The
VALUE TIMES

INSTITUTE OF VALUE MANAGEMENT AUSTRALIA
Ensuring better value for money

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President's Message

Good habits lead to improved Value for Money

In recent editions of *Value Times* I've written about organisational culture and how that affects 'value for money'. A key part of building such a culture, that I haven't touched on yet, is the importance of building good habits.

One thing that I've learned in my journey of research, teaching and international practice is that people can make a huge difference in achieving best 'value for money' just by developing good habits.

Certainly, as we have demonstrated on countless occasions, plans, projects, procurement and operations can all receive significant boosts from applying formal Value Management processes.

Even so, the further I go in this journey, the more I realise that individual people can make a big difference through the practice of good habits. If we can make this part of an organisation's culture then significant benefits will almost certainly result.

So, what do I mean by "good habits"? "Give me an example," you might be thinking.

Well, here's one to start off. Get into the habit of asking questions about the primary purpose of things. "What is the primary purpose of this?" "What is the primary purpose of that?"

"Individual people can make a big difference through the practice of good habits."

This habit alone will make a huge difference. It doesn't need a workshop or consultant to come round to do this.

Everyone can do it at any time, anywhere. And we can do it with any activity at all, ranging from a regular meeting to a multi-million dollar proposal for a new hospital.

Let me give an example.

This one is from many years ago whilst I was Head of Construction Management and Economics at the University of Canberra. The project was an inner-city Remand Centre in one of Australia's capital cities.

In those days I was developing a keen interest in Value Management applied to building design and construction. I was engaged by an interstate construction company that was undertaking a fast-track, construction management project.

They asked me to undertake some Value Management work and I used to travel to the project one day per fortnight to undertake the work.

On one of the fortnightly sessions we had a little time to spare, so I asked the group if we could have a look at the inner security fences.

These fences attracted my attention because I could see from the drawings that they were highly engineered and complex, requiring the use of composite metals.

At the time of construction, the fences would have cost about half a million dollars in today prices.

About half a dozen people joined me in the exercise including the person who was responsible for designing the security of the whole prison.

This person gave a brief overview of the outside security system which comprised,

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from the inside working outwards, an Exercise Yard, an Inner Security Fence, a Sterile Zone and then the prison perimeter fence/wall.

I started the questioning process by asking, "what is the primary purpose of this inner security fence – what exactly must it do?"

Remember, that we were looking at the inner security fences, not the outer perimeter wall.

The person responsible for the design of the whole prison security system explained that to understand the primary purpose of the inner fences, we must first understand the primary purposes of the perimeter fence, 'sterile zone' and 'exercise yard' because they all work together as a system.

He explained that the perimeter wall had two primary purposes — to contain offenders and to exclude intruders. Then there was the 'sterile zone' between the perimeter wall and the inner fence. Its primary purpose was to allow detection of movement.

He then pointed to the inner security fences and said that their primary purpose was to tell the prisoners not to go into the sterile zone.

He then said something that I will never forget – "As a matter of fact," he said, "a white line would do it!"

Did I hear that correctly? A white line would fulfil the same purpose as this highly-engineered, purpose-made fence that would cost over $500,000 at today's prices? "Yes, that is correct", he said.

From the perspective of the 'whole system', the inner fence was not intended to be a physical barrier – the perimeter wall and associated 'sterile zone' would care for the 'contain offender' requirement.

It turned out that whereas the primary purpose could be fulfilled through a "white line", there was a secondary purpose that could not be. Because of the juxtaposition of the Exercise Yard and Sterile Zone, there was a need to contain the basketballs used in the yard and prevent them from straying into the Sterile Zone, where they would immediately set off alarms.

Therefore, whilst the fence was not intended to contain offenders, it did have a requirement to contain the basketballs. Clearly, something like a pool fence or chain link fence could do that job, and such a fence would cost less than $50,000 at today's prices.

To spend close to $500,000 (at today's prices) on a component for which an alternative product, that cost one-tenth of the price and could fulfil the same purpose, did not represent good 'value for money'.

It's more than 30 years since I ran that workshop! I used to use it as an example in teaching Value Management and also used it when explaining the benefits of Value Management to those who made enquiries.

