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A Non-Profit Design-Led Innovation Journey

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Non-profit organisations in the aged care sector are currently under pressure from more than just a sheer increase of customers. A need to respond to changing legislative requirements, increased expectations from customers and increasing likelihood of shortage in appropriate experienced staff are also contributing to instability within the sector. This paper will present a longitudinal action research study of a non-profit organisation revisiting its core purpose of providing relevant services and attempting to build a customer-centric method for addressing the current and upcoming change drivers in an Australian aged care context. The study found Design-Led Innovation to be an effective methodology for capturing deep customer insights and conceptualising new business models which address the prevalent change drivers. This paper details a design-led approach to innovation, tailored to a non-profit organisation seeking to better understand its stakeholders and redefine its value offering.

Keywords: *Design in Business; Competitive Advantage; Shared Value; Aged Care*

Introduction

An increasingly discerning customer base, major changes to regulations and an ageing population are driving many non-profit organisations in the aged care sector to question the services they offer and the way in which they are delivered (King et al., 2012; Swan, 2010; Weerawardena & Mort, 2001). If these organisations remain complacent to these changes and simply present an existing offer to market, they are unlikely to endure through this phase of industry reforms and customer needs. With the decreasing relevancy of the current aged care offering, innovation is now beginning to be seen as a core competency of leading organisations.

This research therefore explores an Australian non-profit aged care provider's journey, and specific steps undertaken, in attempting to develop a Design-Led Innovation capability in response to these change drivers. Previously Design-Led Innovation has not been applied in a non-profit organisation with the aim of creating shared value; the practice of concurrently building competitive advantage within a business and producing social value in the economy for which it caters (Porter & Kramer, 2006, 2011). Hence, placing this research in a novel position.

In order to understand this journey the first author engaged in a longitudinal action research study revealing two major challenges faced by the organisation; an inability to define the organisation's value proposition, and a concentrated understanding of the value of design in a business context. Therefore, this research sets out to contribute a new approach for realising and leveraging opportunities for shared value creation through a Design-Led Innovation methodology, with the outcome of business model innovation.

This paper features a brief review of relevant literature, and outlines the research design and methodology, along with methods of data collection utilised in the study. An overview of the organisations journey and the specific tools and approaches explored by the organisation are presented. Findings from a thematic analysis of interviews, focus groups and a reflective journal are discussed, concluding the paper with implications for industry.

Literature Review

The Aged Care Sector

Three tensions in the current aged care approach suggest that the direction of the industry is unsustainable (King, 2007, pp. 202–203); (i) the ever-growing movement in consumer rights that places the needs of care recipients at the centre of care provision, (ii) the ongoing issue of recruitment and retention of care workers in an environment where demand outstrips supply, and the (iii) requirement for organisations to recognise unpaid carers as partners in the care-giving process and as people who need to be supported in their provision of care. These tensions are underscored by a heavy reliance in the industry on Federal Government funding, often resulting in a compliance-focused culture and operational approach (Weerawardena & Mort, 2001). This approach tends to distract providers from effectively addressing their social mission (King, 2007), and often translates as an inability to define whether an organisation is operating with a customer-centric or government-centric frame of mind. The inherent risk to the organisation is therein failing to understand its core customer, and compromising the organisation's social mission by attempting to respond to the needs of multiple stakeholders without truly understanding their needs.

As incremental changes and product innovation are not disruptive in nature, they will be insufficient in building a solution that responds to these challenges. To effectively drive a change of this scale business model innovation is required. In undergoing such a change an organisation's culture will significantly impact the success of the venture. Likewise, it is improbable that such an undertaking will succeed without the utilisation of an appropriate strategy to drive innovation. It is also important to consider that innovation strategy is not identical in the private (Moore, 2000), public (Albury, 2011; Borins, 2001; Moore, 2000; Mulgan & Albury, 2003), and non-profit (Huang & Yu, 2011; Moore, 2000; Weerawardena, McDonald, & Mort, 2010; Weerawardena & Mort, 2001, 2012) sectors.

Articulating the strategy of a non-profit aged care provider can be a complex matter as organisations operating in this space are required to address both an ethical orientation and a need to be financially viable (King, 2007). Given the predominance of non-profit organisations operating in the field of home and community care (King, 2007), the concept of an organisation's strategy creating superior customer value, not just superior profits (Weerawardena & Mort, 2001) is particularly relevant (King, 2007).

Especially when coupled with pressure from government on non-profit organisations to pursue competitive strategies, which can often conflict with an organisation's social mission (Weerawardena & Mort, 2001). Furthermore, such a framework could be more engaging for care workers, who are value-driven and find social contribution to be central to their performance and their identities as workers (King, 2007). Often non-profit organisations struggle to cater for the social need they seek to address due to a lack of access to significant financial resources (Tyler, 2005). As such, they do not have the luxury to facilitate the tensions created by the dichotomy between the two agendas, they must face the challenge of balancing these agendas rather than allowing one to dominate the other (King, 2007; Mumby & Putnam, 1992).

