Could Design Centred Thinking be the solution to Australia's innovation conundrum?

The speed of disruption is outpacing rates of innovation resulting a widening gap in Australia's capacity to remain globally competitive.

Everything in our world is touched by "design" and therefore can be redesigned, a concept like design or human-centred thinking (DCT) provides leaders with a low-risk option for moving beyond the traditional mindset of "what can't be done"[2].

Prime Minister Malcolm Turnbull's Innovation Statement clearly signalled the need for Australian business leaders to rethink their attitudes towards risk taking, particularly when it comes to product and service innovation. Prime Minister Turnbull argues that when compared to countries such as the US and Israel, Australian business leaders are trailing behind when it comes to *"innovative risk taking"*. The prime minister's statement suggesting Australian business leaders need to "embrace a culture of innovation" maybe hollow rhetoric unless Australian business leaders are prepared to embrace a more innovative and "risk centred" mindset to growth.

At last year's Workforce Productivity Conference, which featured a diverse selection of international and local business leaders that included Richard Dobbs, Director, McKinsey Global Institute, Richard Umbers, CEO for the Myer Group, and Tim Fung, CEO of Airtasker, it became abundantly clear that the speed of disruption is outpacing the rate of innovation resulting in a widening gap in Australia's capacity to remain globally competitive. For many business leaders, this new paradigm combined with the government's commitment to review outdated insolvency laws should create the perfect opportunity for Australian business leaders to rethink their entrenched attitudes towards risk taking. The question however is whether Australian business leaders are willing to put aside their conservative attitudes towards risk and make the necessary changes in order to become globally competitive.

Whilst the significant majority of Australian business leaders continue to focus on keeping their heads above water, Australia's largest organisations including Telstra, Optus and CBA are quietly turning to Design-Centred Thinking (DCT) in an effort to remain globally competitive and shake off entrenched attitudes towards product and service redesign. A strategy which is proving to be highly effective in helping them better understand their customers whilst minimising the risks associated with product innovation [1].

What is DCT and why should business leaders bother?

David Kelley, founder of IDEO argues that the only way of solving complex and intractable business challenges is to build deep empathy for one's consumers.

According to Kelley, leaders have traditionally designed products and delivered services without empathising or truly understanding the people theses enterprises seek to serve[3]. He argues that only by putting themselves in the shoes of their customers, can business leaders truly see the world, and all the opportunities to improve it[4]. Alto argues that discovering what won't work is part of finding what will. When leaders get this right, it's because they got it wrong first. "*Fail early to succeed sooner*" is a common refrain around IDEO, and part of its power is the permission it gives to take risks and get something wrong.

By refusing to take risks, business leaders actually close themselves off from a real chance to innovate [4]. Arguably risk taking requires courage to and stepping out of one's comfort zone and into the unchartered territory for many. The challenge however for most leaders is learning how the process of risk-taking can be leveraged in such a way as to innovative. From then on the challenge shifts to one of managing the risk process in a way that supports the innovation process. DCT provides this opportunity[4]. Essentially DCT humanises the design and risk management process by empathetically focusing on those who will be most affected [2].

"I have not failed. I've just found 10,000 ways that won't work."

Thomas Edison

DCT had its genesis in lean manufacturing sector and is based on designing new products and services around customer demand instead of the functional or technological limitations of the enterprise. DCT essentially integrates the decision-making and design process and supports the operationalisation of new products and services [5]. The process is increasingly used by contemporary business leaders to solve a range of intractable problems including:

- the design of new and innovative products and services,
- overcoming entrenched productivity challenges and
- designing new ways of working that support more agile and responsive enterprise structures [1].

At the heart of any design centred thinking initiative is the belief that all problems are solvable [4] and brings together what is necessary from a customer perspective with what is economically and technologically feasible [3]. Accordingly, DCT can significantly improve product innovation as well as fast tracking the decision-making process and minimising the risks often associated with product and service redesign [6].

DCT is a human centred approach to risk taking and problem solving, one that can occasionally feel more like madness than method - but leaders rarely get to new and innovative solutions if they always know precisely where they are heading.

