

Women can help bridge the 'valley of death' in science innovation

February 20 2014, by Cathy Foley



Cathy Foley reflects on her time as Woman of the Year. Credit: CSIRO

As [International Women's Day](#) approaches on March 8 and my time as NSW Premier's Woman of the Year draws to a close, I have been thinking about diversity in the workplace, and in particular, the relationship between diversity and innovation.

Science and technology that lead to innovation are critical for the changes that lead to a better quality of life, greater business opportunities and a happier, healthier and more equitable society.

We don't have to look far from our own backyard to see examples of

this. The rapid global expansion of wireless communications is in part possible because of the now widely acknowledged work by [John O'Sullivan and his team](#) at the CSIRO. Wi-Fi is now estimated to be used in more than 3 billion devices worldwide.

Given the huge benefits that innovation can bring – economically and socially – we should be doing everything we can to encourage environments where this type of thinking and practice can thrive. One of the most effective ways to do this would be achieve gender balance in our innovation system.

The gender balance

[There is strong evidence](#) that companies operating with a [gender-balance](#) actually enhance their innovation quotient and gain a competitive advantage.

Reports also suggest that advances in [gender equality correlate](#) positively with higher Gross National Product (GNP) and that increasing women's labour force participation and earnings generates greater economic benefits for a family's health and education. Surely this can only be a good thing.

So where exactly are we at? As a nation we have achieved great things. Last year Australia was named the country with the highest [quality of life](#) in the world, according to the [OECD better life index](#).

The gender gap

But we still have considerable work to do in many ways, including closing the gender gap in the workplace. The World Economic Forum has reported that in 2013 Australia continues to [sit at 24th](#) in closing this

gap – just above Ecuador and Mozambique.

Australia still has only 17.6% representation of [women on ASX 200 boards](#) (as of 14 February 2014), and almost a quarter of boards of the ASX 200 still do not have any females at all.

Women working in science remain hugely underrepresented in leadership roles and some areas of physics and engineering have as little as 5% female participation.

The Australian Businesswomen's Network says that women are starting small businesses at [twice the rate of men](#). Despite this, a [US study](#) has found that female-owned companies are less likely to attract private investment compared to male-owned companies.

The recipe for success

If the nexus of women, science and business is the recipe for success in innovation, then how do women, science and business meet?

Equity, diversity and the lost opportunity of not capturing the full human potential are important arguments for having more women involved in science, technology and business.

But I have a new reason. As the traditional "social organisers" women bring a lot to the table. Business and science success is all about relationships and networking. You have to meet to do business.

Take the science world as an example. On average it takes about 20 years for a discovery to develop into a product. This has been an international rule of thumb. Everyone wants this to happen faster.

When you look at the reason for the delay, it is often when the

development gets caught up in what is often called the "[valley of death](#)" or a black hole in the commercialisation process which can add years to transitioning time. Translating a discovery in the science lab to the engineering and development, then finally securing industry adoption can be a tortuous process.

What women can do

Women can offer a great deal in making that link as years of social conditioning means that it comes naturally to us.

Could the gender gap be a factor holding back the transition of science to industry, leading to missed opportunities? The diversity that women bring as scientists, technologists, engineers and nascent entrepreneurs might be the answer.

If women's participation is a demonstrated element for business success and [innovation](#) is the essential ingredient for businesses to flourish, then why have we not embraced the opportunity to boost the role of women in science and business? Perhaps if we did we would witness greater translation of research to industry and our economic success would grow even more.

So at the end of a year thinking about what needs to change if we are to grow our economic and social prosperity, I think that increasing the participation of [women](#) in [science](#), technology and business (big and small) is critical if Australia is to continue to have world leading quality of life, close the [gender gap](#) and have internationally competitive businesses.

Economic and social prosperity depends on change. This is one change we need to make now.

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Citation: Women can help bridge the 'valley of death' in science innovation (2014, February 20) retrieved 23 May 2024 from <https://phys.org/news/2014-02-women-bridge-valley-death-science.html>

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