



RESEARCH INNOVATION 2017

THALES AUSTRALIA

**ALIGNING GOALS &
DRIVING COMMERCIALITY
THROUGH RESEARCH
PARTNERSHIPS**



Research Innovation has continued to build momentum since the 2015 National Innovation and Science Agenda, with several moves towards improving commercialisation and collaboration including the review of R&D tax incentives in October 2016 and the revision of awarding grants – shifting the onus from publication to economic impact.

Although Australia is a benchmark for research excellence, it is still a minnow when it comes to commercialisation and industry partnership.

Ahead of **Research Innovation 2017** we chat with John Best, Vice President of Technology and Research & Development at Thales Australia. John shares how Thales is driving commerciality through research partnerships, and how better communication with research partners has led to a greater return on investment.

Collaboration

Improving Collaboration for Research Innovation

Thales Australia, tracing its origins back to the 1890s, is part of a leading international electronics and systems group serving the defence, aerospace and space, security and transport markets in Australia and throughout the world.

Around 7% of Thales's yearly revenue, of some \$20 billion, is reinvested in Research and Development (R&D). Thales's global network of 25,000 engineers and researchers, 1,000 of which are located here in Australia, are sharing ideas on how to conquer the latest challenges across a range of defence, military, transport and aerospace markets.

"Thales has a very strong culture and history of doing R&D. While we do part of it internally, it's also **very much part of our corporate DNA to conduct our research in collaboration with other parties.**

We have a particularly strong history of working with universities and government research labs, and more recently, due to new developments and a greater focus, we're also doing a lot more with the start-up community," says John.

John is responsible for strategy, operational engineering and engineering process, practice and tools, and also for all of Thales Australia's research and technology; which looks at understanding the importance of new technologies to Thales's business and how to leverage these in the future.

"As a company we are increasingly looking at opportunities to use some of the collaborative mechanisms that government has set up – things like linkage grants, cooperative research centres, and the new Cooperative Centre Research Projects. We're investigating how we could use those linkages as vehicles to help stimulate a higher level of research collaboration," says John.

Commerciality

Strategies to Drive Commerciality

Thales, which has helped research and fund numerous research innovations such as Australia's current Air Traffic Management System (TAAATS) has **successfully driven commerciality through innovation by ensuring R&D is very closely linked to the business.**

When it comes to driving commerciality John highlights three key aspects of Thales' strategy:

- 1** **Technology and Innovation Strategy Plan:** incorporating research innovation into the businesses overall strategic planning process by forecasting to understand what emergent technologies might have an impact on business.
- 2** **Emergent technologies:** considering whether there are emerging technologies in the marketplace or in the research community that could be turned into a new product offering.
- 3** **Meaningful Discussions:** interactions with universities, laboratories, and the start-up community help Thales determine potential future research partners. Internships – taking on university students – also help Thales strengthen the network between the business and the research community.

John stresses though; “what’s most important for us in driving commerciality is to be able to explain to universities and labs the overall business problem that we’re trying to solve, or the customer problem that we’re trying to solve.

We do this rather than going to them and asking that they create a particular technology, or that they solve what we think the particular technology problem is.

I think that if an issue is framed that way, where there is clear two-way communication, it positions us to not only think a little more innovatively around how to solve the problem, but also, **by being involved throughout the process, we increase our ability to then take the research outcomes and inject them into our product line.”**

Communication

Negotiating Challenges and Measuring ROI

While developing a strategy to drive commerciality and sharing this strategy with research labs is all good and well, without continued communication it is all for naught notes John.

“One of the most important elements of continued research innovation success, I think, is having people inside our organisation who are, what I’d call, ‘research intermediaries.’

These are people who sit within the company, but they’re also there to go out and talk to our project teams, or our product teams, or our business teams, and they can start to identify problems which would be amenable to a solution, or at least amenable to improvement by doing some research with a university or lab.

I’ve spoken to universities about this before. I guess just like they have people in their research offices that try and find connections between their research capabilities and industry, it’s important for us to have someone inside the company who has skill and capabilities to identify business problems that are amenable to be addressed with research collaborations.

Research innovation really is a two-way street, and the research intermediaries are really important. They have a really good understanding of the business and know what needs to be done to create a product and bring it to market.

But at the same time the intermediaries also have a real empathy and understanding of how universities work and how research works.

From a business perspective we’d love to sign an ironclad contract with a research lab saying that they’d deliver ‘x’ in a certain amount of time, but that’s not how research works – you need realistic and grounded expectations. So these intermediaries become really important bridging people that both identify the research challenges and then help integrate the research outcomes into the business,” says John.

Challenges

Aligning Goals to Ensure Successful Collaboration

Like any successful business Thales monitors its investment through a number of different metrics. However, as John notes, measuring the Return on Investment (ROI) of something for the most part intangible, like research, is often a challenge.

“There are challenges on both sides of the equation that we’re always working to address,” says John. He continues; “challenges driving commerciality and innovation are two-fold for us; we have external challenges, and internal ones. Externally we’re seeing that universities are starting to more formally recognise the importance of industry collaboration as a key element of what their academics do, which is great as often university staff are balancing the need to publish their research with industry and trying to bring their research to a more tangible outcome.

From an internal perspective, the challenge is helping people understand what the role of research is in our business. People often believe that a research lab is simply going to deliver you an outcome, but clearly that’s a wrong assumption – research doesn’t work like that. So internally we’ve spent a lot of time working with our teams and helping them understand the role and benefits of research collaboration through internal advocacy and education.

We can still retrospectively measure our ROI, which we do in a few different ways.

Our most substantive measure is what we call technology insertion, where R&D technology is inserted into our product lines. A great example of this is in vehicle manufacturing, where we’ve taken some research on robot automation from the Defence Materials Technology Centre and inserted it into our armoured vehicle production line. That’s a really great example as we can measure in retrospect tangible outcomes where we’ve deployed technology.

Second, and just as important but less tangible, is tracking in-kind effort. Often the cooperative mechanisms put in place by the government require in-kind effort put in by the company (Thales, in this instance). More importantly from our perspective, it



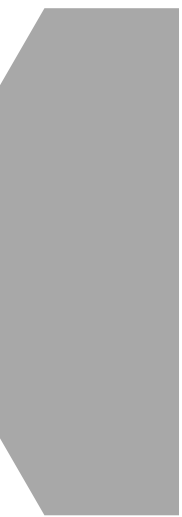
Challenges

Aligning Goals to Ensure Successful Collaboration



ensures our people are really **engaging in the research projects**. If they aren't, then that diminishes our ability to take the research outcomes and successfully inject them into our product line.

Third, and this is perhaps the most abstract outcome to measure, is the **generation of knowledge**. While the research collaboration itself might not translate into new products or services, there is still an intrinsic value in the new knowledge gained. So while research in itself may not lead to a tangible outcome, if it helps maintain our appetite for new knowledge and garners new ways of doing things, then that is really a very important outcome," concludes John.





RESEARCH INNOVATION 2017

If you would like to hear more about research partnerships and how to successfully drive commerciality through communication and collaboration then join John at **Research Innovation 2017**.

Attend the event in Sydney on 4th - 5th April to hear from over 25 industry experts, including scientists, research partners and universities.

For special early bird pricing and to secure your ticket now, simply fill in the **form** and email to **registration@iqpc.com.au**