

2010 Sir Eric Neal Address Guest Speaker

The Honourable Trish White BE BA FIEAust MP State Member for Taylor

In last year's Sir Eric Neal address, our Governor, his Excellency, Rear Admiral Kevin Scarce, identified the engineering profession as the catalyst for future economic growth in South Australia. He called for Engineers Australia to take a leadership role in that economic future by more aggressively promoting the profession as a future career, and also by taking an even more determined stance to progress social and community agendas.

Well Engineers Australia has indeed responded, naming 2010 the Year of Engineering Leadership – an initiative driven by Engineers Australia's Centre for Engineering Leadership and Management (CELM) to recognise leadership within the engineering team and demonstrate the value of that leadership in shaping the future. I congratulate Engineers Australia on its multi-million dollar 'Make it so' campaign, which showcases engineering leadership in a way designed to inspire more Australians to take up engineering as a career, and so address this country's long-standing shortage of engineers. Importantly, the campaign engages with the public to pose the question 'what are the pressing societal challenges of our time' and will challenge our engineering leaders to provide inspiring, innovative and sustainable solutions.

Engineers Australia begins this year very positively, but my challenge to you this evening is to recognise your own leadership skill, to develop it and to promote your own ability to lead business, innovation and change. As we come out of the economic downturn, a new type of leadership is required. For reasons I will expand upon, I believe that engineers are uniquely placed to meet this need. It is time for the engineering leader in each of us to come to the fore.

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- His Excellency, Rear Admiral Kevin Scarce AC CSC RANR ComplEAust, Governor of South Australia and Mrs Liz Scarce.
- Sir Eric Neal AC CVO FTSE HonFIEAust CPEng, Former Governor of South Australia and Lady Joan Neal
- Hon Russell Wortley, Member of the Legislative Council, representing the Premier
- Senator for South Australia, Dana Wortley
- Dr Duncan McFetridge, Member for Morphett
- Prof Doug Hargreaves FIEAust CPEng EngExec, National President, Engineers Australia
- Mr Doug Gillott FIEAust CPEng, President, Engineers Australia South Australia Division
- Prof Andrew Downing FIEAust CPEng, Head of School: Electrical & Information Engineering, University of South Australia
- Mr Barry Gear AO FIPENZ HonFIEAust CPEng, Past President of the World Federation of Engineering Organisations
- Mr Peter Taylor FIEAust CPEng FASCE FIPWEA, CEO, Engineers Australia

It is an honour to join you tonight to deliver the Sir Eric Neal Address. Sir Eric Neal is a prominent Australian who continues to devote himself to the service of our nation, and in particular to South Australia. Together with Lady Joan, he has touched the lives of so many South Australians through his work with charitable organisations, sporting bodies and the public far and wide. He has had



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a most distinguished career as a prominent businessman, as Governor, as champion of higher education and advisor to governments. He has successfully steered some of our finest commercial boards and companies over many years and, with good grace and generosity, he has been an outstanding mentor to engineering leaders. He is the perfect example of an engineer who has applied his training and experience to outstanding leadership.

Tonight I want to talk briefly about why engineers do make good business and community leaders and to encourage you to recognise the way in which your own skill as an engineer is a foundation that gives you advantage in leading business, innovation and change.

Executive search firm, Spencer Stuart, conducted a survey of Fortune 500 companies and found that by far, the most common undergraduate qualification amongst their CEOs was an engineering degree, significantly more than was the case for economic, business administration or accounting qualifications. In Australia, engineering leaders amongst our ASX 100 CEOs are less common – some 14 percent of the ASX top 100 companies have CEOs with engineering qualifications; however this still represents a higher proportion than would be suggested solely by our resource base.

So why would the training and experience of an engineer make for a good leader?

