

<https://sourceable.net/how-innovative-is-your-business/>

It's the easiest thing to claim you are an innovative company – most companies do so without compunction, knowing that investors, employees and construction clients are increasingly demanding innovation these days.



However, most companies lack any meaningful evidence to back up their claims, and most stakeholders do not have the knowledge or tools to determine whether their claims are genuine or not.

The measurement of innovation output and success is a controversial topic. While on the one hand, innovators need to be accountable for their actions like everyone else, on the other hand there is also evidence that the act of measuring innovation can stifle risk taking and promote the type of short-term thinking which is its antithesis. The standing joke among those who oppose measurement is that ROI (return on investment) really stands for 'restraint on innovation' because the impact of an innovation might take many years to materialise.

Furthermore, there is a major question about how one measures the ROI today from an idea which might produce results in 10 years' time. Consider for example, the many decades of minute incremental developments in technologies which eventually led to the development of business information modelling or 3D printing. To have not invested in these technologies because their value could not be measured at the time would have ensured that their huge

potential value could never be realised by those who use them in the future or invested in them at the start.

In Australia in recent years, we have been very good at not investing in our ground breaking technologies because they did not produce immediate returns, only to see our competitors reap the huge returns of being a first mover when the market for the idea matured.

Take solar technology for example. Some 80 per cent of the world's solar cells are now produced in China using technology which was developed in an Australian University by a team of world leading scientists who could not find an Australian investor to support their research. We seem to have forgotten that innovation is a venture into the unknown which may never produce any results. In fact, it is often the case that truly disruptive innovations are worse than existing products and services at the time of their launch.

Consider, for example, the first digital cameras, whose picture quality when introduced was far inferior to traditional film cameras. While sceptics abandoned the idea, the visionaries stuck with it and eventually completely disrupted an industry, putting those who followed too slowly out of business faster than they ever could have imagined. The world of digital disruption is a fast game of very high stakes where winners often take all and where those who don't invest in ideas which may seem outlandish now are often unpleasantly surprised how fast they can be left behind and even go out of business. The key, of course, is picking the winners.

There is also the question of whether we should measure innovation outputs or inputs. Simply measuring the 'output' of an innovation (in terms of profit or productivity for example) is likely to miss important 'input' measures which may also reflect levels of innovation in a business. For example, most innovators will tell you that failure is as important an indicator of innovative company as is success. Indeed, some innovative companies like ExpoTV.com have developed specific business KPIs around failure.

Another problem in measuring innovation is that many firms have never defined what innovation success means for their business and defined this in measurable KPIs. Furthermore, there is no ideal all-encompassing measure of innovation activity. The most commonly used measures of innovation include expenditure data (such as research and development – or R&D), IP count-based data (such as designs, patent and trade mark applications), and qualitative innovation assessments (such as surveys of customer attitudes).

However, some measures (such as trademark applications) are more suited to capturing product rather than service innovations, while others (such as patents) are more suited to capturing radical rather than incremental innovations.

Recently, it has also become popular for governments and companies to use productivity growth as a proxy of innovative activity. However, increases in productivity are by no means certain from an innovation or indeed easy to measure or attribute to a specific innovation if they do occur. There are likely to be many other factors at play which will need to be isolated to get a reliable measure.

Furthermore, some innovations address social or environmental objectives. This means it is important to develop measures of innovation that address a range of impacts as well as economic ones, and there is a growing body of research which shows that innovative firms

use broader measures of business performance than non-innovative firms. They also have a wider variety of management controls, beyond traditional accounting systems, to measure and monitor them.

Regardless of the method used to measure innovation, the quality of data collected is paramount to give a reliable indication of innovation success. However, most firms in the construction sector fail to collect reliable data or report it.

Furthermore, since much of the data used by firms in the construction industry to measure innovation activity is unreliable and because measures of innovation activity are not yet widely established, the proclamations of many firms which claim they are innovators should be treated with a healthy degree of scepticism until properly investigated.

For example, current government definitions allow construction companies to report expenditure in activities such as feasibility studies and R&D in full knowledge that they are manipulating government rules to make them look more innovative than they really are.

IP counts are also problematic since they cannot normally be used to register organisational, service and market innovations which are common in the construction sector. Also, IP counts such as patents are not always used by firms to protect their ideas. This is particularly the case with firms working in technical fields such as construction which are not covered well by patent laws and where firms are too small to have the resources to protect their patents.

While the customer surveys which many construction firms use can be useful to measure innovation activity, the quality of many surveys are questionable and results can be affected by subjectivity, non-response bias, sample selection and failure to consider non-responses and innovation quality.

Measures of numbers of new product or service launches can also be useful, but again they are generally unable to distinguish between new and imitated products. Finally, while publication citations might indicate levels of innovation activity, they can often be of questionable quality and in any event, many firms have a direct interest in maintaining secrecy about their new ideas and avoiding citations in journals.