But this is the thing — and the point of this article. In more recent days, I've realised that if we could create an 'organisational culture' in which people made a habit of asking questions about 'primary purpose', then situations like the one I've described would be picked up as part of that culture. Value for money would be improved.

'I started the questioning process by asking, "what is the primary purpose of this inner security fence – what exactly must it do?"'

Even if individual people do this alone — that is, independent of any organisational culture — it will still make a difference.

As I said earlier in this article, this doesn't obviate the need for structured workshops, which are key parts of the Value Management process, but it will significantly help organisations in their day-to-day practice.

In this edition, I've just highlighted one of these habits — asking questions about 'primary purpose' — I'll cover more habits next time.

Dr Roy Barton
President, IVMA

Sydney 2000 Olympics – a Value for Money Retrospective

This is the first of three articles describing the successful application of value management to the Sydney 2000 Olympic and Paralympic Games. Subsequent articles will address the Showground and specific sporting venues.

Why now?

Twenty years have passed since Sydney hosted what then International Olympic Committee president Juan Antonio Samaranch's opined were the "best ever" Olympic Games.

As Brisbane prepares its bid to host the 2032 Olympic Games now might be a good time to assess what these games bought to Australia and the world.

What were the key factors that made the Games run smoothly whilst they bought joy to many people worldwide?

Australians are by and large sports loving people and there is no doubt that the national enthusiasm for the Games and the work of 45,000 volunteers who gave their time to make athletes, organisers and spectators welcome to the events was an essential contribution to the success achieved.

Beneath any successful enterprise there are however complex 'nuts and bolts' aspects that need to be identified, coordinated and delivered on time to achieve the outcomes valued by participants and the community generally.

The delivery of the games involved a fixed timetable for planning, design, construction and international event testing for the major facilities. Extensive operational matters including security, ticketing, media infrastructure, transport and logistics, and the mobilisation of the volunteers from the community had also to be finalised.

This required the collaboration and integration of multiple sports bodies (and their associated egos), three tiers of government, multiple government agencies and hundreds of businesses – large and small – all prior to the opening ceremony.

And yes there was a budget and a goal to make a surplus.

Value Management was a largely unseen but highly influential contributor to the Games as it permitted complex and sometimes conflicting requirements of the numerous Games stakeholders to be quickly and effectively resolved and, most importantly, for the agreements reached to be rapidly implemented.

The Olympic Game Bid Process

The NSW government through its Olympic Coordination Authority (OCA) had the responsibility for developing most of the facilities and associated infrastructure required for the staging of the Olympic Games.

As part of the bidding process the preliminary scoping and planning for the events commenced more than 12 years prior to the event itself in September 2000.

On 24 September 1993 the International Olympic Committee (IOC) President officially announced that Sydney would host the 2000 Olympic and Paralympic

"What were the key factors that made the Games run smoothly?"

Games. That provided the NSW Government and the OCA seven years to finalise plans, develop the facilities to the standard required by the IOC and to hold international class events at these facilities at least a year prior to the Games.

This latter important aspect of Olympic preparation is needed to thoroughly test the 'real world' operation of all the venues and associated transport, security and Games logistics.

Key Principles

The State Government and the Olympic Coordinating Authority developed key principles that guided development and operation of the facilities before, during and after the Olympic Games. These included:

- The facilities had to operate post Olympics for international standard events and community sports. Venues were therefore sized for the long term and 'enhanced' for the Olympics only. That meant that the Olympic requirements were taken to be 'temporary add-ons' not permanent features.
- The main Olympic site requirements were subject to strategic consideration. The functions of the Royal Agricultural Show facilities at Moore Park were to be

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relocated to facilities in the new Olympic Park at Homebush Bay. This permitted the government to give the Moore Park facilities to Fox Studios to develop a media production facility that would attract (as it has done) overseas film projects.

- Having long-term operators / maintainers of the facilities was intrinsic to the planning – so whole-of-life cycle costs were modelled and taken into account.
- Transportation related to the Games was to operate as efficiently and safely as practicable – from the arrival and departure in Sydney and within Sydney itself.
- Security of the Games was required to reduce the risk and severity of incidents to Games participants and required complex solutions.
- Ticketing was to be seamless and efficient for spectators.

