

The next stage is the hardest

Robyn Williams is concerned at our ability to follow-up on great Australian innovations.



A COUPLE OF YEARS AGO I was running a national board meeting in Canberra when we hit a snag. A majority had agreed that the firm of the future would probably have to take responsibility for all its wastes – no emissions, no crud – and we were about to move on when a retired top banker thumped the table.

"Impossible!" he growled, pink face becoming redder all the while in contrast to his fine white hair, "some stuff can't be got rid of or recycled and it's scandalous to saddle a chief executive with that kind of responsibility." We all looked at him in amazement. "Take tyres" he went on, "nobody in the world knows how to deal with them and you can't just stick hundreds of them in the basement. Ridiculous."

At this point one of our directors gently pushed a government document in his direction (issued by the very instrumentality whose board he was serving on) outlining a scheme for recycling tyres. He gave a grunt and began sucking his dentures.

There are, it seems, 18 million waste tyres produced each year in Australia. I'm told that 57 per cent are put in landfill and 13 per cent dumped illegally. The world figure is a horrifying 1.2 billion and climbing fast. The need for an efficient way to solve the problem, even before 'no waste' becomes mandatory, is urgent. So what about the scheme in the pamphlet?

I suspected it may have featured Molecetra, a small firm on Queensland's Gold Coast run by a laconic guy called John Dobozy. He had just walked off with the main prize from The New Inventors on ABC TV (Invention of the Year, 2005). Back in 1999 he had been bothered by the horrendous scale of mountains of dirty black rubber everywhere, marched into the kitchen and begun to experiment with his wife's cooking equipment, microwave and mixer. She, quite reasonably, kicked him out, into his shed. Things improved: their dinner stopped tasting of rubber. Eventually he came up with a scheme that completely reclaims all the materials within a tyre, makes no emissions and uses the extracted energy to drive the process.

Sounds brilliant. And that's what we agreed this May when we sat, on another committee, trying to decide whether Molecetra should be awarded a \$30,000 Banksia Prize for environmental research. There

was no doubt about the quality of the work, nor its value. The only puzzle was why was it not, after gaining national attention, already being commercialised on a massive scale? Was the laid-back hero from Queensland, like many brilliant inventors, only an average businessman? Was he more of a Tesla than a ruthless Edison?

Well, Molecetra Technologies duly won the 2007 DaimlerChrysler Australian Environmental Research (Banksia) Award (the same night in July that Arnie Schwarzenegger scored the Banksia International Prize) and I can only assume from the exuberance with which the man from Daimler greeted the news that they will lend their Mercedes-quality commercial flair to help the winner get their tyre system working on the global scale.

How many times have we seen an exciting innovation languish, especially an Australian one, because the next stage didn't come off? The Rotary Engine, Relenza (the treatment for influenza), the 'natural' sunscreen from corals, or David Mills' solar heating system.

David Mills spent 30 years developing a technology at the University of Sydney which he's convinced could supply major cities with all the power they need. After decades of getting nowhere he suddenly received a note from American venture capitalists wanting to see his demonstration set up in the Hunter Valley. In almost no time they had flown over, signed a deal and persuaded David and family to move to Palo Alto, California.

Now they are all set and hiring staff from around the world. Just before he left Mills, by coincidence, appeared on Alan Jones's radio show. "Does the PM John Howard know about your work?" asked Jones off air. David shook his head. The day the Mills family was about to leave a fax came from the PM's office wanting to know more. David turned it over, wrote "too late" and sent it back.

Why do so many schemes have such a frustrating run in Australia, despite exemplary successes and magazines such as Fast Thinking offering wise counsel? It could be the broader nature of modern systems, crossing boundaries of definition, plus our inevitable lack of experience.

Take Prame Chopra and his exciting hot rock technology. Near Innamincka in South Australia we have a gigantic underground stone, bigger than Sydney, whose heat can be exploited: cold water down, near boiling water up. But when Chopra (then an academic at the ANU) sought permission under the Mines Act to tap this source he was told it was not a 'natural substance' (like minerals) and therefore outside the legislation. The law had to be changed. And eventually, it was.

Several frustrating years later they have drilled over four kilometers into the Earth's crust and were about to get to the payoff phase – when the contractor dropped a 'bridge plug' down the 4,300 meter shaft. Time to drill another hole. By 2010 Chopra's firm Geodynamics hopes to have a 40-megawatt power station up and running, supplying some of the needs of Olympic Dam.

Has innovation got easier since he and his fractious team thought of the bright idea of hot rocks in the 1990s? "It's every bit as difficult today as it was then," he says stoically.

Some of these schemes often have flaws unsuspected by the casual observer. The one I espoused most enthusiastically a decade ago was a huge worm farm in Brisbane (Redlandshire) promising to gobble up Queensland's sewage and then Australia's. The worms are still being fine-tuned.

As for tyres, here is a problem that must be solved – or else. Now he's got a Banksia plus the support of DaimlerChrysler, can anything stop John Dobozy? We shall see. ★