

Climate Change – A World of Opportunities for Entrepreneurs

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It's no longer mere writing on the wall. The reality of climate change is stark and staring right in our faces, with evidence abounding all around us.

Siberia witnessed record-high 38 degrees Celsius in June 2020, coupled with [wildfires](#) ravaging the land. Australia's 'Black Summer' bushfires drove home the point of climate change too, with almost [three billion animals](#) have died or been displaced, including reptiles and birds. The Amazon bushfires have been at a [13-year high](#) this June. Islands are on course to [becoming uninhabitable](#), according to the Intergovernmental Panel on Climate Change, 2019. The number of displaced environmental migrants globally is estimated to reach close to [one billion by 2050](#).

The pressure for businesses, institutions and governments around the world to change is mounting. Fortunately, the disciplines of entrepreneurship and innovation have been rooted in the pursuit of opportunities where others see challenges. And when it comes to climate change and its implications, there is no dearth of opportunities.

Climate change – a wicked problem

The numerous incidents associated with climate change noted earlier are not random occurrences that we can just wish away. Going by [CSIRO's megatrends](#) that mark our future ways of life, these megatrends are here to stay and we need to learn to adapt to the new realities. Climate change, inevitably, will influence more than one of these megatrends.

Climate change, despite its having been the talking point among intellectuals, influencers and institutions globally for decades, still hasn't seen consensus emerging among the innumerable stakeholders who are affected by the phenomenon. People's perspectives are at loggerheads, there is lack of clear formulation of the problem, there is no effective way to stop climate change, a full solution is not yet on the horizon, and the problem in itself could be seen as a symptom of other problems. In effect, climate change aptly qualifies in being called a [wicked problem](#).

How could this wicked problem of climate change be turned into innovative ideas for businesses?

Innovations to suit your size

Innovation could be incremental (continuous improvements to reduce prices and / or enhance performance), radical (unevenly distributed, aimed at new markets or products) or transformative (technologically superlative, giving rise to entirely new industries or sectors). Innovation also features three distinct characteristics that innovators need to embrace – people, problems, and risks.

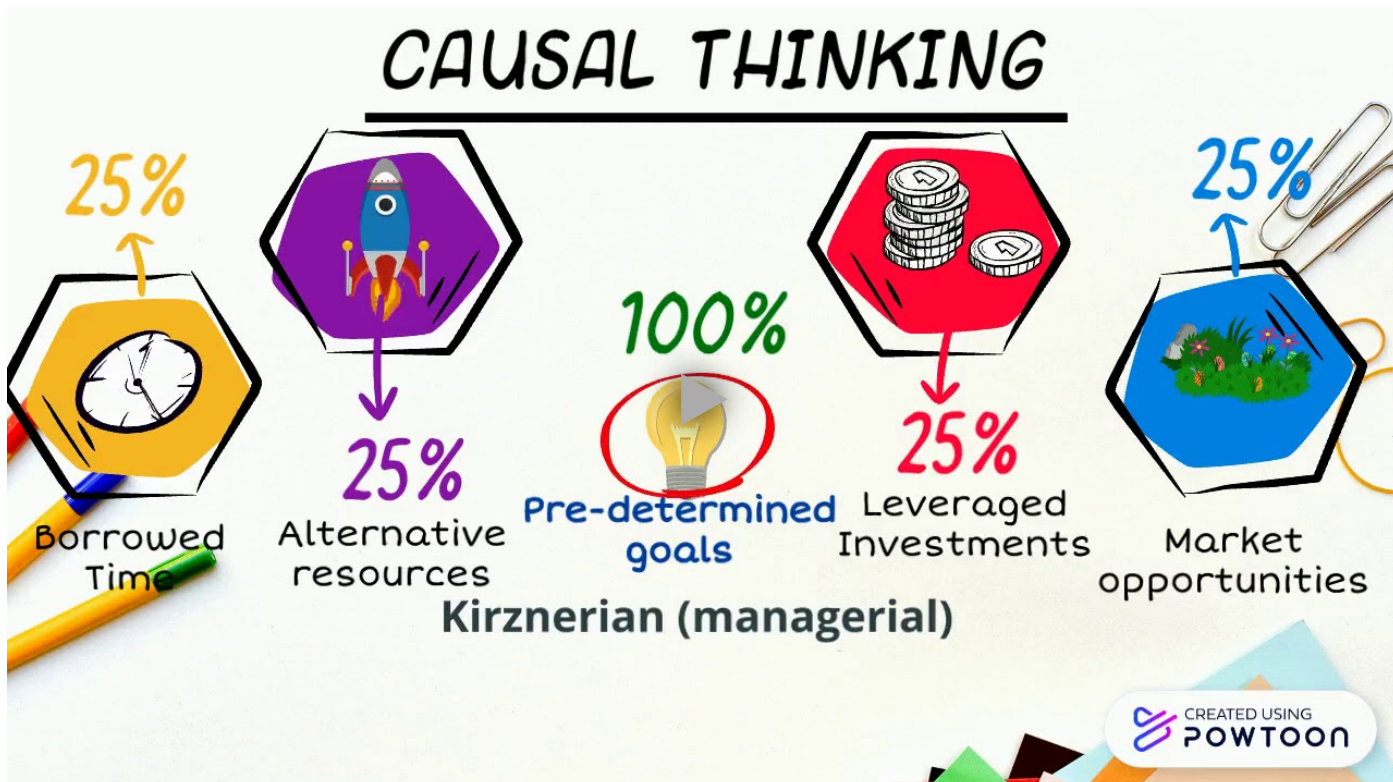
The southern hemisphere's fastest supercomputer, based in Canberra, for instance, is an example of transformative innovation that creates a new range of possibilities for the most drastic challenges facing the world today, including climate change. Such innovations demand massive investments in people, the ability to identify and deal with large scale problems, and the willingness to take on significant risks of failure. Hence, transformative innovation is generally the prerogative of large organisations or multinationals, or in this case the Australian Government.