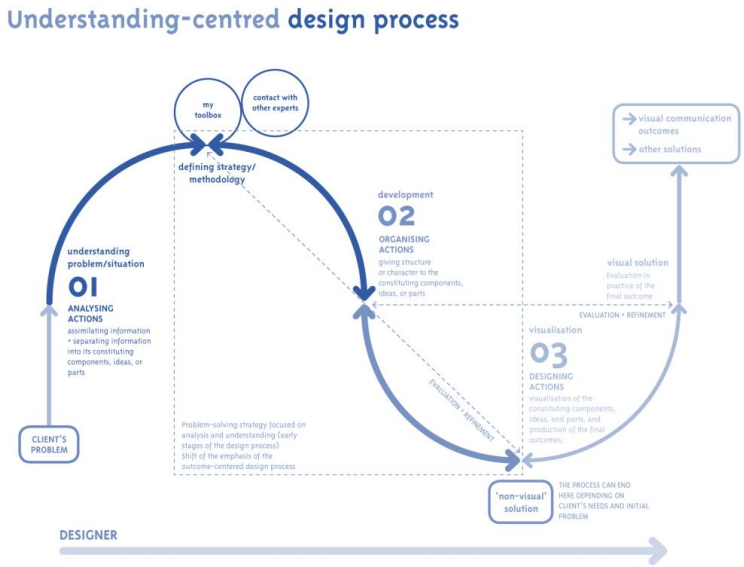
The process is designed to encourage enterprises and their leaders to learn directly from their customers by opening up to a breadth of creative possibilities and then focusing in on what's most desirable, feasible, and viable for a customer's perspective [4]. The process also looks beyond the boundaries of the immediate challenge to ensure the right questions are being addressed.

Using multidisciplinary and interdisciplinary teams, DCT incorporates diversity of thought and ideas and leverages different paradigms from a range of professional disciplines to analyse, synthesise and generate insights and new ideas. The interdisciplinary nature of DCT also ensures that the innovation process is naturally balanced between the technical, business and human requirements [6].

DCT also draws on the enterprise and its leaders to integrate the needs of customers, the possibilities of technology and the requirements for business success. It is this kind of risk taking that drives successfully into, and through, the immediate challenges through to innovation [3]. Often described as a "practice-based activity" and a way of making sense of the world around us, it is common to use deductive and inductive thinking to overcome these challenges [7]. DCT is often categorised as being:

1. the creation of artefacts,
2. a reflective practice,
3. a problem solving activity,
4. a way of reasoning / making sense of things and
5. the creation of meaning [7].

Typically, the design or problem solving process is divided into two separate phases. The first phase is focused on clearly articulating and defining the problem while the second focuses on the possible solutions. During the first phase all the elements of the problem are identified. This is an analytical sequence.



In turn, the problem solving phase is a synthetic sequence, where different perspectives of the challenge are compared and balanced against each other to create a final outcome [7]. An overview of the process is outlined in the figure inserted.

(Source: IDEO)

Insofar as it is open-ended, open-minded and iterative, this approach to problem solving often feels non-linear and chaotic to those experiencing it for the first time[1]. Leaders who rely on this approach argue however that by focusing on creative responses to complex problems increases enterprise engagement as well as strengthening the interpersonal relations within and across teams.

From a creative problem solving perspective, a design-centred approach also tends to level the playing field and create an environment in which nobody is ever fully in control of the process. The approach therefore encourages *"risk based innovation"* and rewards failure as a means by which the enterprise and its people learn what it is that's important to their customers. Indeed, a design-centred approach to product and service redesign can be transferable to any set of business or customers challenges[1].

In *Rethinking Design Thinking: Part II,* Lucy Kimbell suggests that a design-centred approach to risk taking and problem solving provides an effective way of distributing the risk and resolution process across a number of different people and perspectives that together enact the innovation and redesign process [8]. This approach clearly recognises the messiness of the process and the incompleteness of the results, which is highly reliant on the interdependencies between an enterprise, its employees, its customers or end-users and the redesign or problem solving process.

The artefacts used to articulate the problem, the users or customers and the circumstances are all part of the design system according to Kimbell[1]. She also argues that by adopting a *"practice approach"* to problem solving, the emphasis switches the focus from individuals and/or teams - and their norms - to an unstructured symphony of minds, things, bodies, structures, processes, and agencies[8].

Leaders who rely on DCT understand that the problem-solving process is "human-centred" rather than technology or enterprise-centred. These leaders also rely on an iterative problem-solving process that moves from generating insights about their clients to idea generation and testing, through to prototyping and implementation. They will also rely on visual artefacts and prototypes to help their teams work together on particular challenges as well as asking the 'what if?' questions in order to encourage future scenarios rather than accepting the way things are done today [1]

Leaders who rely on a design centred approach need to be confident at reformulating and reprioritising specific tasks or challenges in such a way to ensure the problem and its complexities are fully understood to all and therefore producing more "generative reasoning". Arguably by doing so results in teams working on challenging problems in a creative way which brings with it the added benefit of applying multiple problem-solving skills to future business challenges resulting in people becoming conscious of, and given opportunities to reflect on the problem solving process [1].

Another notable benefit of DCT is its explicit valuing of divergent thinking, a key to fostering creativity. In addition to valuing divergence and therefore expanding an enterprise's capacity for approaching problems in unexpected ways, DCT also involves adductive or constructive reasoning, which requires bringing together partial or contradictory evidence and drawing an incomplete but workable conclusion from it [1].

