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Understanding, Identifying and Driving Design-Led Innovation Capability in Large Organisations

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Corporations are exploring innovations by changing from a product push towards a service or experience model. To enable this transformation, programs to construct design thinking are being deployed across many organisations to drive innovation practices and ultimately sustainable growth. Yet, there is limited understanding on how individual employees view design, how it is being employed and the relationship of design thinking to innovation. This paper aims to investigate how employees (non-designers) within a large financial services corporation recognise the possibilities of design and its link to drive innovative practices and how design is being adopted. The paper builds on an audit undertaken of Design Thinking programmes rolled out across the large financial services organisation in Australia, in addition to thirty-one (31) semi-structured interviews conducted with employees across various levels of hierarchy. The results suggest that deploying design and innovation programmes across an organisation does not automatically result in significant innovative outcomes. Instead, design is linked to incremental innovation and internal process improvement at best, with limited effect on the strategic issues. The findings provide insights into employees' experiences with applying design-led approaches and the barriers required to be overcome in order to achieve a different outcome in the business.

***Keywords**: Design Thinking; Design-led Innovation, Insurance Industry; Financial Services*

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Introduction

Large corporations recognise the need to innovate to achieve sustainable growth in today's economic marketplace (KPMG, 2015). Design, Design Thinking, and design approaches to innovation have been discussed to assist in this process (Brown, 2008; Brown & Martin, 2015; Kolko, 2015; Verganti, 2008). Adopting a design-led innovation methodology offers a new way for business and design to collaborate to achieve innovative results (Liedka, 2010). Combining business management expertise and designer capabilities creates new approaches to solving problems and achieving a different set of outcomes to drive innovation (Martin, 2009). However, what is still absent from the literature is the appreciation of employees' awareness of how design thinking (DT) is linked to innovation. As design has grown in popularity, organisations have commenced delivering innovation programs using design principles to drive innovative practices (Carlgren, Elmquist, & Rauth, 2011; Liedtka, King, & Bennett, 2013; Matthews, Bucolo & Wrigley, 2011; Matthews & Wrigley, 2011; Wrigley & Bucolo, 2011). With an increased number of people being exposed to design-led innovation methods, we explore the research questions: to what extent do employees understand the link between design thinking and innovation and in what ways are they applying design in the organisation?

The research team investigated how non-designer employees viewed innovation and the utilisation of design thinking through their experiences to date inside the organisation. The researcher interviewed 31 employees across various organisational levels, roles, geographical locations and departments, uncovering what they are thinking, and feeling, saying and doing about design-led innovation in their current capacities. The purpose was to contribute practical evidence of the complexities associated with how individual employees interpret design and innovation, the application and scalability of design to move beyond building capability and enable greater innovative outcomes.

Current Research Problem

The aim of this paper is to challenge the notion that merely focusing on building a design thinking capability is sufficient to deliver innovation and significant growth in the company. From an industry perspective, developing a design capability within a firm has become a growing agenda over the past decade and the drive to become 'innovative' pervades modern management discourse. At present the average lifespan of a fortune 500 company has dropped from 75 to 15 years, and the size of a firm is no longer a safety net

(Dennings, 2012). This holds true for traditional industries, such as financial services, where tried and tested methods to generate the growth they have previously enjoyed are no longer sufficient. A recent survey conducted by KPMG, found eight out of 10 insurance executives believed the future success of their business was closely tied to the ability to innovate ahead of their competitors (KPMG, 2015). Despite this need for innovation, particularly a design-led innovation capability, many firms struggle to implement design and innovation programmes effectively. Academic researchers are also seeking to answer this question, however empirical evidence on how employees perceive design and its relationship with progressing innovative practices in the organisation appears limited.

Current Understanding: Change and Embracing Innovation

The challenge of organisational change and adapting to innovation has been extensively studied (Burdon & Dovey, 2015; Büschgens, Bausch, & Balkin, 2013), where a key problem for many companies appears to be attempting to use previous experience and problem solving techniques to solve future, previously uncharted problems. Burden and Dovey (2015) describe the challenge of fostering an innovative company as consisting of the interplay between leadership and culture. Also (Ahmed, 1998) contends that for an organisation to develop a sustainable culture of innovation, leaders must be linked to what is happening within the organisation and accepting that ambiguity requires new processes to solve problems. The desired outcome of such change is the creation of a company that can confront and solve future problems with new methods, not limited by past deeply ingrained, tacit methods of problem solving evident in established firms.

Design Thinking and Design-led Innovation in Business

Amongst the wide array of problem solving techniques, design has recently emerged as not only a method of problem solving but also a driver for innovation (Dong, 2013). Under the banner of Design Thinking, this process has spread yet is often clouded across literature from different landscapes. At present design thinking has multiple meanings (Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013), however (Liedtka et al., 2013) quite simply summarise design thinking as a systematic problem solving approach. This approach, rationalises designer sensibility to match people's needs with what is technologically feasible while simultaneously converting

that into a viable business opportunity (Barry & Beckman, 2008). Similarly (Brown, 2008) defined design thinking as the ability to 'operate between analysis and synthesis within both the concrete and abstract world'. This approach is closely aligned to (Martin, 2009) description as the balance of analytical mastery and intuitive originality when applying design sensibilities in a business context (Brown & Martin, 2015).

