

Engineered For Success

- Can Engineers Become Good CEOs?



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In many organisations, the path to the CEO's office often lies through the finance department. As companies look for leaders who can create value and understand the financial ramifications of their businesses, executives with a strong finance background are being often favoured for the top job.



› The experience of Chua Sock Koong, chief executive of SingTel, South East Asia's largest telecommunications company, is typical. A Certified Public Accountant, she joined the Singapore-based company in 1989 as its Treasurer in 1999, before being promoted to Chief Financial Officer a decade later. She was appointed to the top job in 2007.

For an organisation that is so dependent on its engineering prowess, only one of the seven senior executives listed on SingTel's management committee is an engineer by training – Bill Chang, a former Cisco Systems executive who heads SingTel's Group Enterprise division.

Indeed, engineers globally have traditionally been seen as less qualified to lead a large organisation than their counterparts in finance and sales and marketing. The common grouse is that, although

technically proficient, they often lack the people and communication skills to lead.

Yet, this dynamic appears to be changing, as more examples of successful engineer CEOs make their mark on the corporate world. The head of Thai conglomerate PTT for instance, is helmed by Pailin Chuchottaworn, who holds a PhD in Chemical Engineering.

In the U.S., research by Spencer Stuart shows that one-third of S&P 500 CEOs were engineering trained. The numbers are encouraging, but it doesn't detract from the challenge many senior engineers face in making the leap from an operational, product-focused role into a strategic, enterprise wide one.

This Spring Professional Leadership Series paper will explore the advantages and disadvantages that engineers face when they are tasked to run a large company.

Product Leadership Is Key

- What does an Engineer bring to the boardroom table?

Engineers possess many skill sets that will prepare them for the CEO role. According to management guru Stephen Covey, there are four imperatives for leaders: they must inspire trust, clarify purpose, align systems and unleash talent.

Clarity of purpose and aligning systems such that there is no conflict between what is stated to be important and what is ultimately measured, are skills that all engineers learn in the course of their training.

The other two imperatives, which involve the ability to communicate with and inspire others, may not come so easily. The good news is that these skills can be taught. Engineers are also known to be meticulous and analytical and rather than engaging in management-speak, they tend to keep things simple and realistic.

Perhaps most significantly, the advantage engineers possess over other professionals is that they understand the company's products and the technology behind them. Indeed, being responsible for the lifecycle of a product, they are better equipped than anyone else to resolve product related issues.

Looking ahead, as companies move from a phase of cost cutting to one of developing great new products or services to drive future growth, engineering prowess will play a bigger role within an organisation.



For instance, Taiwan's Foxconn Technology Group, one of the world's biggest electronics contract manufacturers, is moving beyond just making iPhones for Apple by climbing up the value chain and producing their own line of LCD televisions.

In such situations, engineers are able to provide the necessary technology vision and product leadership better than any other role.



"It's hard to start reading about the (economic) recovery without wandering into an article, blog post or some piece of research that talks about how crucial great products are to growth over the next couple of years," wrote Chad Jackson, the President of Lifecycle Insights, a research and advisory firm in a blog post for industry website Engineering.com

Always On Tap And Never On Top

- What challenges do engineers face in making the leap to the CEO's office?

Despite their many attributes, engineers do face difficulties in making the transition from being an operational leader to a strategic leader.

Those who are promoted to the CEO's role will find themselves moving from running a single division to overseeing all of them across an organisation. While many technology start-ups are founded by engineers who go on to build large companies, it is a different proposition for engineers who move up to the top job in established businesses.

The key criticism of engineers is that they sometimes lack people skills, a pre-requisite for any successful senior leader. Because of their talent in tackling challenging problems and developing successful solutions, there is a perception that they are always on 'tap' but never on 'top'.

However the hopeful thing is that these skills can be learnt, practiced and mastered by an engineer, provided they make a determined and sustained effort. It is rare for any individual, early in their career, to possess all the elements required to be a senior leader.

However, to overcome their deficiencies, these professionals must develop a plan of action for nurturing the skills they lack.



Encouragingly, many big companies led by engineers have put in place management programmes to help their middle managers develop the skills necessary to move into senior management. And many engineer CEOs have supplemented their technical training with top notch MBAs.



