan is a freelance writer.