Innovation in Non-Profit Organisations

Innovation is key to the ongoing success of an organisation (McDonald, 2007). Markets and environments change, organisations that do not change along with them are likely to falter and fail (McDonald, 2007). But people and institutions, for the most part, do not like change. It is painful, difficult, and uncertain (Cain & Mittman, 2002). The issue being that the act of innovation is to change. Without innovation the cost of public services rise faster than the rest of the economy. Without innovation the inevitable pressures to cut costs and drive efficiency can only be met by stretching an already strained workforce (Mulgan & Albury, 2003). To remain effective government and public services depend on successful innovation. Innovation is a means of developing better ways of meeting needs, solving problems, and using resources and technologies. Even in fields such as health care, innovation is frequently seen as a luxury or burden when it should be seen as a core activity (Cain & Mittman, 2002).

Remaining relevant in a dynamic market is difficult, to do so an organisation requires an appropriate strategy and a culture which is aligned to it. This is especially true for organisations seeking to face multiple change agendas to maintain relevancy. It is important that a strategy crafted for this purpose not only try to address the need for a competitive advantage but also address an unmet customer need, or in this scenario, an existing social issue (Porter & Kramer, 2006, 2011); as leveraging these two change drivers concurrently can provide organisations with a suitable platform for innovation.

For innovation to succeed, in any sector and by any organisation, the innovation needs to be well-formulated and designed to address a clearly

articulated problem (Mulgan & Albury, 2003). To translate innovation into fully realised competitive advantage which can be sustained in a NFP human services environment, the organisation's staff and management need to see a link between the organisation's strategy and social mission. Therefore, any attempt to redefine the organisation's value proposition or underpinning business model must be deliberately linked to its culture. However, most organisations do not consider their business model, let alone link it back to their respective cultures.

Design-Led Innovation

While there is no certainty behind the success of adopting a new strategy or attempting something new and innovative, not responding to a burning platform such as the one being faced by the aged care sector can be disastrous (Carlopio, 2009). Previous research has identified that organisational cultures that engage employees in developing new ideas and strategies are better suited for implementing innovation (Chenhall, Kallunki, & Silvola, 2011; O'Cass & Sok, 2013). To sustain the changes required to develop and maintain innovation organisations require that employees understand the need to continuously improve or change product offerings, learn, and adapt to customer-focused demands (Bucolo & Matthews, 2011a; Chenhall et al., 2011). This is most effectively achieved where the underlying value structures of organisational cultures encourage innovation by way of cooperation, flexibility, and adaptation (Chenhall et al., 2011).

Often this journey begins by questioning where an organisation is, and where they are headed - having a clear vision of their reason for being, their offering, their market and their competitors – and a clear idea of what they want to become (Ward, Runcie, & Morris, 2009). Even once articulated, realigning to a collective vision is a challenge in itself, as is ensuring that all of the company's plans for growth are strategic and focused on achieving its aims (Ward et al., 2009). These, along with a change agenda that is simultaneously driven internally and externally through continuous engagement with customers and employees, are integral elements for successful innovation.

While design has been demonstrated to be a crucial strategic business resource (Dell'Era, Marchesi, & Verganti, 2010, p. 12) traditional conventional views maintain that designers are primarily concerned with the aesthetical and technical considerations of a product or service (Cox & Dayan, 2005). As with the term innovation (Baregheh, Rowley, & Sambrook, 2009; Smith, Busi, Ball, & Van Der Meer, 2008), design has continued to be

described as a wide range of activities, resulting in an array of outcomes that do not fall under a single definition (Bucolo & Matthews, 2011b). Design-Led Innovation (DLI) is a methodology that bridges these two terms and provides practitioners with a method for creating a compelling value offering for customers by radically changing a product, service, or business model's value proposition. This method of innovation, along with general design principles, has been proven to be applicable in separately creating both competitive advantage (Bucolo & Matthews, 2010; Carlopio, 2009; Holloway, 2009; Martin, 2010) and social value (Brown & Wyatt, 2010; Brown, 2008; Bucolo & Wrigley, 2011; Sklar & Madsen, 2010; UK Design Council, Danish Design Centre, Design Wales, & Aalto University, 2013).

Being 'design-led' implies utilising a set of tools and approaches which enable a business to embed design thinking in the form of a cultural transformation (Bucolo & Matthews, 2011a). From a business perspective this requires an internal vision for top line growth. For this vision to be realised it needs to be based on a base of deep customer insights and expanded through all customer and stakeholder engagements, with each outcome being mapped across all aspects of the business (Bucolo & Matthews, 2011a).

There is increasing understanding in the private sector of the enormous value this adds, even in areas not traditionally seen as the domain of design (Martin, 2010). Likewise, and for similar reasons, it is increasingly clear in the public sector that utilising design as strategy is an appropriate way to overcome common structural flaws in service provision and value offering (UK Design Council et al., 2013). DLI is a collaborative process which bypasses inefficient handovers that occur between analysis, solution and implementation. Rather than disjointedly patching together incremental solutions to problems as they arise, design looks at an entire system and redefines the problem from the ground up. It begins by understanding user needs in order to ensure that the solutions generated are appropriate to these needs, waste is avoided and end users buy into these solutions. Rather than jumping straight to expensive or risky pilots the design process tests iteratively, starting with low-cost, simple prototypes and designing out risk as prototypes become more evolved (UK Design Council et al., 2013). For these reasons, it becomes a feasible option for non-profit organisations to explore.