Researchers have applied and extended notions of design thinking to broader rigorous innovation methods. Design-led Innovation is one such method. Design-led innovation is broadly defined as a method which allows a company to consider and evaluate radically new propositions from multiple perspectives, typically spanning user needs, business requirements and technology demands (Bucolo, Wrigley, & Matthews, 2012). Key to this process is that design is core to a company's vision, strategy, culture, leadership and development processes. Design-led innovation framework outlined below (Figure 3), provides a conceptual structure to assist the development of innovation through collaboration across the entire organisation; integrating the operational functions with the strategic vision by combining internal and external sources.

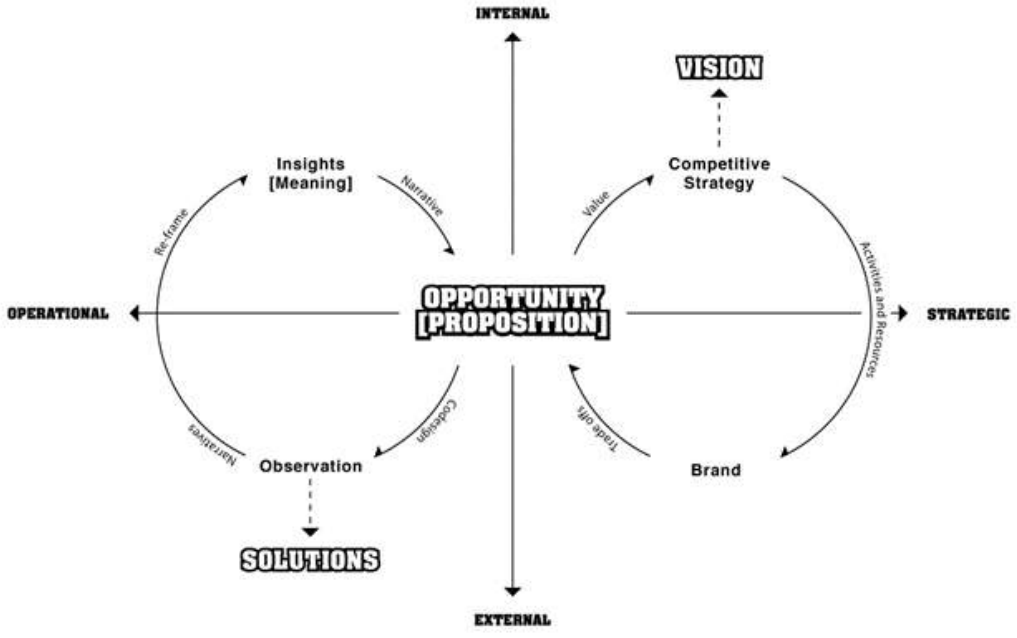

Figure 3: Design-led Innovation Framework (Bucolo, Wrigley, & Matthews, 2012)

This framework was selected as a lens for analysis to better understand the organisation's perception of innovation and design thinking and the relationship between these notions. Identifying close configuration with the structure of a large organisation as it represents both the operational and strategic landscapes and the interaction with each other to deliver opportunities. In particular the framework links the layered and segregated team configurations where strategic management and operational units may function in isolation and their potential to deliver new propositions is limited. This framework aids in pinpointing deficiencies and strengths associated with delivering innovative results, highlighting where different foci and how innovative outcomes can be enhanced to deliver greater economic growth.

Outlining the fundamental elements to design thinking and design-led innovation provides a basis for understanding the competencies essential to drive the practice within a business setting. The next section summaries integration of design into large organisations as defined in the literature.

Integration of design thinking into large organisations

This research is primarily focused on large, established organisations comprised of multifaceted frameworks, traditional hierarchical structures and well-established management practices. The ability to overcome these obstacles to drive innovation through a design-led approach is challenging (Bucolo, Wrigley & Matthews, 2012; Martin, 2009). A recent study of six large firms across Germany and the US that use design thinking, examined how companies recognise its value and the results it provides to the organisation (Carlgren, Elmquist, & Rauth, 2013). Carlgren argues that building design capability requires focus on developing the mind-set as well as tools and techniques. Often design is taken out of context and is offered as a set of tools that can be selected out of a toolbox when required. That one can choose irrespective of expertise and ability to execute as embodied in a designer (Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013).

Other organisations have taken design capability to the next level by applying experiential and iterative collaboration with all relevant stakeholders in all stages of the problem solving process. Meaning, removal of traditional approach; define problem, devise solution and present to management team (Brown & Martin, 2015; Kolko, 2015; Michlewski, 2008).