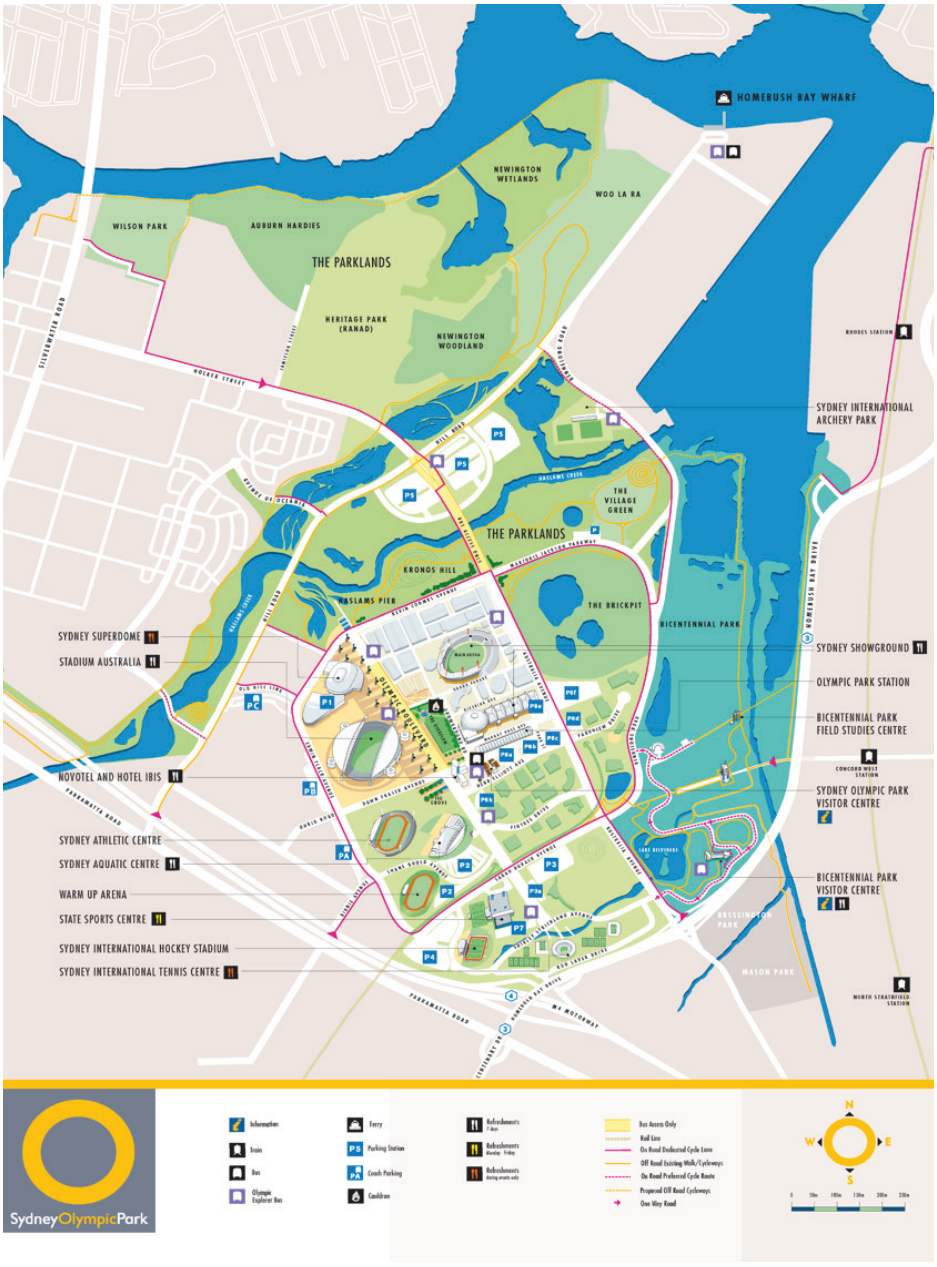
A critical economic and financial consideration was that the Games (that would last a month, including for the Paralympics) were not to impose high costs for ongoing future community use that will last for decades. There were to be no blank cheques for developing the facilities and staging the Games.