Research Design and Methodology

While a single clear cut approach to drive all innovation does not exist, some approaches are more suitable than others in certain contexts. This paper outlines the journey of the first author, whilst working as a Design Innovation Catalyst embedded in a large non-profit aged care provider based in Australia. A catalyst's purpose is to translate and facilitate design observation, insight, meaning, and strategy into every facet of a company. This role is defined by continuously instigating, challenging and provoking innovation both internally and externally from within the company whilst maintaining a link to the strategy of the business by re-aligning and mapping these activities (Wrigley & Bucolo, 2012). In the scope of this role, the first author was tasked with (i) assisting in conceptualising, designing and implementing an innovative business model, and (ii) diffusing the design-led capability throughout the organisation as part of an action research study. This paper aims to provide an overview of the early steps of the organisations journey, focusing on the specific steps and activities undertaken in addressing the organisations mandate to design and develop a customer-centric business model.

As the methodologies and processes incorporated in action research are shown to be suitable drivers for innovation, creating change, and facilitating learning (Gustavsen, 2005; Zuber-Skerritt, 2001), action research has been selected as the primary research method. Using this method, the researcher engaged in several cycles of action research. Data collection throughout these cycles consisted of content analysis, participant observation, semi-structured interviews, field notes and reflective journal entries. As the aged care sector is in constant flux the agenda driving this research exceeds a one-time solution. The real future challenge lies in disseminating the capabilities required by an organisation to action design-led innovation in response to, or ideally in prediction of, future shifts in the market.

Data Collection

Data collection methods for this paper consisted of (i) 13 semi-structured interviews with middle to high level internal staff ranging between 40 to 70 minutes, (ii) participant observation, (iii) reflective journal entries, and (iv) 11 focus groups. The purpose of these methods was to: (i) capture internal stakeholders' baseline understanding of the role of design in business, and to ascertain whether staff could articulate the value proposition of the case study; (ii)(iii) gauge any shifts in the staff's understanding of the case studies value proposition and their understanding of the role of design in business;

and (iv) identify the future direction of the organisation featured in the case study through co-design with internal and external stakeholders.

The Journey

Internally within the participating organisation several streams of work have occurred as a response to the change drivers faced by the Australian aged care sector, this is illustrated by Fig. 1. As part of the scope of this paper the five streams deemed to have been the most influential will be discussed. These streams include competitor analysis, customer segmentation, narrative cycle, design workshops and culture transformation. Fig. 1 represents the existing relationship between these streams, the order in which they took place, how each stream informs another, and how the streams fit into the broader action research approach.

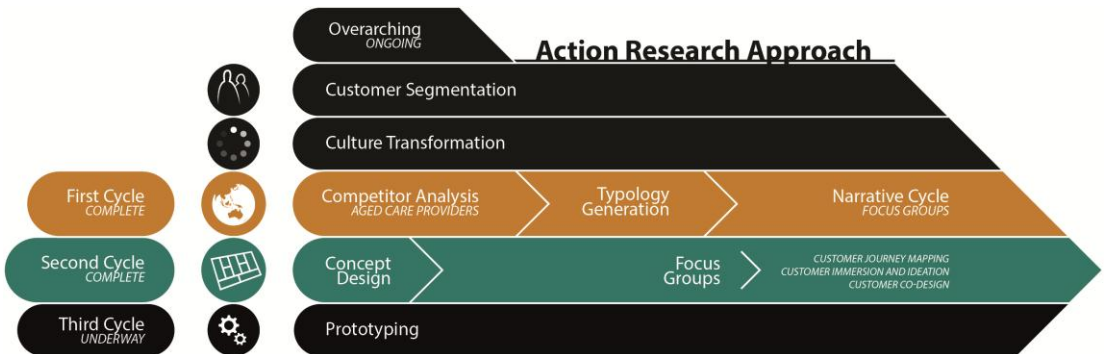


Figure 1 This figure illustrates the relations between each stream of work along with when they occurred and how they informed one another.

A set of underlying activities and objectives are grouped under each stream of work. The activities for which the first author was directly responsible or had a large contribution as part of the action research study are outlined in Fig. 2. This figure aims to depict the actions taken in each cycle of research and the outcome of each of these actions.