A study conducted by Darden University looked at the effect and impact design thinking was having in large organisations. Revealing difficulties of application of DT, challenges of complex structures, separated business departments, management ability and expertise and the language barrier

between designers and non- designers (Carr, Halliday, King, Liedtka, & Lockwood, 2010). Deploying design throughout a business involves more than focusing on tools and processes. It involves employees thinking differently and being open to failure. However, it is recognised this will not happen easily as it is contrary to how employees have been trained, incentivised and is not conducive to how businesses are often structured. (Liedtka et al., 2013) Thus illustrating the intricacies associated with large organisations, the impediments required to overcome in order to successfully build design capabilities within the business.

The next section moves from general large organisations to exclusively the financial services industry in Australia, focusing on the adoption of design thinking and DLI within this sector.

Design thinking in the financial services sector in Australia

The financial services industry is the leading contributor to the Australian economy. In 2012, the industry added nearly $34 billion, surpassing the mining, manufacturing and construction industries (IBSA, 2013). Known for its conservative nature, the ability to remain competitive in an environment of constant disruptive change is more important than ever (KPMG, 2015). A highly regulated industry comprising multiple sectors including banking, insurance, investment, superannuation and other financial services businesses, the support for design thinking as a lever for innovation is still in its early stages (Sobel & Groeger, 2013). Indicating Australian businesses remain tied to traditional workplace practices and expertise that have successfully delivered predictable short-term results (Matthews, Bucolo & Wrigley, 2012).

A recent study conducted on a professional financial services firm providing consulting services, acknowledged the complexities associated with non-design trained employees learning design thinking (Howard, 2012). Highlighting the need for design to be integrated into organisational systems and culture. As such there appears limited research directed at design thinking in the financial services sector.

This paper aims to focus on how employees (non-designers) within a corporation recognise design and its link to drive innovative practices and reveal how design is being adopted through the lens of the employee. Limited empirical evidence on how individual employees view design, how design is being employed and its relationship to innovation within the context of a large financial services institution.

Participating Organisation

The participating firm is a complex multinational financial services organisation based in Australia. With over 10,000 employees, the business is a successful publicly listed multifaceted corporation and this case study examines one sector within the Group, comprised of 2000 employees. An innovation framework consisting of varied education and training programmes, ranging from a one hour introductory workshop through to a tailored programme centring on providing knowledge based experimental design thinking practices aimed to drive innovation has been in place for 3 years. An internal innovation team was tasked with developing and building innovation capability of employees through delivery of these programmes, with voluntary participation and at the discretion of the individuals' manager approval. Details of the program are summarised in in Table 1.

The framework was developed to support the organisations desire to drive innovative practices due to the changing external environment, shifting customer behaviours and lack of growth opportunities within the current business model. It should be noted that based on the size of the organisation, projects are delivered from multiple teams across various departments at different times. The sheer size, complexity and the desire for design led innovation within this business is the motivating factor for selecting this particular firm as the case study for this research.

Table 1: Design Program Summary

Program	Date	Purpose / Objectives	Individual Capabilities of staff member	Time	Program Content	Tools	Outcomes
Program A	2013	An introduction to Design Thinking.	All Staff, No prerequisite Required.	60 mins	High level overview of Design Thinking using D school model	D School Model Design a Door Exercise Video of IDEO Hospital video	A broad understanding of Design Thinking and the D School Model and how you might utilise Design thinking in your everyday work High level view of DT No detail about each component of the process
Program B	2014	Learn end to end Design Thinking through experiential application Introductory Course. Very fast, efficient course in a busy business environment	All Staff, No prerequisite knowledge or skillset required. Reference to a particular mind set e.g. curiosity or ability to collaborate across teams	90 mins	D School Model More emphasis on each step	Design a wallet	Understanding the end-to-end design thinking model. Participants learn via experiential learning the high level concepts of Design Thinking by designing a wallet for their partner Walk away with how a conceptual view of how DT can be applied to your own problems or ideas
Program C	2014 - Original 2015 – v2	Learners will describe the purpose, technique and skills used to generate creative ideas and demonstrate delivery of improved business results	All Staff, No prerequisite	90 mins	6 Phase Program	Self-Driven Tools Discussions	Outlines what to do when you have an idea and how to flesh out the idea using tools and techniques
Program D	2014	Tailored to individual program Experiential learning through practical application of a real problem or idea	All Staff: No prerequisite knowledge or skillset required. Reference to a particular mind set e.g. curiosity or ability to collaborate across teams	Time Frame is discretion of the team. 120 mins	Expanded D School Model	IDEO Model from UTS; Various tools and techniques e.g. Business Model Canvas journey mapping, interview techniques, ideation, prototyping	Taking an idea/problem through the process of Design Thinking ending with a prototype to integrate into the Business Program of Work Participants learn how to apply tools and techniques

Research Design

The research team chose an exploratory qualitative approach with a case study method (Yin, 2013). Semi-structured interviews consisted of 31 employees from across the business (Berg, Lune, & Lune, 2004). Participating employees were selected from a range of diverse roles, primarily those in project, marketing, strategic or roles that participated in business improvements. Selection also derived from various levels of hierarchy, geographical location and differing business departments as reflected in Table 2 and Table 3.