As a consequence detailed budgets were established and carefully monitored. A focus on value-for-money was a key feature of the planning and delivery thinking and practice.

Value Management (VM) was one of the techniques applied to the Games projects and strategies together with Risk Management and Economic Appraisal to deliver best 'value for money' to all the stakeholders.

Pre-bid Planning

Planning for the Sydney 2000 Olympic Games bid commenced in 1988 with the first VM studies being carried out in the early '90s on strategic aspects of the proposal.



Sydney Olympic Park Facilities Layout

At this stage the broad scope of the whole project was defined including safety, security, ticketing, transportation, media and athletes' accommodation, new versus upgraded existing sporting venues and marketing.

What was to become the new Sydney Olympic Park housing the majority of venues had been a diverse industrialised site with major environmental as well as services engineering challenges, for example the identification and removal of some hazardous waste, with other material left in situ and sealed and capped.

Major water infrastructure was required as well as power supply, roads (including

linkages to the then 'new' M4 motorway) and passenger rail infrastructure (including station facilities that did not then exist).

Existing leases had to be terminated and in some cases compensated to allow the various projects to proceed and the planning approval processes had to be freed from the normal pathways so the government had control of its delivery timetable.

Settling the ground transportation strategy was a potentially complex and contested task. An early Value Management Study (VMS) incorporating all the transport authorities in the city reviewed the transport task as defined in the 'function analysis' phase of the study. It quickly became apparent that the great majority of the 'heavy lifting' would have to be done by rail and buses – there was limited scope for private vehicles that would only clog Sydney's predominantly 19th century road network.

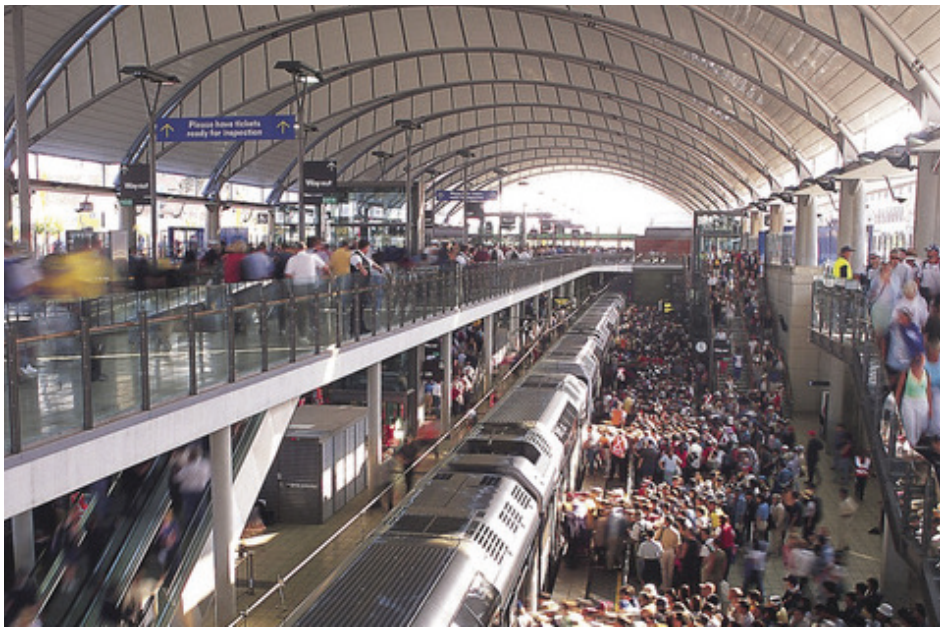
It was also agreed that a holiday would be declared for most businesses in Sydney during the 2-week duration of the main Olympic Games further reducing the risk of transport congestion.

An important factor was that the majority of the infrastructure and services required for the Olympic Games, including roads, rail, bus services waterways management, sports venues, waste management, waste services, health and environment was already in public ownership so that control over its adaption and management was generally vested in a NSW State government instrumentality.