The first cycle of action research was structured to internally demonstrate the value of design in a business context. This cycle was about gathering a deep understanding of the organisations stakeholders, its internal and external environment, and capturing a rich base of customer

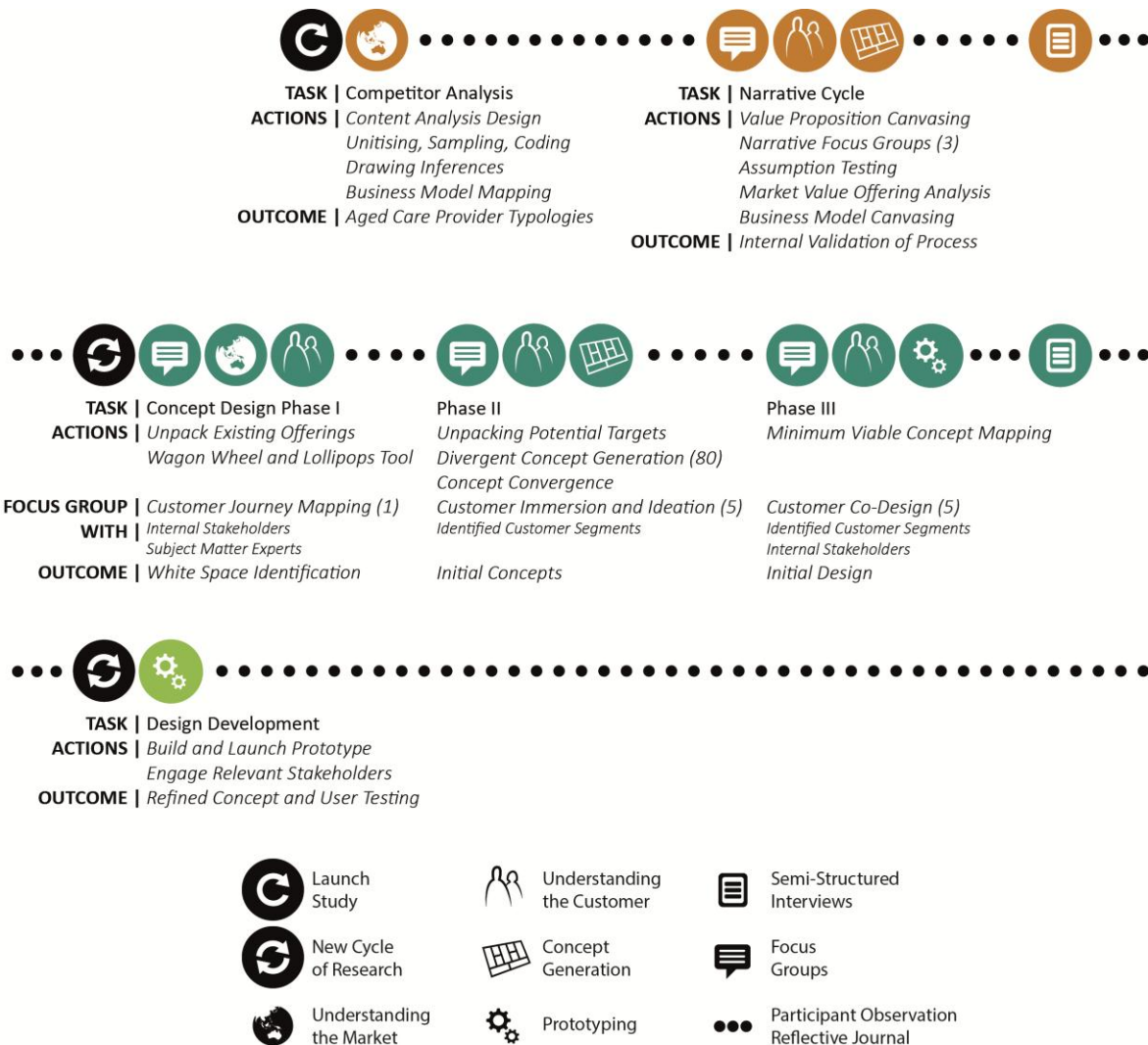


Figure 2 Action Research Cycles. This figure illustrates the specific actions in each research cycle.

insights which would act as a foundation for future innovation. Following this, the purpose of the second cycle was to build momentum. This was achieved by identifying opportunities for innovations, conceptualising what form the innovations could take, and co-designing alternative products, services and business models to address the insights captured in the first cycle. The third cycle of action research will aim to shift from conceptualisation to implementation of the solutions developed in the second cycle.



Sector Analysis

Sustaining a competitive advantage requires an organisation to constantly monitor the uncertainties that could invalidate the assumptions underpinning its strategy. The preliminary stages of this process consisted of the researchers using the business model canvas (Osterwalder & Pigneur, 2010) to analyse the business models of over thirty local and international organisations, both within and outside of the aged care industry. For organisations in the aged care industry, the canvas was utilised to understand the value proposition of each organisation, identify if they delivered on their value proposition or if it was for marketing purposes, articulate unique elements of operation, and categorise organisations with similar operating structures into typologies. The organisations analysed outside of the aged care industry were selected based on their exemplary performance. In this scenario the canvas was used to identify how these organisations were able to deliver on their value proposition and, in a hypothetical context, how they would approach the delivery of aged care if they were to enter the market.