I think that, while the nature of engineers is often held up as a reason engineers might not be suited for leadership roles, this very nature is actually a desirable strength if we are to solve the world's big challenges – challenges requiring inspiring, innovative and sustainable solutions. Engineers are, after all, adept problem solvers:-

- They know they need to gather the facts first and not be diverted too early by premature conclusions - they know how to isolate emotion from fact. This isn't to say that engineers don't consider the emotional but they do know how to be objective in their decision-making (which reminds me of the Chinese proverb that says "an optimist is a person who sees a green light everywhere, while the pessimist sees only the red stoplight – the truly wise person is colour blind");
- They know how to process the data and are not perturbed by its volume or complexity;
- They understand risk analysis and are objective in its application – a very important skill, in light of the poor risk management behaviour amongst some of our largest companies that has been highlighted during the Global Financial Crisis;
- They are creative and intuitive in finding sustainable solutions (unlike the applied scientist, the engineer must deliver on budget, on time and it has to work in the field; Remember Albert Einstein's refrain that "scientists investigate that which already is, engineers create that which has never been"); and
- They understand complex systems.

The same attributes which are sometimes responsible for a public perception of engineering as a narrowly qualified, introspective and socially disengaged profession, are in my view the very attributes necessary, after the upheaval we have seen during the Global Financial Crisis, to lead economic and societal growth.

Objective analytical skills mixed with creativity are, I think, a pretty good foundation for leadership success.

So engineers have a valuable set of skills that makes for good leadership; why aren't we seeing more engineering leaders coming forward in this country?

There is a lot written about the qualities of good leadership and, in one sense, not a lot has changed on that front over the last twenty years. Much of it seems geared towards process improvement, and as engineers, we are good at squeezing efficiency out of processes and improving quality to drive economic growth. That's what we are trained to do. However, as our endeavours become more global, and our competitors get better on quality and price, the competitive advantage begins to disappear. There comes a point in well-run companies at which not much more can be reclaimed in the name of process improvement.

So as we emerge from this economic downturn, with most Australian companies having trimmed the fat and refocused on core business, business leaders are now asking what will be the next leadership evolution that propels economic growth.

My view is that the answer lies in 'relationships' and 'relevance'. Often regarded by engineers as 'soft', less 'rational' considerations, these aspects are nevertheless pivotal to leadership success.

Getting things done depends upon relationships. Effective leaders know that every interaction with customers, peers or employees either promotes or inhibits their effectiveness. They use their personal strengths to influence, to inspire.

They also need to be relevant, to have deep understanding of the societal context in which their enterprise operates and to understand the drivers for that context.

In my current field of politics, understanding what really drives your constituency is everything. No matter what a politician facing a bad poll may say about its relevance, we do poll, and we poll, and we poll again. We do it in a qualitative way in order to understand not just what people say about their intentions to vote, but to uncover the real drivers for their voting behaviour. We use it to check the relevance of our policies and we use it to develop the language with which to communicate our message.

This week marks the anniversary of the birth of Thomas Eddison. As an electrical engineer, I regard him as a remarkably inspiring engineer – inventor of the electric light and credited with the first industrial research laboratory, who applied mass production and teamwork on a large scale to invention. He was a businessman who greatly influenced life around the world through his company General Electric. He was a doer. He was the man who said “genius is 1 percent inspiration and 99 percent perspiration; accordingly, a genius is often merely a talented person who has done the homework”.

My father is also a doer. He often would quote Eddison saying “opportunity is missed by most people because it is dressed in overalls and looks like work”. An electrical fitter by trade, he is also an inventor and an important catalyst for my engineering career. Had the educational opportunities which are available today, been available to him at the time, I am sure he would have become an engineer.

Before my first day at school, he took my hands in his and said to me “these hands can do whatever you set your mind to”. He taught me how to imagine an outcome, focus on it, absorb the challenges along the way and be flexible enough to adapt to changed conditions. In short, he taught me a systems approach to life.

That, I think, is the engineer's true advantage in leadership – the ability to conceptualise an endeavour as a complex adaptive system, where crises become merely variables to be dealt with. Remember Charles Darwin who said “it's not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change”. Our world is changing rapidly and the engineering leader must apply his/her skill with inspiration, with agility and with success.

In closing, I congratulate Engineers Australia for investing in its “Make it so” campaign to influence and inspire Australians towards engineering. I have always been proud to call myself an engineer. May our skilled engineers undertake to promote their leadership capabilities and may experienced engineers commit to mentor the next generation of engineering leaders. And may you each recognise, develop and promote the leader that exists within you.

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