



Engineers Australia Breakfast

Speech by Steve Ludlam, ASC Managing Director and Chief Executive Officer

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Pathways to Leadership

I want to thank Engineers Australia for inviting me to speak to you today.

I would like to acknowledge my distinguished colleague; Andrew Fletcher, it is an honour to share a platform with him on such an important topic.

There is no doubt that now is a great time to be an engineer in Australia.

All around us we see increasing demand for engineers, across all disciplines and industry sectors.

Whether it is the construction of a warship, the development of a copper mine or the creation of transport infrastructure – your professional opinions are highly valued and sought after by government and companies, big and small.

As a fellow engineer, I applaud you on the choice you have made in your career.

Today I want to talk about the path to leadership across an area that I know well: the Defence industry.

Many of you may be running businesses or you may one day get the opportunity to become a chief executive.

Australia has many engineers but what this country is now seeing is the evolution of the engineer into the chief executive, the general manager, the chairman or the managing director.

What do these emerging executives have in common?

I would suggest a logical and consultative approach to their work and their colleagues and, of course, a strong understanding of engineering principles. They are confident and they are decisive

Many of these emerging engineering leaders are studying further through programs like MBAs and the Masters in Complex Project Management. They are building expertise in areas outside engineering so they can apply the engineers' discipline to whatever industry and role they choose.

My chosen sector is Defence.



I have been in the submarine and naval shipbuilding business for 35 years, working for Rolls Royce and more recently ASC.

I have managed the design and construction of all kinds of vessels and ship equipment, particularly nuclear submarines, diesel submarines and major surface combatants in the United Kingdom, Europe and America.

Today I manage over 1,700 employees at ASC a company owned by the Commonwealth that is building three air warfare destroyers and maintaining Australia's fleet of Collins Class submarines.

This is a role that stretches every engineering and management sinew in my body. It is a job in which I must: lead, collaborate, defer, fight for, and challenge the people of ASC. I must consult with Government and the media and most of all I must serve the Royal Australian Navy.

I am also building a vision and a business plan for the company over the next 50 years. I want all the team at ASC to have a positive future.

Few companies want to talk about where they will be in 50 years, yet ASC has the assets and capability to pursue such a bold objective.

The people at ASC are world class. The assets we work with – and the taxpayer owns – are world class.

There is no other conventional submarine in the world that is capable of challenging the technical capabilities of the Collins Class. In the water, these vessels are practically invisible.

There are many pathways to leadership but when you are there, the things we have just talked about need delivering, they are yours to deliver.

The three Hobart Class air warfare destroyers (or AWDs, as they are known) we are building will be the most sophisticated fighting machines Australia has ever known.

Let me start a long way along the pathway and consider what leadership looks like in the AWD. This may help you prepare better for your own leadership pathway.

The AWD project has been mentioned in the news of late because one of our subcontractors has found difficulty meeting its contractual obligations.

There are a variety of reasons for the difficulties in the AWD project and the matter has now been fixed – but the important element is the leadership demonstrated by the key players involved in the AWD project.

As a leader you are expected to be prepared and be able to deal with such events. They can occur at any time in your career and depending on your experience, your role in them will be different.



For those who are unaware, the construction of the AWDs is overseen by an organisation known as the AWD Alliance. ASC is part of the alliance, alongside private defence contractor Raytheon Australia and the Commonwealth's defence procurement arm, Defence Materiel Organisation or DMO.

Bottom line is that once the subcontractor's problems became known the Alliance swung into action. Alternatives were sought and ASC and a second subcontractor are now undertaking more of the work. Some blocks are also headed to Spain where designer Navantia can oversee their fabrication.

The leadership team of the AWD Alliance used all its training and development to do this quietly and with little ceremony.

As I said, the matter has been resolved. It may reverberate in the media for a while but what the media won't tell you is that the Alliance structure ensures we avoid costly blowouts to the schedule and taxpayer. It ensures accountability. It demands that the private sector work collaboratively with the Commonwealth.

Leaders need to be accountable and your development must give you the confidence to be accountable.

The Alliance also creates a platform for the future of naval shipbuilding in Australia by creating a shipbuilding capability, establishing the resources, expertise and skill base that can accomplish an incredibly complex task.

In many ways the Commonwealth has learned from the successes and difficulties associated with the key naval construction projects undertaken in Australia in the last two decades. The construction of the Collins Class fleet of submarines is a worthwhile case in point.

The construction of each boat met significant technical difficulties yet ASC prevailed and successfully launched each boat. The numbers around the Collins project are significant:

- A local, national and international supply chain of 1,600 vendors;
- Over 2,000 individual contractors, 1,250 of which were Australian companies;
- 35 Australian companies with ISO 9000 quality accreditation at the start of the build. On the back of the Collins Submarine and ANZAC Frigate projects, that number grew to over 1,500 by the year 2000;
- Many of the Australian companies that worked with ASC through the construction and delivery phases have gone on to thrive; and
- For every one of the 1,200 ASC employees employed during the construction phase for Collins, it is estimated that there was a multiplier effect of two to three within local industry.

What these figures say is that the Collins Class Submarine Build program didn't just deliver a project; it created a foundation for an industry, an industry that put an international spotlight on Adelaide as a premier defence hub.



It created an environment for engineers to develop and thrive. It created great engineers and great leaders who have the strength to deliver improvement and change.

Without that industry, the Commonwealth would not be contemplating the opportunity to build 12 new submarines using local companies and local people. The very same process is underway with the AWD project.