Culture Transformation

The organisation took the initiative to rebuild the values exhibited by its internal culture. This was proposed to occur over a set of three horizons where culture foundations would be established, the skills & capabilities required to live the aspired culture would be developed, and finally the culture recognised by the industry, customers and staff as a differentiator. This stream of work was structured to begin with engagement, followed by creating a future state culture, launching the vision and values of the organisation, creating regular culture checkpoints, embedding the culture internally, and Institutionalising the culture across the organisation's external sites.



Narrative Cycle Focus Groups

The emphasis of the focus groups was on co-creating with consumers through the use of a narrative (see Figure 3 for an example board). Given that the definition of value and the process in which it's created is rapidly shifting from a product and firm-centric view to a personalised and customer-centric view, it was vital that the consumer became the locus of value creation and extraction (Osterwalder & Pigneur, 2010; Prahalad & Ramaswamy, 2004).



Figure 3 Example Narrative Board

Narratives begin by capturing the smallest of insights, glimpses of an unrelated detail that gradually grows into a more comprehensive appreciation and understanding. The deepest of these insights arise from judgemental questions that elicit personal responses (Dillon & Howe, 2003). Interacting with firms in this manner allows consumers to co-create with organisations, redefining the meaning of value and the process in which it's created (Bucolo & Matthews, 2010; Prahalad & Ramaswamy, 2004). Dialogue can then flow in both directions, from consumer to provider and from provider to consumer. A narrative not only teaches participants how to

bring their lives into the narrative, but also to bring the narrative into their lives (Dillon & Howe, 2003).

The narrative cycle was utilised to unpack customer insights, and conceptualise how these insights could then be leveraged into business models through iteratively learning and questioning the underlying values of the insights. Initial stages of the process involved using the 'Value Proposition Canvas' (Osterwalder & Pigneur, 2010) to hypothesize unmet customer needs and to prototype a service around these needs. The first author constructed and tested the narrative with three focus groups, each consisting of two-three participants in the organisation's target demographic that were not currently receiving formal care services.

Following the narrative sessions, the insights were layered over the original Value Proposition Canvas to test the accuracy of the initial hypothesis. The insights were reframed, compared to the initial set, placed into a 'Business Model Canvas' (Osterwalder & Pigneur, 2010), and compared to the existing business model, in terms of financial and organisational capability to execute the model. Fig. 4 provides an overview of the narrative process.

Customer Segmentation

The organisation featured in this case study recognised the need to immerse itself in its market, and to question who its true customers and competitors were. A behavioural segmentation study was carried out to collect both qualitative and quantitative data relating to the needs, preferences, attitudes, behaviours and decision-making approaches of ageing Australians and their families. Over 90 hours of customer interviews took place in metropolitan and regional Queensland, New South Wales and Victoria, including 'High Tea Triads' (focus groups, typically with 3-4 participants), paired depth interviews, and depth interviews. The synthesised qualitative output informed the design of a quantitative data collection approach that incorporated over 1,300 surveys deployed through both telephone and online methods. This staged research approach delivered a rich bank of qualitative and quantitative insights relating to the experience of ageing, as well as a segmentation model that clearly identifies and describes five unique customer segments and four unique 'influencer' segments.