Table 2: Participant selection (Departmental)

DEPARTMENT	DISTRIBUTION (D)	CLAIMS (C)	PORTFOLIO (P)	OPERATIONS (O)	HUMAN RESOURCES (HR)	STATUTORY (S)
No. Participants	5	4	4	11	1	6

Table 3: Participant selection (Geographic and Managerial)

No. of participants	Executive General Manager (EGM)	Manager (M)	Team Leader (TL)	Team member (TM)
Sydney (SYD)	1	3	1	2
Brisbane (BNE)	2	4	7	8
Melbourne (MEL)	-	2	-	1

In the interviews, questions were asked pertaining to the following issues; perception and understanding of innovation; barriers and impediments to applying innovation in addition to design thinking understanding and application and also reflection on day to day work activities. The interviews were conducted in the organisation at a time and place convenient to the interviewee. To strengthen validity, interviewees were selected across all departments and from various levels of hierarchy to obtain broad, diverse and unbiased explanations of individual experiences of innovation and their use of design led principles. The assortment of employees occupied roles in either positions of influence, project, marketing

or strategy departments rather than the functional or operational roles, where design capability may not be required. The reason for the diversity of participants was to acquire a true appreciation of the dissemination of design led innovation expertise from both bottom up and top down positions.

A thematic analysis approach (Braun & Clarke, 2006) with investigator triangulation (Begley, 1996) used to analyse the data by grouping answers into common themes. Figure 3 below outlines the constructs and the top themes identified from the interview findings.

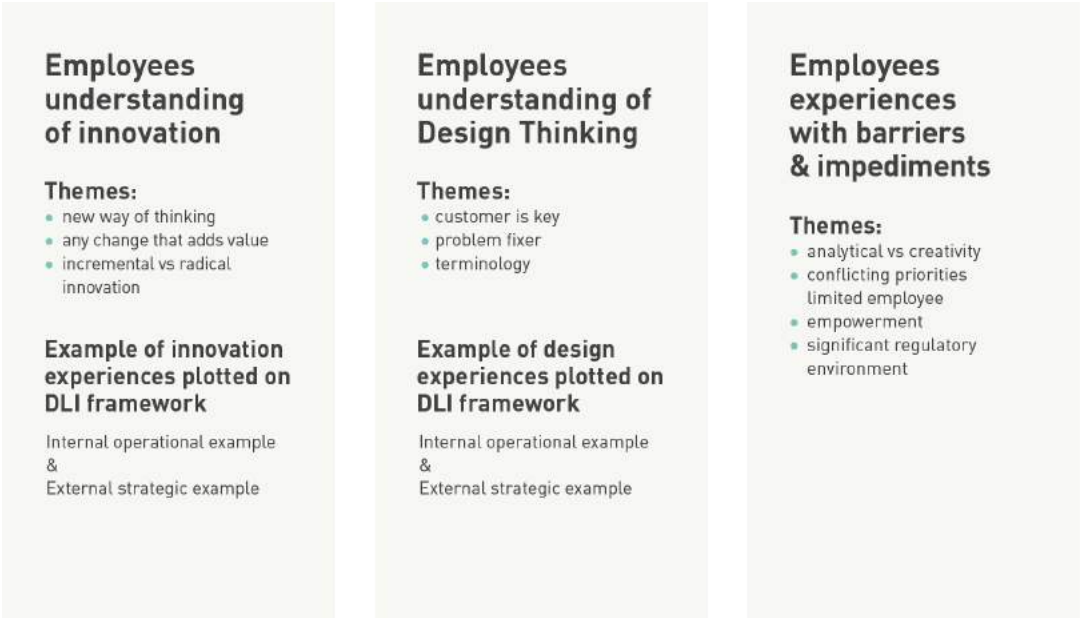

Figure 3: Themes identified within each area of focus

The Design Led Innovation Framework (Bucolo, Wrigley & Matthews, 2012) was utilised to map the results pertaining to the examples of design and innovation experiences within the organisation. Figure 4 represents the analysis taken to plot the results. This framework connects all aspects of a business and illustrates the relationship between strategic and operational areas and internal and external influences to deliver opportunistic propositions (Bucolo & Wrigley, 2015).