The Product Evaluation Unit within the then NSW Public Works Department conducted the VM studies using registered VM practitioners.

Post–award Planning and Implementation

By the time of the Opening Ceremony there had been at least 12 years of planning and implementation efforts – yet there were issues that emerged even within four years of the Opening Ceremony that other design and planning techniques had not recognised or resolved. These were identified, resolved and implemented by the application of VM to deliver a 'value for money' outcome.



Olympic Park Station was the most critical point of the Olympic transport strategy being the busiest of all the transport venues for a large part of a typical Olympic day.

An early VM study identified that the originally proposed location of Olympic Park Station was too close to Australia Stadium and that passengers waiting to board trains might cause queuing of people trying to exit the Stadium. As a result of the study the Station was relocated a greater distance from the Stadium to obviate this potential problem.

Olympic Park Station

The Station has three platforms – a centre platform at which, in Olympic or other high-use mode, all passengers alight the train and two side platforms with 'corrals' outside the platforms to permit passengers to be organised into full trainloads and then let onto the two side platforms after the train had arrived so they can board it safely. This permits two trains to load and unload very high passenger volumes safely.

A subsequent VM study identified that in post-Olympic mode the sharing of the existing train track by passenger and freight trains could present future operational problems if a freight train were to be delayed. (The problem would not occur in Olympic mode as freight train operations in the area were prohibited during Olympic use.)

The solution was to separate the tracks which provided passenger train operations near the Station from those that served freight trains. This had the added benefit of eliminating any related points failures in this area – which could have impacted Olympic transport.

Olympic Park Station, with its vaulted steel and glass roof provided a dramatic sense of arrival for visitors to the Sydney Olympics. It opened in March 1998 and the architects, Hassell Pty Ltd, subsequently received a prestigious Sulman Award for Outstanding Example of Excellence in Public Buildings.

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The French submarine boondoggle* is Australia's biggest defence blunder and compounded by media failure

By John Menadue

The following article was first published on the John Menadue blog 'Pearls & Irritations' on 5 March 2021.

The article raises significant issues of functionality, risk, probity and value for money in Australia's contract to purchase 12 new French-designed submarines. This purchase is now one of the subjects of the recently established Naval Shipbuilding Enterprise Governance Committee chaired by the Prime Minister.

Our corporate media has failed to hold the government to account in its scandalous handling of the $90 billion French submarine purchase. For five years, the media has failed us. It is now rewarded in the new Media Code with 90% of the tax on Google and Facebook to be handed over to the three failing monopoly media companies.

Since July 2016 Pearls and Irritations' writers Jon Stanford, Michael Keating, Hugh White and I have repeatedly drawn attention to the folly of the submarine purchase by the Turnbull government five years ago.

Only two journalists, Brian Toohey and Michael Pascoe, have consistently drawn attention to this public scandal. The so-called defence and military journalists in the corporate media have been missing in action.

The Morrison government has at last announced a review of the boondoggle*, tasking two senior naval people, Vice Admiral Jonathan Mead and Commodore Tim Brown, to review the mess.

Significantly, these two naval officers have not been involved in the $90 billion scandal and are removed from the division in the Defence Department that has created the whole sorry story.

* A boondoggle is a project that is considered a waste of both time and money, yet is often continued due to extraneous policy or political motivations. Wikipedia

They are strategic thinkers who will be reporting to the Prime Minister via the Chief of the Defence Staff and the Secretary of Defence, and not through the Chief of Navy.

Hopefully, we can begin to climb out of the worst defence bungle in our history, which has probably cost about $2 billion. Who said the Coalition is good at ensuring our security and good at managing taxpayers' dollars?

In the five years of the boondoggle, our corporate media has been lost on the high seas. Embedded in the Navy and Defence to secure 'exclusive' media drops, they failed to examine and report on the mess.

Just imagine the field day our media and journalists would have had if the ALP had got itself into this sort of a mess.

A brief summary of the five years of incompetence and media failure.