The problems above mean that innovations in the construction sector are often 'hidden' from the view of governments, clients, potential employees and investors, meaning that the sector often looks less innovative than it really is. If we are going to start promoting our companies and our industry as an innovative sector, then we had better start figuring out how to better measure, report and promote the amazing work we do

- See more at: <http://www.be.unsw.edu.au/content/how-innovative-your-business#sthash.Dmet0CoL.dpuf>

Despite continual changes in the focus of innovation policies between Liberal and Labour governments in recent years, one common thread has been the belief that small business and start-ups represent the foundation of an agile, innovative and prosperous Australia.



This is based on evidence that such businesses are the factories of new ideas which contribute disproportionately to employment growth and the much needed transition in our resource-dependent economy. While Australia ranks relatively well in the OECD countries for ease of business creation, our start-up rate has declined in recent years and jobs generated per business has been falling, with only three per cent of start-ups generating 77 per cent of employment growth.

The construction industry is well known to be an entrepreneurial industry of small business with 95 per cent of its firms employing fewer than 10 people. While the rate of start-up business is high in construction, so is the rate of insolvency, and budding construction entrepreneurs face a whole range of challenges in both starting and scaling up their businesses.

One of the greatest challenges is finance. The big banks are highly risk averse and the emerging Australian venture capital sector sees the construction industry as a relatively high risk investment. They also see it as a sector which provides relatively little growth and return on investment compared to the high technology industries, which promise to transform our economy into the future.

Unlike construction entrepreneurs in countries like China and the US, who have access to multi-billion dollar venture capital markets and government start-up funds, Australian entrepreneurs have to compete for finance from a fledgling venture capital sector which

invests approximately \$600 million a year. While this amount is growing slowly each year, most of this money is invested into high-tech businesses in other sectors which are in their early commercialisation phases, leaving both new and established construction entrepreneurs struggling to find finance to establish and build their businesses.

However, the growth of the internet is presenting Australian construction entrepreneurs with new alternative possibilities to fill the funding gap in developing their bright new ideas and businesses. Australia punches above its weight in the growing crowdsourced funding market (crowdfunding), having established some of the world's largest crowdsourcing platforms such as Freelancer, Ozcrowd, pozible, Designcrowd, Kaggle and Venturecrowd, to name a few.

These new crowdfunding platforms, and many others such as Kickstarter which are based overseas, provide largely untapped opportunities for construction entrepreneurs and companies to seek investment capital for their new ideas from the public, customers and angel investors from around the world in a new borderless platform economy. For example, using the crowdfunding platform Crowdcube, a cleantech start-up in the UK, recently raised £762,000 from 535 equity investors in just two days to support the development of a floor tile capable of generating energy from pedestrians.

Crowdsourcing is also emerging as a new way to fund major construction projects. For example, the world's first crowdfunded construction project was a hotel development in Bogota, Columbia which secured US\$170 million in funding from 3,800 investors who reportedly got an average of 40 per cent return on their investments. In the US, it has been estimated that by 2017 the value of construction project crowdfunding could grow to be over US\$3 billion, driven by recent legislation which allows projects to be funded by non-secured investors.

However, until recently it was difficult for Australian construction entrepreneurs to provide crowdfunding investors equity in their projects. This has restricted the number of projects suitable for being crowdfunded and the numbers of investors willing to support them. So to avoid Australia losing out to other countries where equity crowdfunding is permitted, the Australian government has recently created a legal framework for crowdfunding to assist start-ups and other small businesses that may have difficulty accessing traditional equity funding. This framework also provides important protection to investors who are likely to be relatively unsophisticated and investing in new ideas and companies with high risk of failure.

To date, crowdfunding has been mainly pioneered in other industries such as the arts, where funding for projects is notoriously limited. Large companies like Qantas, Vegemite, LEGO, Starbucks, IBM and even Kettle Chips are also using crowdsourcing to tap into the loyalty of their customer bases to involve them as equity partners in the creation of new products and services. In this way, crowdsourcing is becoming a legitimate form of collaborative innovation and organisational learning whereby companies tap into the power of the crowd. Indeed, it is predicted that by 2017, 50 per cent of all consumer goods innovation will be funded by crowdsourcing, since it represents an excellent way for companies to test the viability of their new ideas in the market through the willingness of their customers to invest in it.

While construction entrepreneurs and companies do not have the loyal customer bases which consumer organisations may have, the buildings and infrastructure which they build are often

occupied and used by thousands of people who may be willing to invest in their design and development. This may be especially true for social buildings and infrastructure.

Indeed, crowdsourcing (without the equity and finance) has been used by many years in the construction sector in the form of design competitions for some of the most iconic buildings including the Sydney Opera House. However, it has yet to be widely used to secure funding for projects and new business ideas and given the huge potential for entrepreneurs in the construction sector to contribute positively to society and the environment in which it builds, this would seem to be an untapped opportunity.

Crowdfunding could not only provide new sources of funding to large and small construction companies and budding construction entrepreneurs, but could open up enormous new opportunities for the industry to engage with communities which have traditionally been seen as a risk to the construction industry rather than an opportunity and asset.

Finally, crowdsourcing may offer interesting new opportunities for deep collaboration within construction supply chains by enabling firms to come together in the financing and development of new ideas.

- See more at: <http://www.be.unsw.edu.au/content/financing-construction-innovation-through-power-crowd#sthash.G5918Q2k.dpuf>