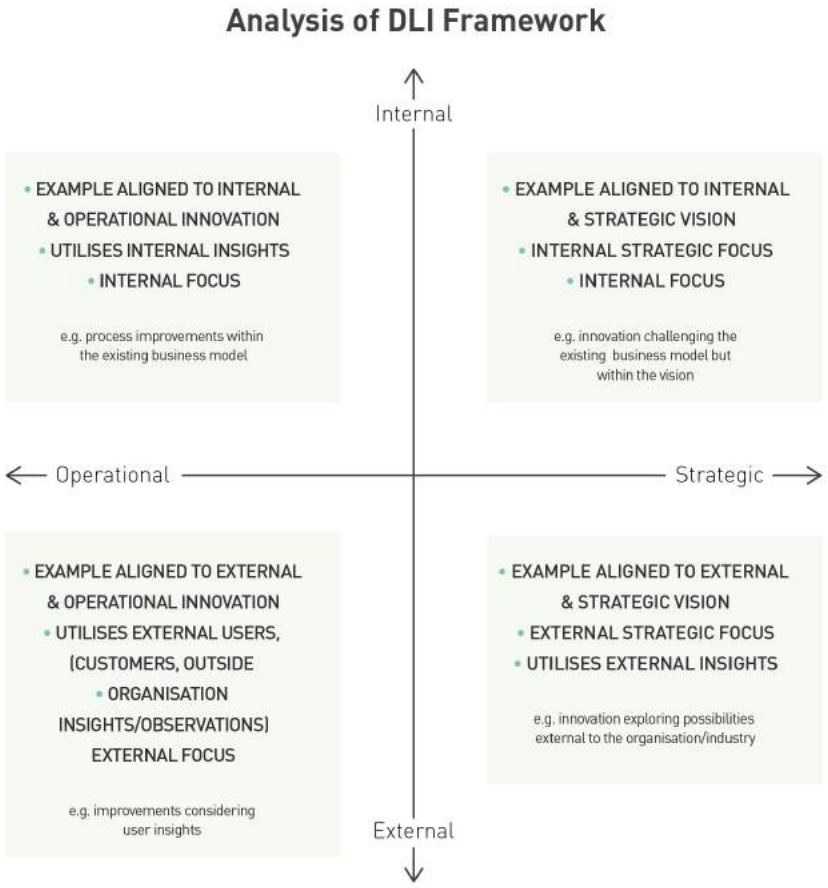

Figure 4: DLI framework analysis table

Findings, Analysis & Discussion

The analysis from the interviews provides insights into how employees describe innovation and design thinking and more importantly what (if any) links the two perceptions together in practice. A synopsis of the findings per notion as outlined in figure 3 is discussed further below with supporting quotes from the interviews disclosed.

Notion A: Employees understanding of innovation

When asked about how they defined innovation, employees provided a wide range of responses. However, the results were analysed and the top three themes are reflected as: new way of thinking; any change that adds value; and incremental vs radical innovation.

A new way of thinking

Interviewees often referred to innovation as doing things in a different way, looking at something from another perspective, stepping into new and unexplained territory and thinking outside of the box. These explanations provide positive insight into the mind-set of the individuals and their openness to explore possibilities outside of the current status quo. This is appreciated in the examples denoted below.

Employee (C-BNE-L): "innovation is…..new ways of thinking about things that perhaps we haven't taken the time to stop and have a look at before will potentially give us different outcomes to what we've gotten in the past.

"Employee (C-BNE-M): "I think it is challenging and doing things differently that may not have been fully investigated or completed before."

Any change that adds value

The findings characterised innovation as creating change that provides a value add, whether it be to the customer, business or solves a particular problem. This also seems to align to the notion that anyone can 'innovate' and contributes to building design capability in an industry not known for their innovation expertise.

Employee (C-BNE-M): "Taking something that always pre-exist but something that is simple or relatively simple to find and using it in a new or innovative way that it becomes innovative. I guess it is just really using something from another perspective."

Distinction between incremental and radical innovation

The results show that employees have a well-defined interpretation of innovation as two diverse events: one being small or simple improvements of existing processes and products; the other being radical innovation such as changes to existing business models to support new products or services (Norman & Verganti, 2013).

Employee (O-SYD-M) "Innovation can be something massive or it can be something really small. Innovation is a new way to brush your teeth or it can be redefining how we do business in an organisation."

Notion B: Examples of innovation practices experienced by employees

Employees were subsequently asked to provide examples or experiences they would deem as 'innovation'. Each response was plotted onto the DLI Framework, figure 5 below represents the analysed responses. By positioning the responses onto the DLI framework, it highlights innovation application, illustrating operational or strategic focus and whether the firm is predominantly motivated by internally or externally opportunities. For example, where the experience of innovation refers to an internal process improvement, based on employee insights to improve the operational environment within the company, the result is placed in the upper left hand quadrant.

Referring to figure 5 below, 14 employees provided an experience of innovation that reflected an internal operational example. Such that the emphasis is on internal process or product improvements that may not take into consideration external user insights and the outcome drives inner efficiencies. Employee (O-SYD-EGM): "there are small innovations where we do a fair bit with our partners overseas… about if we can reduce time frames on some things and give our staff more time to focus on what they should be doing. To me that is innovation because we have simplified our existing processes to become more productive, so for me that is the small stuff."

Alternatively, experiences that reflected an external strategic example included external influences, strategic vision and considered user insights. Employee (D-SYD-TM): "personal banking has moved from transacting in the branch to transacting on your phone so the innovative thing is how do you provide the same level of service to your customers without fundamentally changing too much of what they would do…. and I guess they have just made accessibility to their product more simple by going rather than having to look into a branch that is they operate at a certain given time that utilised the device that they utilise 24 seven and see if we can do the same thing so as an example of the innovative piece that was done there was taking transacting in a bank in person and moving it to a mobile device."