While driving this project, ASC and its partners are developing the skills required to construct a hugely complex vessel. I might add that ASC is building the most sophisticated part of the vessel – the central tower of the boat which manages its entire defence and attack capability.

ASC is among the industry leaders tasked with delivering a national shipbuilding capability from the AWD project. This involves millions of dollars of investment in training, support, tooling and skills development.

It means working with primary schools, secondary schools and tertiary institutions to ensure we have the level of expertise in the pipeline that is needed for the next shipbuilding project or the next sustainment program for AWD or future submarine.

So your chosen pathway to leadership needs to consider experience in supply chain management, the attraction and retention of human talent and the ability to influence. You must keep all this in context and the simplest the context the better. Never forget that your engineering discipline and training is your anchor when things are tough.

I read a recent commentary which stated that the recent issue with the AWD subcontractor only reinforced the argument that Australia should buy defence hardware off the shelf, that it must go to countries with thriving defence industries and ask them to build our submarines or warships.

Leaders need to argue the rights and wrongs of such opinion and influence a good and balanced outcome for the nation. Be prepared to do this.

This is not the way to ensure that talented men and women such as yourselves are challenged enough to stay in Australia.

It is not the path to creating jobs in communities such as Adelaide, Newcastle and Williamstown.

It is also not an approach that will create the next generation of leaders in defence industry.

A leader needs to be strong and confident at all times.

My **own** path to becoming a leader has been relatively conventional. I worked my way up the ranks and sought 'counsel' from a variety of experienced and successful people in my industry, company and customer base. I have found that a variety of ideas and views leads to a better balance of approaches or decisions.



I also adhered to a maxim put eloquently by an American engineer named Hyman Rickover.

“When doing a job — any job — one must feel that he owns it, and act as though he will remain in that job forever.”

Rickover, for those who don’t know, was the father of the nuclear submarine, indeed he was the father of the nuclear navy.

With 63 years in the US Navy – a milestone that remains today – Rickover established the US fleet of nuclear submarines and ruled the fleet with an unorthodox leadership style that brought plaudits, criticism and admiration from superiors and 13 successive US presidents. He was both feared and loved as a leader.

Rickover was also very quotable over his 86 year life and retired a full admiral at 82 years of age. He spoke at length about engineering and an approach to leadership.

Many of his words resonate with me because of their simplicity and power in dealing with an issue or a matter of importance.

Rickover said that leaders must create the ability in their staff to generate clear, forceful arguments for opposing viewpoints as well as for their own.

He added: “Open discussions and disagreements must be encouraged, so that all sides of an issue are fully explored.”

This is something that we have at ASC.

As a leader what I have done since I came to ASC.

We are engaging with the production teams, the engineering teams and the supply teams and working with them to figure out where they face issues.

We are taking each issue away and helping these teams find solutions by thinking in new ways.

We hold numerous discussions with the unions and they continue to raise interesting points for management to consider.

I am pleased to see that ASC employees are growing in confidence and that this is translating into solutions and excellent outcomes for our customer.

This is about sustaining what I call exemplary performance and that can be very difficult.



My role is about constantly building the confidence of this team and building individual leadership qualities so employees put their hand up when they've made a mistake or understand the implications of a poor decision.

Leadership and accountability are critical elements in any company and especially so in one that that is part of delivering sophisticated warships that will serve the nation's frontline defence capability. ASC has to be led and prepared to be part of this effort and be constantly reminded to be alive to the obligations we carry.

I have to prepare the emergence of the new generation of leader in the Australian defence industry. Men and women who have the skills to work in both construction and sustainment and understand – an industry built around construction and sustainment.

These future leaders may be working in all parts of ASC and some of their achievements often go unsung.

These people might be charged with the task of removing and weighing every part of a submarine as part of what we call a Full Cycle Docking – a complete overhaul of a submarine. They might be combining their work on the shopfloor each day with night-time studying an engineering course at the local TAFE.

They might be employees who have worked in the design area of the AWD or Collins programs who have come up the ranks the same way and command the respect of their colleagues because of their knowledge of a vessel from the ground up.

Or it might be the engineer whose job it is to silence a Collins Class submarine – a task that sounds simple but is incredibly complex.

What these people are doing is building a skills base for the defence industry of tomorrow.

They are leading by example at a time when the industry is moving through an incredible growth phase where billions of dollars are being spent on major projects designed to keep Australia secure.

How will that industry look? I don't want to venture outside my brief so I will limit my focus to ASC.

My vision for ASC is that it is involved in the ongoing sustainment and construction cycles for Australia's fleet of AWDs and submarines.

That means hopefully being involved in the Future Submarine project, which I am sure many of you have heard of.

We'd also like to apply our expertise in shipbuilding to frigates and the sustainment of these vessels.



What it is really aimed at is bedding in a national capability to be a naval shipbuilder and submarine builder.

But we do this without a sense of entitlement.

Instead we focus on the challenge of harnessing the skills, enthusiasm and energy of the talented people across ASC in a way that will ensure our success.

And when employees ask me to define my role as a leader I tell them I have a simple approach to a complex task.

We want to create an environment where tomorrow's leaders can thrive.

We want to ensure that we are operating efficiently and reducing the expense to the taxpayer.

We want to ensure that Australia has a fleet of vessels that are at the frontline of the nation's naval defence capability.

Quite simply.....I want to establish a world class business. Ambitious but leaders must be

Thankyou, that concludes my talk.