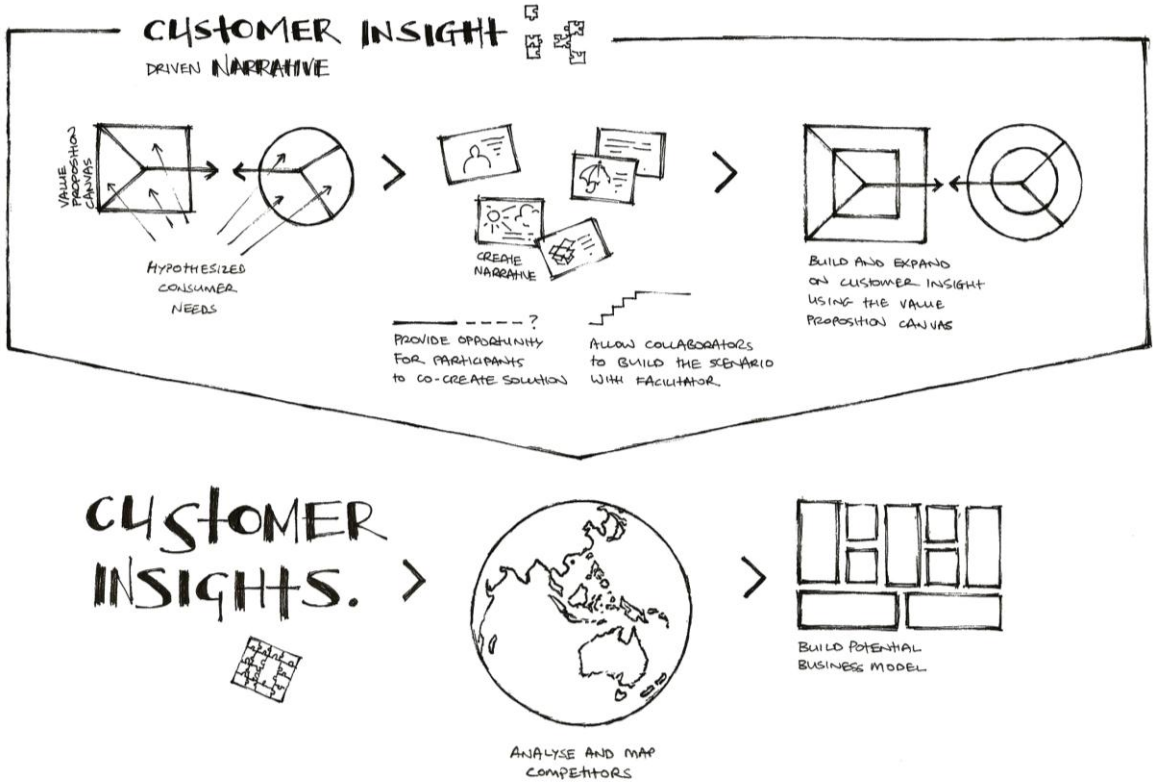


Figure 4 Narrative Process

Design Focus Groups

The organisation also undertook customer journey mapping exercises and a series of three focus group typologies; Customer Journey Mapping Workshop (1 session), Customer Immersion and Ideation Workshops (5 sessions) and Customer Co-Design Workshops (5 sessions).



The Customer Journey Mapping Workshop was attended by 20 internal and external stakeholders to the organisation, including staff members and subject matter experts. Through a series of activities and interactive sessions, participants created a large-scale visualisation of a

person's experience of ageing, focusing on dimensions of the experience that were reported as being significant in the segmentation study findings. The goal of this workshop was to: identify the primary customer, secondary customer and relevant stakeholders; understand the needs and desires of the customer throughout each specific experience; articulate the channels in which the customer could be reached in terms of both potential interactions and platforms; unpack the experience, looking at dialogue, access, risk and transparency; identify the distinctive capabilities an organisation would require to operate in the space; and validate potential sources of revenue generation. Participants were encouraged to deconstruct and analyse the experience through the eyes of one of five identified customer segments and one of four identified 'influencer' segments. In addition to building empathy with the customer and uncovering deeper insights into the experience of ageing, the workshop was designed to identify opportunities for relieving pain points or delivering greater value; this was especially valuable in identifying white space for new business opportunities in the aged care sector.



Outputs from the Customer Journey Mapping Workshop informed the design of a series of Customer Immersion and Ideation Workshops. A proprietary segmentation algorithm and selection questionnaire was employed to recruit ten to twelve customers per workshop by segment, enabling the researchers to observe the workshop interactions on a segment-by-segment basis. Five dimensions of the ageing experience were explored (for example, 'Staying Connected'), one per workshop, through open questioning and a structured but informal conversation with and amongst participants. Two types of questions were included in the workshop facilitator guide; those that deeply explored the topic and those that opened up the ideation process by encouraging participants to consider new solutions to problems.



A period of analysis and synthesis of workshop outputs took place following the Customer Immersion and Ideation workshops and findings were incorporated into a bank of prospective solutions that would form the basis of potential new business models. A categorisation and filtering process was applied to narrow the solutions to those that most effectively responded to the customer pain points or opportunities and these solutions were explored in a series of Customer Co-Design Workshops.

Participants were again recruited by segment, including customer and 'influencer' segments, and the approach to questioning was open-ended and exploratory. Large-scale visuals were used to describe the 'problem-solution' and to deconstruct and reconstruct the solution with the participants as active designers. As customers seek to further influence business, companies are no longer able to act autonomously in the design of new offerings (Prahalad & Ramaswamy, 2004). Engaging customers as active designers ensures that offerings are grounded in customer needs and allows the solutions to create mutual value for both the user and organisation.

Findings

Once collected each mode of data was thematically analysed and coded for categorisation; segments of text were labelled in accordance to the categories they fell into, and codes were chosen to underpin the research agenda (Joffe & Yardley, 2003). Since the researcher had already formed theoretical ideas in regards to the data, it was deductively coded (Joffe & Yardley, 2003). Using theoretically derived themes allowed the researcher to replicate, extend or refute prior theories (Boyatzis, 1998). Following a thematic analysis the separate modes of data were methodologically triangulated, resulting in a set of two primary themes; value proposition for a customer-centric business model and customer focused value creation.

Value Proposition for a Customer-Centric Business Model

Two sub-themes fall under this grouping. That is, the internal staff's ability to articulate the value proposition exhibited by the case study organisation, and whether they were familiar with the scope of work undertaken by the organisation in order to realign the value proposition to a customer-centric business model.

Initial stages of research saw the first author conduct a set of interviews, mostly taking place prior to any staff exposure to the Design-Led Innovation methodology. The interviews revealed that in general, no internal consensus in regards to the value proposition of the organisation existed. When asked to articulate the core value of the organisation interview participants typically displayed uncertainty in their answers, with one participant blatantly stating *"I don't think I can answer that because I haven't been dealt in on that. I want to know what they came up with, even though my boss and good colleague thought of it"*. Others who did respond to the question did so with uncertain terms. Typically, using inexplicit language such as *"core*

value? Probably...”, and “probably not at the moment. I think coming in the core value was probably ...”.