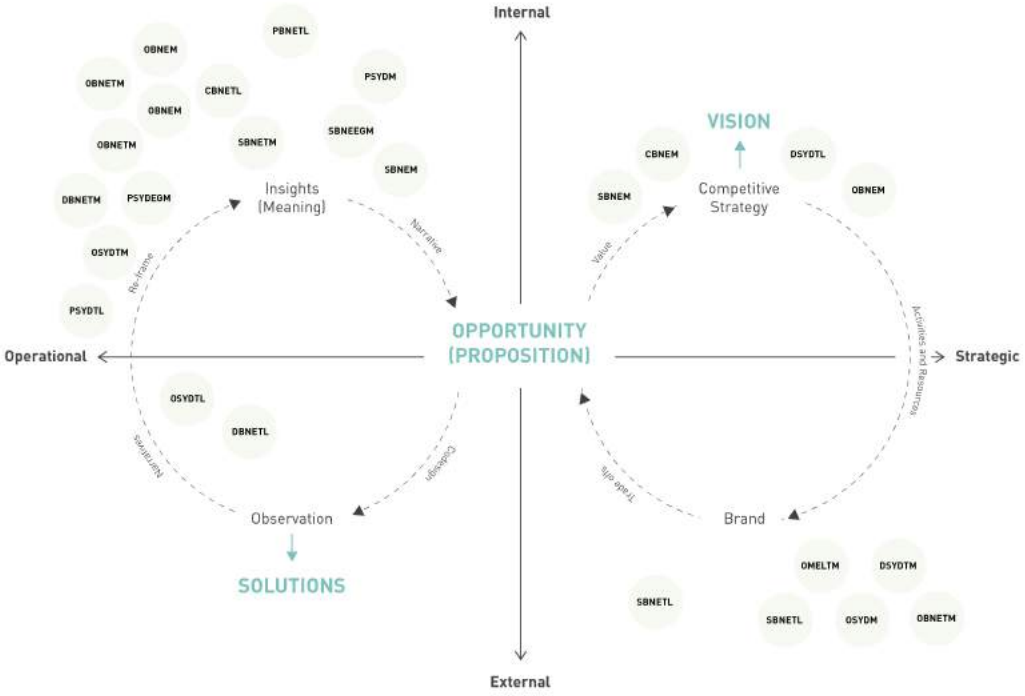

Figure 5: Innovation Results placed on Design-led Innovation Framework (Bucolo, Wrigley, & Matthews, 2012)

Notion C: Employees understanding of Design Thinking

After obtaining an appreciation of how employees view innovation, discussion turned to design thinking and their perception of design in the context of their role. To determine what employees understood about DT was an opportunity to gage how effective the internal design led innovation framework is at building design capability. As the literature outlines there is no one definition for Design and this was mirrored in the results from the interviews. The results were themed and the top three themes are categorised: emphasis on customer; problem fixer; and terminology

Customer is key

The results showcased a strong relationship between design and the end customer. With responses referring to 'putting yourself in the shoes of the customer' through to undertaking ethnographic research including interviews, observations and gathering valuable insights on customer pain points. This of course is a key component of Design, however in large traditional organisations who have acquired success from product manufacturing rather than 'customer service' this is a revelation. In order for design capability to translate to application having access and

understanding with your customer is an essential element to successful outcomes (Price, Wrigley & Straker, 2015). For large organisations customers are one of their principal assets and in a business with 9 million customers this is a step in the right direction.

Employee (P-BNE-TL): "It is about designing our products around what the customer wants, rather than us telling them what they want and need." Employee (O-BNE-TM): "Co-creating with our customer, so putting the customer at the heart of everything we do. It's going from being internally focused to being externally focused….. Finding out what it is our customers actually want and need and building it with them."

Problem fixer

The reference to Design being an approach to solve problems or a way to find a customer's problem (via pain points) came through in the explanations of DT. Although Liedtka defines design as a problem solving approach (Liedtka et al., 2013) this could highlight the relationship to process improvement within the organisation and why Design is not seen as a way to significantly shift the direction of the business through experimentation with new business models.

Employee (O-SYD-M): "my understanding of design thinking is an iterative process physically coming up with some ideas building a prototype into practice and then redesigning or reworking the particular process or particular thing…. to reach the outcome or outcomes that you want."

Various design terminology

Central to developing any capability is the use of common and understood language or terminology. It was obvious the employees were more familiar with the terms such as 'Human centred design' or 'customer centric design' and 'customer based design' instead of Design Thinking. This could be due to the focus on customer as the centre of the methodology. Another driving force that contributes to the attention of common terminology is the access to online Design communities, such as the hugely successful Design firm IDEO which uses the term 'human centred design' and offers easy access to free courses that are very attractive to those that are seeking to build capability in this area.

Employee (O-BNE-M): "well, I think of it from a human centred design so what are our customers saying and doing and thinking and what does that mean for what insights can we draw out of that and then what do we need to do in order to achieve it."