THREE SUCCESS STORIES

Their engineering backgrounds provided a solid foundation, but it is their leadership and people skills that have propelled these three executives to the top of the corporate ladder.

1 Choo Chiau Beng, Keppel Corp CEO

Starting as a management trainee in 1971, Keppel Corp chief executive Choo Chiau Beng has for over 40 years helped steer the \$20-billion Singaporean conglomerate to the apex of the global offshore and marine industry.

Along the way, he's led the Singapore-based company through economic slumps, a tight talent pool situation and even government pressure to merge with a local rival. The world's largest oil-rig builder posted a 35 per cent rise in second quarter net profits of S\$521 million.

Trained as a naval architect, he attended the Program for Management Development in Harvard Business School in 1982 and was appointed as CEO in 2009.

Choo's people skills have undoubtedly been a key factor in his success. His deep contacts with counterparts in Brazil helped Keppel secure lucrative rig building contracts there.

"I first went to Brazil around 1980 on a 'fishing' trip. We knew Petrobras was looking for some semi-submersibles, although we knew we weren't going to win the deal, we got to know the people," he told The Reuters Energy Review magazine last year.

"A lot of people on that project team became friends for life. And many of them have moved on to important roles at Petrobras and other companies in Brazilian oil and gas."

Choo, who is also Singapore's non-resident ambassador to Brazil, has used contacts to help Keppel win big orders from the Latin American nation, where state oil firm Petrobras wants to buy 28 rigs worth around \$20 billion in the next five years.

He also views himself as a trailblazer in the industry, showing other engineers that there are paths for them to move on to bigger things.

"An engineer does not need to stay an engineer all his life. I was trained as a naval architect and I practised for a few years, but beyond that I was in management. In some respects, being a highly paid CEO has attracted people to Keppel, because it shows you don't need to be a lawyer to be highly paid, you can be an engineer and be highly paid."

Mr Choo holds a Bachelor of Science (First Class Honours), University of Newcastle upon Tyne (awarded the Colombo Plan Scholarship to study Naval Architecture); Master of Science in Naval Architecture, University of Newcastle upon Tyne; attended the Program for Management Development in Harvard Business School in 1982 and is a Member of the Wharton Society of Fellows, University of Pennsylvania. He was appointed as Chief Executive Officer on January 1, 2009.

2 Pailin Chuchottaworn, President and CEO, PTT Plc

Mr Chuchottaworn helms Thailand's energy giant PTT, one of the largest corporations in the country and also the only Thai company listed on the Fortune Global 500 companies list.

He was appointed Chief Executive Officer of PTT in 2011, following a stint as the CEO of IRPC (formerly the Thai Petrochemical Industry Public Company Limited).

His hands-on approach to leadership can be seen in his personal commitment to securing talent for his

company. He has also established a number of leadership development programmes and stepped up the company's recruitment of experienced mid-career managers.

"Finding a sufficient number of capable managers to support PTT's growth plans is a really tough job. I've taken personal responsibility for HR matters in this organisation because it's so important to us. If we fail to recruit and retain talented people, there's no way PTT can meet its growth targets."

Mr. Chuchottaworn holds a Bachelor of Engineering in Chemical Engineering from Chulalongkorn University, a Master of Engineering in Chemical Engineering from Tokyo Institute Of Technology, Japan and a Ph.D. of Engineering in Chemical Engineering from Tokyo Institute Of Technology,

3 Baba Kalyani, CEO, Bharat Forge

MIT engineer Baba Kalyani joined his family-owned Bharat Forge in 1972 and built it into one of the world's largest makers of auto forgings. It is the flagship of India's Kalyani Group, which has expanded into non-auto forgings.

The company has been rated as one of the best companies in Asia by the Forbes magazine because of its high growth rate. It boasts a global customer base comprising 38 automobile manufacturers.

Recognising the importance of looking beyond the bottom line, Mr Kaylani has made efforts to build ties with stakeholders not directly related to his enterprise.

He sits on the boards of trade and educational institutions in India and abroad, and is the Founder Chairman of Pratham Pune Education Foundation, an NGO that provides primary education to under-privileged children in the local community.

Mr Kalyani attended India's BITS Pilani, from where he earned a BEng (Hons.) in Mechanical Engineering, and graduated from the Massachusetts Institute of Technology with an MS degree.

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