Those leaders who rely on DCT often describe this process as *"thinking with their hands"* largely due to the fact that it encourages experimentation with a variety of forms, sharing concepts with others, and selecting the methods, ideas and forms that they believe work best in a particular circumstances[1]. What DCT thinking needs most however is an environment in which people know they can experiment, take risks, and explore the full range of their faculties [1].

Why DCT can be an effective antidote to innovation and managing risk?

Traditionally, business leaders believe problem solving involves that taking a series of inputs, analysing them and determining the most appropriate way forward.

Contemporary leaders acknowledge that the "one right answer" approach to overcoming enterprise challenges is no longer relevant in a pluralistic world[1]. DCT therefore allows leaders and their employees to appreciate situations from multiple perspectives. It also provides ways of empathising with customers, while working alongside them to collectively apprehend and construct a broader context within which to overcome enterprise challenges.

DCT is an approach to working together to act, reflect, and learn while doing [2]. It also helps teams and groups to challenge boundaries, construct shared frames of reference, visualise alternatives to prevailing paradigms, and align actions to improve messy situations. It is often associated with the "*ah-ha moment*" or a point at which synthesis, divergent thinking, analysis and convergent thinking come together to address a problem or challenge at hand. It is at this point that future possibilities emerge and the focus becomes clearer and new products or services can be designed. It is also the point at with the solution seems so evident that the people involved in the process cannot even understand how such a simple solution had not come to their minds earlier [7].

DCT is an approach to working together to act, reflect, and learn while doing [2]

The process is designed to help business leaders overcome challenges often associated with complexity, uniqueness, value conflict, and ambiguity. The process therefore allows diverse teams to develop different perspectives and biases of the problem and translate possible solutions or insights into action [2]. These new perspectives can unlock the potential for significant innovation and product redesign.

Those who rely on DCT argue that the process materially improves the speed and quality of new ideas to improve the situation whilst also minimising the risks associated with innovation. The process also supports leaders and their people make substantive progress on the most complex challenges [2]. In addition to describing an approach to product innovation, the process also strengthens decision-making practices in fields such as strategy and management[9], operations and enterprise studies [10] and more recently, in projects where social innovation and social impact matters[11].

Building dynamic enterprises by adopting a DCT mindset

Enterprises of the future will require autonomous and flexible teams, agile enough to respond to changing circumstances.

More than ever before, today's leaders need to lead through a state of perpetual innovation whist ensuring their teams and people are equipping with the skills and capabilities to adapt quickly and effortlessly to these new circumstances. The challenges often associated with working within these new environments will require the involvement of engaged teams that are collectively committed to overcoming the completes enterprises now face.

In an effort to overcome these circumstances, enterprises such as Atlassian are leading the way in leveraging the benefits these new methods and ways of working can deliver. Devolved decision making process – of which DCT underpins their ways of working - are providing employees with a sense of personal and collective ownership and purpose and as a consequence are creating rewarding work places and experiences along with enhancing the enterprises problem solving and risk management capabilities. These enterprises are also providing their employees with the flexibility and authority to make decisions while equipping then with the skills to cope with their constantly changing environment and circumstances.

Enterprises that have adopted DCT methods as a mainstay of their culture develop a greater sense of freedom and ownership which in turn empowers employees to act on a variety of tasks, to learn and to build relationships with their colleagues and customers whilst ensuring risk is managed appropriately[5]. Finally, taking a DCT mindset provides the opportunity for employees to fulfil their personal ambitions; desire for achievement, autonomy, and a sense of control on what they have. Employees are then more likely to develop affective commitment with their employer [12].

Another characteristic of these new enterprises is that roles within the enterprise are often designed in such a way so as to empower people to perform a variety of tasks simultaneously. These roles are not governed by rigid rules and procedures, rather the team shares the responsibility of the work, and the locus of control is usually not present therefore allowing the team to identify the right person to solve a particular problem [5].

DCT is a great method that should form the building blocks of equipping today's leaders with the capability and resilience to deal with the rates of disruption and innovation that the emergence of technology has brought with it. It comprises collaboration in order to solve the problems by finding and processing information, taking into consideration the real world, people's experiences and feedback and applying creativity, critical thinking and communication. DCT is often characterised as "a powerful methodology for innovation" which integrates human, business and technical factors in problem forming, solving and design. It is human centred and relies on diverse points of view [7]. Leaders who adopt a design thinking approach invariably develop a very different perspective to problem solving and risk taking that allows them to anticipate and address conflicts and challenges more directly [12]. These leaders typically adopt a solution-focus or abductive approach in which they explore solutions and problems together and use a potential solution to better understand the challenges they face [12]. The biggest challenge for some leaders in the acquisition of design thinking is their ingrained knowledge and residence to disruption [12].

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