However, many similarities did emerge in the themes of the responses, and as exhibited by the first quote and in the following, *“somewhere in here you’ve got to understand your competitive market, where your point of difference is coming from. I’m not quite sure where in all of this that is tested”*, there was an internal drive to attain or develop a better understanding of the organisation’s value proposition. This form of response didn’t convey the ignorance of participants, but rather that the organisation simply did not have a value proposition as an underlying driver for the business model at that stage.

Indeed, the organisation was undertaking a scope of work to identify their future customer, their needs, and a value offering that aligned to this customer. There was a clear internal understanding that the organisation needed to change, that the current methods of employing care would not result in positive organisational growth, *“the question you should really ask is, do we do nothing or stick to our knitting? Do we explore the boundaries of opportunities and innovation? And I think we should be doing the latter, as well, since there’s a real prospect”*.

Perhaps not surprisingly, as the organisation set out to redefine and innovate its business model, staff exhibited a greater understanding of the value that the organisation wished to deliver to customers, and the image that the organisation wanted to develop and attain. In fact, the insights captured in customer segmentation as part of this scope of work proved to have significant applicability to business as usual. Other streams of work unrelated to the business model innovation were seen to constantly borrow and lean on these insights. When asked whether this work stream was valuable, one of the interview participants responded with *“absolutely, if you’re talking about co-creation with customers such as the business innovation that’s just about to commence, the findings of customer segmentation present a great opportunity for creative thinking and collaboration to respond with services that are better aligned with what people want”*.

Customer Focused Value Creation

While there was a definite internal acknowledgment of the initiative to innovate the organisation’s business model, it was not evident, except to the individuals integral in the development, that this process was design-led. In fact, except for two outliers, interviewees strictly referred to design as the

conceptualisation and development of physical or digital products and services (e.g. architectural and industrial design).

Regardless of the lack of familiarity with principles of design being utilised at a strategy level, all interview participants commented that the design-led approach to innovation resonated with the non-profit organisation, as it clearly established that the customer is the locus of value creation.

As demonstrated by the following quotes, all interview participants were not only well aware of the need for organisational change, *“the rapidly changing regulatory environment, the intent of the regulator or the government to be able to fund aged care, just the impact on GDP, it’s not going to be sustainable, so it has to change. So you’ve always got innovation ... it can either be incremental or a major step change ... if we’re not innovating then we’re out the back door, quicker than anything”*, but it was also evident that the change needed to be customer-centric, *“if you’re going to realise that you’re very existence needs to be predicated on change you need to go and talk your customer”*.

Regardless of the challenges outlined in the literature review that are associated with this sector, and as acknowledged by staff stating that *“the core business of [the case study organisation] has been dramatically constrained by a funding model that doesn’t have any variation in it”*, the overwhelming evidence demonstrated that *“it’s all about solving problems or challenging issues which your customers are facing and exceeding those expectations”*, which is central to a design-led approach to innovation.

Conclusions and Implications

This research investigated potential drivers for change in a non-profit organisation that was facing multiple challenges in a fast changing dynamic environment. The design-led innovation approach to this investigation found that having an underlying social purpose was an effective means for driving innovation. As the design-led approach to innovation was grounded in customer needs it was able to identify, articulate and communicate the need to innovate in response to the social problems occurring in the aged care sector to the broader organisation. However, to a large extent, in the traditional and conservative context of a non-profit aged care organisation, only the traditional purposes of design were seen to be valid. In line with Cox & Dayan's (2005) findings, the organisation lacked awareness surrounding the opportunities associated with the field of design.

While some of the key stakeholders within organisation were open to the potential of design in a business context, and some were in fact design champions, no real progress could be made in this avenue until the effectiveness of a design-led process was demonstrated. The narrative cycle was created for this purpose. Capturing deep customer insights demonstrated that design can unpack unexpressed customers' needs and develop clear new narratives. This design process generated a much deeper understanding and awareness within the organisation, creating more possibilities for designing appropriate solutions that address emerging customer needs.

As a non-profit aged care provider, the organisation faces the challenge of balancing the needs of its several stakeholders. The applicability of Design-Led Innovation in a non-profit aged care context has been under-researched, and it's applicability in addressing an organisation's agenda to create social value and competitive advantage simultaneously is unknown. Through the co-design workshops it was found that DLI can indeed identify and leverage opportunities for the creation of shared value. Furthermore, due to the social mission of the organisation the concept of shared value creation resonated strongly with its internal stakeholders.