Notion D: Employees examples of Experiencing Design

For those employees who provided a definition of design thinking, they were asked to provide an example of design application, whether they were a part of the experience of have seen it being applied. In contrast to the innovation examples provided, several employees found it difficult to provide an instance of the application of design thinking either within the organisation or external. Again, similarly to the innovation examples provided, the focus was around existing process or product improvement, finding better ways to 'do' something, rather than a situation that contained a wicked or ambiguous problem. Suggesting design thinking is seen a pure problem solving tool rather than a methodology to identify differing value propositions for the customer and business by exploring external outputs or engaging the customer to truly understand the way they operate. Lastly, it was identified that examples provided only elements of design thinking. For example, employees referred to 'looking at what customers want or testing solutions with customers', not necessarily considering the broad end to end spectrum of how design can be applied. Therefore highlighting the deficiency in understanding the significance of a design-led approach or its value in delivering innovative outcomes. Mapping the results against the Design-led Innovation framework in Figure 6 below highlights the lack of connection between the strategic and operational areas within the business as reflected by the examples presented by the participants.

Employee (O-BNE-M): "One of the things that was observed was we don't have a relationship or a sufficiently strong relationship with the brokers and therefore they are not buying and that is still our business problem and what has evolved is people are saying.. I follow-up every quote, someone else is saying we don't follow-up any quotes so everyone started to look at what the quote follow-up process....And I said, could we just actually put ourselves in the broker's shoes, what is the best way for us to make it easier for the broker to buy …"

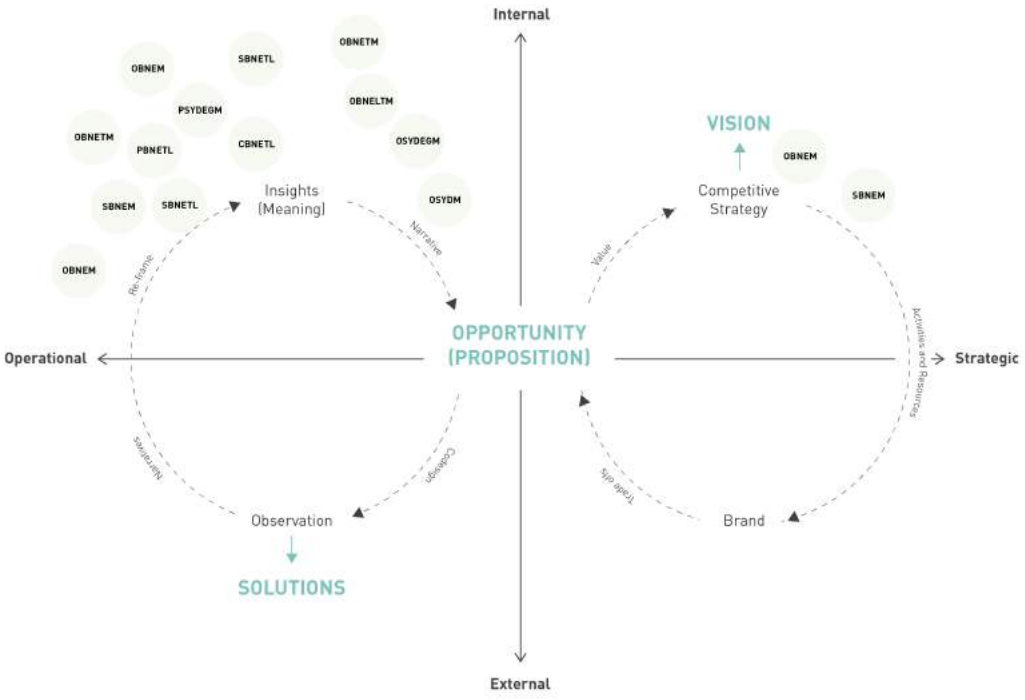

Figure 6: Deign results placed on the Design-led Innovation Framework (Bucolo, Wrigley, & Matthews, 2012)

Notion E: Barriers and Impediments to Design Led Innovation

Employees were also asked whether they experienced any barriers or impediments to driving or delivering design led innovative practices in their role. The purpose of gathering insight was to obtain real life examples of obstacles incurred by those that are trying to drive change in the business. Although this has been discussed significantly throughout the innovation management and design community, the importance these findings play in order to drive a design led approach to innovation should not be dismissed. Since developing a design led capability to deliver innovative results can only be successful when the below represented barriers are removed. The following represents obstructions as expressed by employees to a delivering real change and innovation via a design led methodology. Four main categories emerged: analytical capability vs creativity; conflicting priorities; limited employee empowerment; and significant regulatory environment.

Analytical capability vs creativity

This impediment encapsulated a number of factors including the limited value placed on creativity over analytical expertise; management's limited

ability to understand and value design outside of the traditional expertise hired for within the business and the ability to practice the knowledge and skills learned. The Financial services sector predominantly employs highly skilled professionals expected to perform complex analytical roles. The expertise required to apply a design-led approach to solving problems is quite different and often opposing to the analytical skill set of the majority of current employees. Even though design capability has been expressed as the balance between analytical proficiency and instinctive originality (Barry & Beckman, 2008; Martin, 2009), the value of creative and intuitive skills appear to be undervalued in this environment.

