

THE CONVERSATION

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DCNS' 'Shortfin Barracuda' was the winning design for Australia's next submarine fleet. AAP/DCNS Group

French company DCNS wins race to build Australia's next submarine fleet: experts respond

Published: April 26, 2016 1.22pm AEST

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Australia's next fleet of submarines will be built by French company DCNS but constructed in South Australia, Prime Minister Malcolm Turnbull announced on Tuesday.

DCNS beat competing bids from German and Japanese manufacturers to win the contract. The fleet of 12, which is to replace the Collins-class submarines, will come at an estimated cost of A\$50 billion. The government claims the project will:

... directly sustain around 1,100 Australian jobs and a further 1,700 Australian jobs through the supply chain.

The Conversation's experts respond to key aspects of the announcement below.

What does it mean for local jobs and South Australia?

John Spoehr, Director, Australian Industrial Transformation Institute, Flinders University

This announcement is one of the building blocks needed to accelerate transformation of South Australia's ailing manufacturing industry.

Next year will see the closure of the heart of Australia's automotive manufacturing industry – much of which is concentrated in South Australia. This alone was going to lead to the loss of thousands of jobs in Adelaide's northern and southern suburbs.

The threat of closure of Arrium's steel manufacturing and mining operations now hangs over the state. These operations employ around 3,000 people in Whyalla.

A circuit-breaker like the submarine project was urgently needed to instil some hope in South Australia. On its own it won't solve the short-term problem of job losses in the automotive industry, but it can lay the foundations for the growth of a robust advanced manufacturing sector in South Australia.

Projects of this scale and complexity help underpin more rapid uptake and diffusion of advanced technologies and workplace innovation. This is essential to the successful roll-out of a project like this. And it is enormously beneficial for other industry sectors that can grow more rapidly on the back of this long-term investment.

The choice of the French option is particularly interesting. The Japanese were the favourites to begin with, but they were not as committed to a local build as the other bidders. The Germans offered a local build. The French put forward a hybrid build – with the first of the submarines being manufactured in France.

From an economic development and jobs point of view, the challenge will be to ensure a smooth and certain transition to a local build as soon as possible. This will require a sophisticated knowledge-and-skills-transfer program to ensure that opportunity is maximised.

What does it mean for our foreign relations?

Nick Bisley, Executive Director of La Trobe Asia and Professor of International Relations, La Trobe University

Since the 2009 Defence White Paper, Australia has been committed to a new generation of submarines. The Abbott government got within weeks of announcing that Japanese contractors would build the boats. The unsuccessful leadership spill in February 2015 resulted in the competitive evaluation process that led to the selection of the French firm DCNS.

The government has rightly emphasised that the decision was a merit-based one. The most important factors related to questions such as cost, reliability, operations and the like.

But a fleet of submarines is not a fleet of trucks. The decision has obvious strategic and foreign policy implications.

The conventional wisdom had been that Australia would take the J-option as the culmination of significant tightening of the strategic links between two of America's most important Asian allies. That Australia did not go with Japan will clearly hurt that relationship to some degree, but it won't be a major setback.

Although relationship management will be challenging because of the humiliating way in which information was leaked prior to the formal announcement, overall the decision will be more of a roadbump than a significant roadblock.

Japan and Australia have become one another's most important strategic partners after the US. The reasons for this – the convergence of strategic interests and their shared commitment to the prevailing regional order – mean that the underlying relationship will continue on its long-run trajectory.

Unusually, Australia has a relatively strong hand in the relationship. Japan needs support for its broader security transformation, and it has relatively few friends in Asia. It had been thought that the submarine deal was part of this support – with Australia helping Japan to become a defence exporter – yet it is likely that there will be some other defence procurement of a lower profile and lower risk that Australia will put toward Japan.

While China is likely to be pleased that Japan was unsuccessful, it was not overly concerned about the decision itself. Its concerns remain with what it perceives to be a regional order stacked against its interests.

After Japan, the US will probably be the most disappointed party. The US clearly was hoping that Australia would go with Japan due its desire to support Japan's broader strategic development and the ties that it would cement between two of its key partners.

That the decision pleases China and displeases both Japan and the US means that Australia's submarine choice might be seen as a metaphor for Australia's broader strategic dilemma. But this is to misunderstand the more complex forces that Australia needs to balance in its international dealings.

Australian diplomats will be managing the fact that many will make this mistake. And it is testimony to the region's febrile nature that this decision has taken on such a stature.

What were the technological considerations?

Stephan Fruehling, Associate Professor, ANU College of Asia and the Pacific, Australian National University

By selecting a French bidder to build its next fleet of submarines, Australia is entering a long-term relationship with the only Western country that designs and builds both conventional and nuclear-powered submarines.

Since the survival of a large part of France's nuclear arsenal hinges on the survival of its submarines, Australia's new partner is committed to remaining at the forefront of submarine technology.

Australia's own submarine requirements are driven by the long distances its navy has to deal with in the Indo-Pacific region. No existing submarine provides the range and endurance Australia is looking for. Japan offered a modification of the existing Soryu submarine; Germany's Thyssen-Krupp proposed a new design based on the smaller Type 214.

DCNS' proposal is a conventionally powered boat derived from the Barracuda class – the “Shortfin Barracuda”. It was the largest design in the competition at 4,500 tonnes.

In recent weeks, reports that Japan's design had been ranked third seem to have confirmed the judgement of many submarine experts that the Soryu contained several limitations in its layout and acoustic proofing.

Choosing France's proposal over Germany's, Australia will avoid the risks that may come with significantly scaling up a smaller submarine design. However, the Shortfin Barracuda also comes with its own unique technical risks. In particular, Australia's new submarines will be the only conventionally powered boats using pump jets for propulsion, rather than a propeller at the rear.

While pump jets promise acoustic quieting and are common on nuclear-powered boats, some experts have questioned its efficiency and performance at the slower patrol speeds typical for conventional submarines. At the same time, the German technology for air-independent propulsion is generally seen as more advanced than France's.

There was a lot of focus on the strategic implications of the Japanese bid. But France's own position as a regional power – with sovereign territory in the oceans to Australia's west and east, and a continuing military presence in the region – promises much of the commonality of interest without the strategic drawbacks that some saw in the Japanese proposal.

And, perhaps most importantly, France can offer one thing that Japan and Germany cannot, even if it is unlikely to have featured in the evaluation of the bids: if Australia ever wants to acquire nuclear-powered submarines, it now has a partner that could offer that too.

Will it meet our needs?

Hans J. Ohff, Visiting Fellow, University of Adelaide

I have my doubts as to whether any of the three contenders had the right answer for Australia's future naval needs. Australia owns the intellectual property of the Collins-class submarines. At 3,000 tonnes, an evolved Collins would match or better anything a 4,500-tonne boat can throw at it.

At more than 4,500-tonne submerged displacement, a conventional submarine loses its signature advantage (noise, infrared, radar when on the surface) compared to a nuclear-powered submarine.

The French Navy operates submarines across the five oceans. The French bidder, DCNS, argued that the experience and propulsion technology they transferred from their conventional and nuclear submarines made them the preferred candidate to build Australia's future submarines. And they turned out to be right.

But it's a shame that in Australia we always reach for the stars rather keeping our feet on the ground. While the French ran a brilliant campaign, the Germans and Japanese both ran very poor campaigns.

Editor's note: you can read Hans Ohff's analysis piece on the decision here.