

FINANCIAL REVIEW

MUNDAY 22 AUGUST 2011

www.alf.com Price \$3.00

The missing link that
makes money and sense

Solid partnerships between universities and business are few, yet some tie-ups that are made are remarkably strong, writes **Joanna Mather**.

Strong linkages between business and universities are drivers of innovation. Unfortunately, Australian businesses are poor collaborators.

The government's latest *Australian Innovation System Report*, which analyses annual progress on innovation goals, confirms weak performance in the area.

Although spending on research and development (R&D) reached a peak of \$27.7 billion in 2008-09, the rate is below the OECD average, and only 2.4 per cent of "innovation-active" businesses in Australia collaborate with universities and other higher education institutions.

The apparent intransigence is often put down to a clash of cultures and objectives. University of NSW biomedical researcher John Whitelock, who has a strong research collaboration with a US-based medical device company called HemCon, admits he often wonders whether scientific discovery and the dollar are diametrically opposed. "Research is like going into a dark cave," he says.

"You go in and flick on your little hand-held torch and you start investigating. You might find something nasty, you might find nothing or you might strike gold. Academics love that, but companies get really nervous."

With budgets squeezed, universities and businesses have devoted time and effort to devising more systematic approaches to working together.

For its part, the federal government, through Innovation Minister Kim Carr, has set a goal to double collaboration between industry and publicly funded researchers over the next decade. But a formula for successful engagement is proving elusive.

"The issue has always been, and will probably continue to be, the need for patience on the part of those on the corporate side," says Karen Sinclair, who heads the Licensing Executives Society of Australia and New

Zealand, a professional group for innovation and commercialisation professionals.

"And for universities engaging with business, it means they have to be a little bit more flexible as to ownership arrangements, benefit sharing and speed," she says.

Of course, there are success stories, as highlighted here. What these collaborations have in common is that they started small and were allowed to grow and evolve naturally. They were also built on relationships that developed because people got on well and shared a mutual interest.

In the case of Melbourne-based Technique Solar, sound research produced in a university that actively encourages collaboration has been taken up by venture capitalists. With finance often presenting a huge problem for spin-out companies, this was a crucial ingredient. As company director John Keating points out, too many good ideas are sold offshore or left languishing in laboratories.

RMIT and Technique Solar

Companies spun out of universities or based on university R&D are not unusual. But Technique Solar's partnership with Victoria's RMIT University has delivered more than the company's directors could have imagined – a contingent of highly skilled scientists.

Not only is Technique Solar's core technology based on RMIT research, but the company now employs the scientific team behind the breakthrough.

Unfortunately for the university, four former employees, including microtechnology professor Ian Bates, have jumped ship to join Technique Solar as it moves to commercial-scale manufacturing of a solar system that not only generates electricity but heats water.

"We would never have had the in-house R&D capacity to bring the idea to fruition without RMIT," says John Keating, a Technique Solar director.

"We had, and continue to have, a very close relationship with RMIT, so much so that for a long time even some of our meetings continued to take place at the university."

Capital raising among the company's shareholders, mostly family and friends, has yielded nearly \$10

million and manufacture is due to begin in October.

"Our aim has been not to let ideas go offshore and not to let good ideas sit in a laboratory or classroom in a tertiary institution," Keating says.

Rather than the invention of a new solar cell, Technique Solar's innovation relies on a combination of existing technologies and a unique business model.