Conflicting priorities

A large organisation in particular has significant infrastructure to support its people, processes and products. Maintaining the systems that drive the engine that is a corporation is constant and requires a huge amount of resources. It was highlighted throughout the interviews that innovation is seen as a 'nice to have' it wasn't a priority as focus and attention was required on fixing and improvements of existing systems. Therefore taking the time to utilise a design led approach is not appreciated and the requirement to slow down to identify true opportunities is not valued. Particularly spending time truly understanding customers via insights and observations, identifying the real problems and prototyping possible solutions with the possibility of failing, unfortunately goes against short term goals and incentives.

Limited employee empowerment

The interviews revealed a lack of employee empowerment and ability to influence within the organisation. There was considerable desire to innovate, whether it be small or large, however the limited opportunity to take the ideas to the next level was overwhelmingly frustrating for employees. Where ultimately they would just give up and focus on their 'day job'. This highlighted design capability was evident, however having the expertise is not enough. There are a lot of players in large organisations and those who have the talent and ideas may not have the opportunity to drive a design led approach forward.

Significant regulatory environment

The Financial Services Industry is one of the most heavily regulated industries in Australia and should not go unnoticed as an obstacle to be

overcome. With significant legislative Acts and standards, policies, industry bodies, commissions and financial obligations to maintain and uphold the ability to use a design led innovation approach is often constrained. For example due to a number of privacy requirements, access to customers is limited or prototyping potential propositions can be difficult for the organisation under the constraints of their Licences. Although not impossible, what it does mean is the obstacles are greater and the proficiency to navigate through the requirements to develop something new and exciting for the customer, the business and the shareholder, is a skill that may not be developed thus far.

Implications

The findings from the study outline the extent to which employees understand the link between design thinking and innovation and the ways in which they are applying design in the organisation.

Understanding the relationship between innovation and design through employees' experiences, provides valuable insight into how capability is developed and transferred to application, increasing the ability to innovate and derive potential opportunities. The below explicates the implications of an incumbents' ability to navigate through the dissemination of a design led approach:

- Employees broadly understand the concept of innovation and were able to articulate elements of design, particularly the value of customer. Interestingly, there was little aptitude to spend the time to comprehend the actual customer, raising the question 'can a large incumbent truly put the customer in the forefront to push forward?
- Results from this study demonstrate that solely deploying internal innovation and design programmes do not drive significant innovative outcomes in application. The desire for a design-led approach to deliver innovative outcomes is restrained due the inability to execute. It was found that those who encompassed a design capability often found their limited ability to influence and the lack of empowerment to utilise the learnings considerably constricted their aptitude to innovate.
- Those that did manage to get through some of the barriers to apply a design led approach only managed to make simple or incremental

changes to existing processes, services or products. Significant change has yet to be an outcome. Further empirical research is required to explore this more deeply.

- Design Thinking is presently linked to incremental innovation not radical innovation. Improving existing internal processes, provides limited utilisation of the full spectrum design can bring to an organisation. The reason Design has been limited to process improvement could be linked to conservative organisational risk appetite. For example, there doesn't appear to be any shortage of ideas, employees are given permission to generate and raise ideas. However, if the idea is outside of the existing business model or completely different from the existing product or process then the less risky option is often chosen, even if it isn't necessarily the more suitable option. The less risky options are often seen to be easier to get 'buy in' from the management team for resources to implement. Focusing on short-term gains rather than seeking long term value.
- There is a lack of discussion at the strategic level. Include Design-led Innovation experts in the strategic discussions. To get more value from the opportunity a design-led approach to drive innovative practices can bring, design needs to move into the strategic arena as well as continue to play a part in the operational space. Providing a top down and a bottom up reasoning, will assist in driving a more targeted approach to innovation and propel outcomes. Upper management's role is to foster a culture conducive to innovation, therefore integrating a Design capability whether it be a Design Catalyst (Wrigley, 2013) or up skilling influential managers to add design concepts into management discussions will highlight the genuine value of integrating design can bring. It is suggested this be further explored.

The findings emphasise that merely focusing on building a design capability without addressing the above mentioned considerations, will only produce incremental improvements at best.

Summary

In an age of business uncertainty, even established companies must continually push to innovate in order to survive. As many companies are turning toward design as a method for innovation, this paper aims to highlight the relationship between design and innovation and showcase

examples of application. With particular focus on non-designers within large complex organisations. Through the use of a case study method, the research team interviewed employees across all levels of hierarchy inside a large, Australian multinational financial services firm. Through observation it was apparent elements of a design-led approach is linked to internal incremental innovation and the added benefit it can bring to the strategic arena is yet to be realised. It is suggested that further research and practice be explored.

Practically, this paper provides insight to design and innovation practitioners and managers, unearthing insights from employees, leaders, managers and executive managers regarding the ability to innovate using design thinking principles. This research forms part of a wider research study looking at capability building in large complex corporations.

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