The initial cost of the 12 French designed submarines was $50 billion, although the media suggested this was an over-estimate. The current cost adjusted for inflation is $90 billion and counting. As Hugh White the Professor of Strategic Studies at the Strategic and Defence Study Centre at the ANU and formerly Deputy Secretary of the Department of Defence put it on 23 September 2016 in Pearls and Irritations, 'the acquisition strategy for the submarines almost guarantees a disaster whoever builds

Collins Class Submarines

them, because the design and pricing are taking place in a completely competition-free environment. What we need is a competitive Project Development Study phase, in which two (or more) contenders develop detailed designs and provide tender-quality prices on which a fixed price contract can be based. That is standard in this kind of project, or used to be. As it is, the French can offer whatever they like at whatever price they choose to demand and we will have no option but to accept it – and the longer the current phase lasts the less option we will have, because the less we could be able to stand the delay of starting again.'

The Effective Rate of Assistances is in excess of 300%. This is the excess cost we are paying for construction in Australia rather than buying from overseas suppliers. Compare that rate of assistance to the 5% that our car industry received before the Coalition shoved it out the door.

Despite all the political propaganda in South Australia and the silence of Murdoch's Adelaide Advertiser, the submarine project in Adelaide may provide only 2,000 jobs. The real value-added work will be done in France. We sold out for 2,000 jobs to help Christopher Pyne keep his seat of Sturt. At the same time, we lost 250,000 jobs with the closure of the auto industry, many of which were in South Australia. The Morrison Government now says that 60% of the submarine funding will be spent in Australia.I remain skeptical about that with a company like Naval Group.

With luck, the 12 French Shortfin Barracuda submarines will be delivered some time between 2033 and 2050. As suggested, these submarines are to operate in the South China Sea against the Chinese navy. There is clearly no need for the Chinese navy to worry.

With our six Collins Class submarines nearing the end of their lives from the mid 2020s, there will be a significant and wide capability gap for Australian defence.

A critical assumption has been that the new French submarines would operate in coalition with the US in the South China Sea. But there seem to be two major problems with this. The first is that the French submarines are not nuclear powered and will be contesting the waters with Chinese nuclear-powered submarines. Second, it is also not clear that the US navy, with nuclear powered submarines, would want to operate alongside our conventionally powered submarines.

And strategically, do we really need submarines to operate at long range in the South China Sea with the severe limitations involved. Isn't the protection of our littoral zones where we should be focussing our intention?

The Turnbull government's decision on the future submarine (FSM) represents bad policy. It is bad for the Navy, bad for the taxpayer and bad for the future defence of Australia. Given the key role the FSM is meant to play in the future of the naval shipbuilding industry, it is also bad news for South Australia.

The Navy's requirement is for a uniquely large conventional submarine (SSK) that can undertake force projection missions far from home. This in itself raises important strategic questions. Is this an appropriate role for Australia? Does the US want Australian submarines to operate in the South China Sea? In practice, should only nuclear submarines (SSNs) undertake such missions?

But accepting the Defence requirement for what it is, the concerns around the decision to acquire the DCNS Shortfin Barracuda submarine are considerable. They relate as much to the very substantial risks involved as to the excessive cost.

In terms of the acquisition costs budgeted by Defence, $4.6 billion represents an eye-watering price for a SSK. A nuclear-powered 'Barracuda' costs less than half this in France. A very large 'Virginia' class SSN currently costs $3.6 billion in the US. Most SSKs cost less than $1 billion.

The French submarine appears to be easily the most expensive out of the three proposals submitted under the competitive evaluation process (CEP). TKMS, the German contender, offered to build twelve advanced submarines in Adelaide for around $20 billion, the same cost as in Kiel. At about $750 million in Japan, an improved 'Soryu' class submarine would cost more to build in Adelaide, but far less than $4.6 billion.

Turning to risk, there is a fundamental flaw in the process itself. By eliminating all competition before a detailed design has been produced, the Navy faces substantial risks.

What if the eventual DCNS design is untenable on technical grounds? What if the price quoted by DCNS, now a monopolist,is unacceptable? Australia could be forced to buy an existing design off the shelf from overseas that may not meet all the Navy's needs.