Radical innovations may not be able to tackle the direct effects of climate change by themselves but may still be able to contribute considerably to dealing with its consequences. German company BASF, for instance, invested in research and development of new technology in farming and agriculture in Australia, leveraging Australia's proximity to the enormous Asian market (80% of the additional 2 billion people to be added to the world population by 2050 will be in Asia). Another case in point, a water purifier called Pureit from Unilever: lack of access to safe drinking water in India is a growing and persistent challenge. The solution stemmed from the opportunity to bring potable water to millions, tailored to fit small kitchens using technology that did not require running tap water or continuous electricity supply.

Entrepreneurial mindset – Effectual Vs Causal Thinking

Management students are often taught to 'think like an entrepreneur'. Start-ups and Small and Medium Enterprises (SMEs) alike are likely to fail if they don't adopt an entrepreneurial mindset.

Managerial thinking, according to Sarasvathy, is typically causal, starting with a pre-existing goal, then seeking to identify the fastest and the most efficient means to attain this goal by manipulating resources. That's what large organisations do – they start with pre-existing goals and strive to achieve them, or try to find alternative means of achieving them (which makes for strategic thinking). The goals of penetrating a new market or achieving a specific market share, for instance, would lead to leveraging existing resources or acquiring new resources to attain the objective. Entrepreneurs too tend to get caught into the allure of strategic thinking, when they should, in fact, be 'thinking like an entrepreneur'.



The entrepreneurial mindset involves invoking effectual thinking, starting with a set of available means, letting goals emerge gradually over the horizon. Entrepreneurs could evolve their ideas along the way based on their aspirations, ground realities and their interactions with stakeholders; but they start within their means. For instance, entrepreneurs could bootstrap into a venture in an industry of their interest, aptitude and expertise. They need not be concerned about the goal of achieving a pre-determined market share or gaining inroads into a new

market – their concern is their means and what they can get out of what they have. Their goals would take shape as their means let their enterprises grow. For entrepreneurs and SMEs that may lack the resources of the larger firms and may balk at taking disproportionate risks, incremental innovation that cashes in on opportunities, riding on the wave of megatrends powered by effectual thinking, should fit the bill.

Whether it is about helping businesses reduce carbon emissions or attain carbon neutrality, predicting weather patterns or managing bushfire, enhancing agricultural productivity or bringing clean, safe drinking water home, the scope for engaging in incremental, radical or transformative innovations is tremendous. Climate change, when dealt with from the right perspectives, can be turned on its head to do planet earth more good than harm. The opportunities are out there to seize. The world is waiting for entrepreneurs, the catalysts of change, to make it happen.



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Krishnan teaches in the tertiary education sector across the disciplines of Human Resources Management, Entrepreneurship & Innovation and Marketing Management, with experience in workplace training in fast-paced business environments, developing and reviewing learning materials, and facilitating over a range of LMS platforms. He has trained executives across Australia and overseas and has worked in multiple industries and cultures.