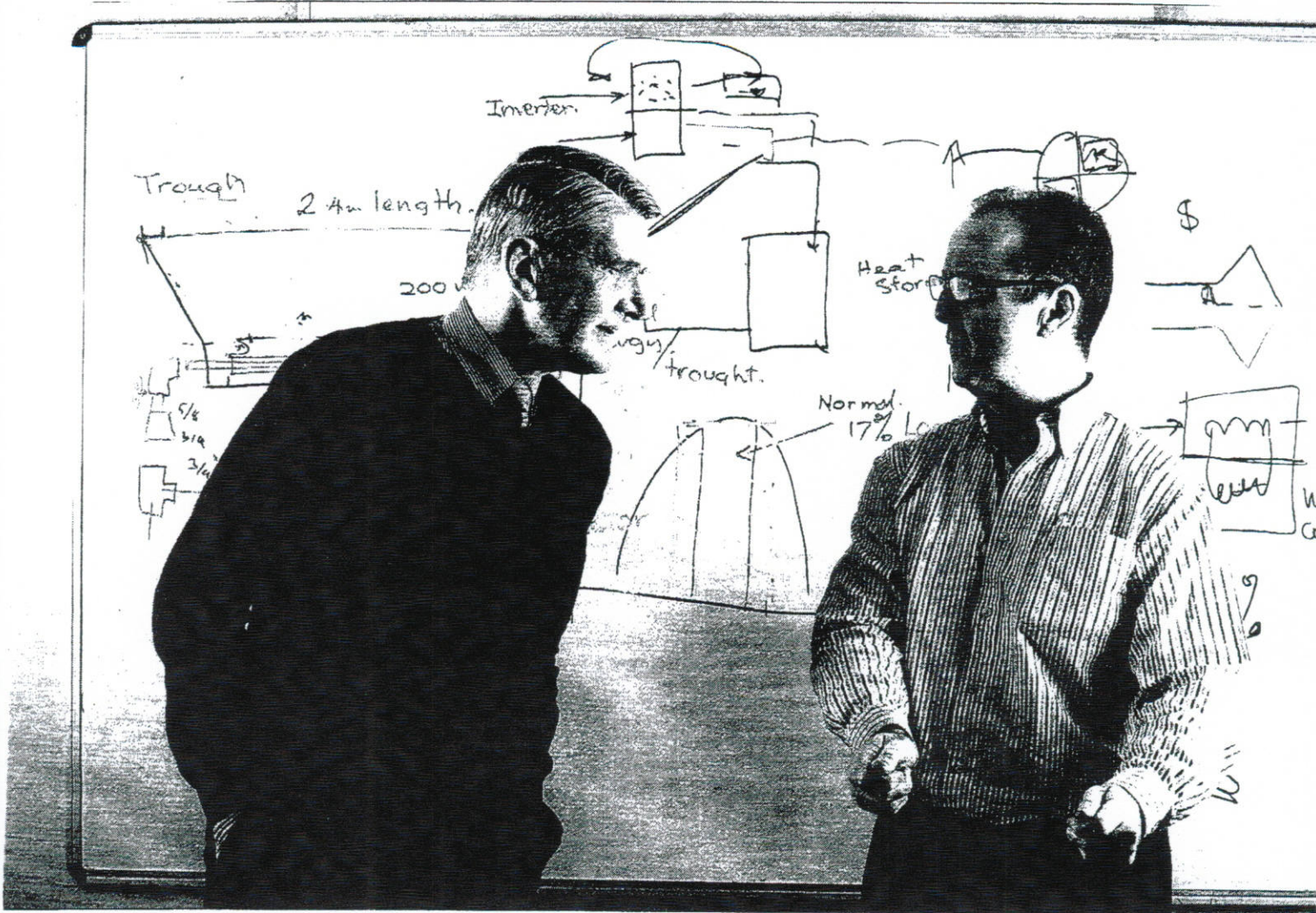
In essence, a lens is used to concentrate the sun's rays on rooftop solar cells. The system produces electrical energy as well as heat energy with about a third of the number of solar cells used in conventional solar panels – Technique Solar claims a fourfold increase in energy efficiency. The heat, a natural byproduct of solar electricity production, is harnessed to produce hot water for the residential or commercial property.

What makes the business model different is that the modules would be owned or leased by utility companies, local councils or private equity groups. These organisations would arrange installation and maintenance of the modules and use the energy savings to meet legislative requirements for cutting power and carbon emissions. Householders win because they are able to lock in energy prices for an extended period, say 15 years.

Keating says Technique Solar's initial efforts will focus on the Australian market but a deal with Chinese purchasers to manufacture and distribute up to 200,000 modules a year has already been struck.

Getting Technique Solar to the stage it is now has largely relied on a relationship between Bates and Keating. With a background in corporate finance and venture capital, Keating had worked with Bates and RMIT on a commercialisation venture previously. That project didn't get off the ground but when Bates spotted the commercial potential of research being done by master's of engineering student Dennis Thoroughgood, he called Keating. Based on the promising research, Technique Solar was incorporated in 2003 and by 2009 Keating had managed to convince Bates, Thoroughgood and two others to join the company.

Technique Solar had already provided the funding for Thoroughgood to do his master's



R&D boost ... Ian Bates, left, brought his expertise from RMIT University to work with John Keating, right, at solar energy company Technique Solar. Photo: ARS

research and for RMIT to develop a prototype.

“What we brought to the table was the finance and business acumen,” Keating says. “But we realised the only way to accelerate the commercialisation was to encourage Ian and the others to join the team and work full-time on the project.”

Before his departure, Bates was the director of RMIT’s Microtechnology Systems Centre, which brought together engineering disciplines including aerospace, electrical and mechanical. He credits Technique Solar’s existence to RMIT’s openness to multidisciplinary research.

“It wouldn’t have happened if

RMIT wasn’t like it is because multidisciplinary centres are not thought of as being attractive because it takes quite a bit of management to bring the resources together,” Bates says.

“The real issue is to solve problems and not find a way to make your own technical expertise relevant. Unless you’re thinking beyond your knowledge you’re not asking yourself the very confronting questions.”