This scenario is not impossible because the French proposal involves major technical challenges. Nobody has ever converted

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The French submarine boondoggle* is Australia's biggest defence blunder and compounded by media failure

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a nuclear submarine to a SSK before. Many submarine experts doubt that it can be done. The hull forms are different. The use of pump-jet propulsion in the Barracuda, whilea breakthrough technology in SSNs, may be far less efficient at the low speeds associated with a SSK.

Another technical risk with the DCNS proposal is that, unlike the other two contenders, it doesn't incorporate air-independent propulsion (AIP). AIP allows a SSK to remain submerged for up to three weeks, albeit moving at slow speeds. Because of improved anti-submarine technologies, which allow SSKs to be detected when 'snorting' (recharging their batteries close to the surface), AIP is a 'sine qua non' for an advanced SSK in the twenty-first century.

A major risk with the French proposal is the tardy delivery schedule, with the first submarine not entering service until the 2030s. This will necessitate a major upgrade to the 'Collins' submarines to keep them in service until the 2040s. This involves massive risk.

Collins cannot be converted to embody AIP. Deep diving will become increasingly dangerous as the platform ages. While the likely cost of the upgrade to Collins is in-excess of $15 billion, it may not deliver a credible submarine capability.

Given the ADF's preference for American weapons and systems, a further risk is that the US will refuse to allow the full transfer of sensitive technology to a French platform.

The recent comprehensive leak of DCNS' top-secret submarine data is likely to make the US more wary of providing sensitive technologies to France. This means that an American combat system, as well as US cruise missiles and torpedoes, may be unavailable.

One popular theory suggests that the choice of the Shortfin Barracuda is merely an artifice to allow the nuclear version of the platform to be acquired down the track.

> *"If this is Defence's cunning plan, it is highly questionable."*

Peter Jennings, Executive Director of the Australian Strategic Policy Institute, certainly thinks so: "it's probably a good bet to say that the reason we've gone with the Barracuda is that some of the 12 builds can be nuclear."

If this is Defence's cunning plan, it is highly questionable.

First, the Germans and Japanese do not produce nuclear submarines and so were participating in the CEP, in good faith, onthe basis of a false prospectus.

Secondly, it is also a highly risky approach to replacing Collins. Even if we started now, it would take 15 years to develop the hard and soft infrastructure required to operate SSNs.

We do not know if this will ever be politically acceptable in Australia. We have not undertaken any process to determine whether a French SSN would be more appropriate to the Navy's needs than an American or British design.

We may well also need to procure SSKs to complement the putative long-range SSNs, and the Shortfin Barracuda is unlikely to be the best available platform for that role.

Overall, the risks involved in the DCNS proposal are so high as to be unacceptable, particularly in light of the costs involved. A senior Defence official is quoted as saying "If you asked someone to devise a new submarine program with the highest risk factors at every stage, you could not have done a much better job. It will almost certainly end in tears and possibly a catastrophe".

Fortunately, it is not too late to change course. To date, the only agreement with DCNS is for the development of a detailed design. The solution is to keep the competitive process alive by extending the CEP and resuscitating the other proposals.

As Hugh White has said, "what we need is a competitive Project Development Study phase, in which two or more contenders develop detailed designs and provide tender-quality prices on which a fixed price contract can be based. That is standard in this kind of project, or used to be."

As well as proposing a tender price for building them overseas, each contender would also be required to provide a detailed plan for building the submarines in Adelaide under a fixed price contract.

Apart from the benefits of re-establishing a competitive process, extending the CEP would also help repair relations with Australia's friends in Japan and Germany. There was considerable angst in both countries not only about the outcome of the CEP but, more fundamentally, about the process itself. Both the German and Japanese proposals were rejected by Defence for reasons that were regarded by the proponents as being largely spurious.

Extending the CEP would not delay the acquisition. Indeed, the FSM may be in the water sooner than currently projected. At the same time, the major risks in the current process would be substantially reduced and there is a much greater likelihood that the Navy would be provided with the right submarine at an acceptable cost.

John Menadue is the publisher of Pearls & Irritations. He has had a distinguished career both in the private sector and in the Public Service.