The need for innovation in the public sector is, for the most part, heavily outlined in existing literature. Along with frameworks for approaching innovation, some literature exhibits case studies of organisations innovating due to similar drivers as those exhibited by the aged care sector. Most of these articles are theoretical in nature and only disclose a set of general principles and practices for practitioners to follow. No specific guide explicitly states the steps taken and methods utilised by an organisation, in and aged care context, in order to drive innovation. This paper therefore seeks to provide a detailed approach for non-profit organisations wishing to utilise design led innovation as a method for better understanding their stakeholders and redefining the value they offer to market. The next stages of the organisation's journey, which are currently underway, consist of further development, prototyping and testing of the solutions developed through this approach. Future research should explore whether this approach to innovation is capable of sustaining momentum and moving beyond the conceptualisation of a solution to its implementation.

References

- Albury, D. (2011). Creating the Conditions for Radical Public Service Innovation. *Australian Journal of Public Administration*, 70(3), 227–235. doi:10.1111/j.1467-8500.2011.00727.x
- Baregheh, A., Rowley, J., & Sambrook, S. (2009). Towards a multidisciplinary definition of innovation. *Management Decision*, 47(8), 1323–1339. doi:10.1108/00251740910984578
- Borins, S. (2001). Encouraging innovation in the public sector. *Journal of Intellectual Capital*, 2(3), 310–319. doi:10.1108/14691930110400128
- Boyatzis, R. (1998). *Transforming qualitative information: Thematic analysis and code development*. United States of America: Sage Publications.
- Brown, T. (2008). Design Thinking. *Harvard Business Review*, 86(6), 84–92.
- Brown, T., & Wyatt, J. (2010). Design thinking for social innovation. *Stanford Social Innovation Review*, 8(1), 31–36.
- Bucolo, S., & Matthews, J. (2010). Using a design led disruptive innovation approach to develop new services: practising innovation in times of discontinuity. In C. Kobe & I. Goller (Eds.), *Proceedings of the 11th International CINet Conference: Practicing Innovation in the Times of Discontinuity* (pp. 176–187). Zurich, Switzerland: CINet.
- Bucolo, S., & Matthews, J. (2011a). A conceptual model to link deep customer insights to both growth opportunities and organisational strategy in SME's as part of a design led transformation journey. In *Design Management Toward A New Era of Innovation*. Hong Kong Convention and Exhibition Center, Hong Kong.
- Bucolo, S., & Matthews, J. (2011b). Design led innovation: Exploring the synthesis of needs, technologies and business models. In *Proceedings of Participatory Interaction Conference 2011, 13-15 January*. Sønderborg, Denmark.
- Bucolo, S., & Wrigley, C. (2011). Design led innovation as a means to sustain social innovation enterprises. In J. Faust (Ed.), (pp. 17–18). Barcelona, Spain.
- Cain, M., & Mittman, R. (2002). *Diffusion of innovation in health care*.
- Carlopio, J. (2009). Creating strategy by design. *Design Principles and Practices: An International Journal*, 3(5), 155–166.
- Chenhall, R. H., Kallunki, J.-P., & Silvola, H. (2011). Exploring the Relationships between Strategy, Innovation, and Management Control Systems: The Roles of Social Networking, Organic Innovative Culture, and Formal Controls. *Journal of Management Accounting Research*, 23(1), 99–128. doi:10.2308/jmar-10069

- Cox, G., & Dayan, Z. (2005). *Cox review of creativity in business: building on the UK's strengths*.
- Dell'Era, C., Marchesi, A., & Verganti, R. (2010). Mastering Technologies in Design-Driven Innovation. *Research Technology Management*, (March-April), 12–24.
- Dillon, P., & Howe, T. (2003). Design as narrative: Objects, stories and negotiated meaning. *International Journal of Art & Design Education*, 22(3), 290–296.
- Gustavsen, B. (2005). Innovation and Action Research. *International Journal of Action Research*, 1(3), 267–289.
- Holloway, M. (2009). How tangible is your strategy? How design thinking can turn your strategy into reality. *Journal of Business Strategy*, 30(2/3), 50–56. doi:10.1108/02756660910942463
- Huang, K.-H., & Yu, T. H.-K. (2011). Entrepreneurship, process innovation and value creation by a non-profit SME. *Management Decision*, 49(2), 284–296. doi:10.1108/00251741111109160
- Joffe, H., & Yardley, L. (2003). Content and Thematic Analysis. *Research Methods for Clinical and Health Psychology*, 56–69. doi:10.4135/9781849209793
- King, D. (2007). Rethinking the care-market relationship in care provider organisations. *Australian Journal of Social Issues*, 42(2), 199–212.
- King, D., Mavromaras, K., Wie, Z., He, B., Healy, J., Macaitis, K., ... Smith, L. (2012). *The Aged Care Workforce*. Canberra: Australian Government Department of Health and Ageing;
- Martin, R. (2010). The Design of Business: Why Design Thinking Is the Next Competitive Advantage. *Rotman Management*, 7–11.
- McDonald, R. E. (2007). An Investigation of Innovation in Nonprofit Organizations: The Role of Organizational Mission. *Nonprofit and Voluntary Sector Quarterly*, 36(2), 256–281. doi:10.1177/0899764006295996
- Moore, M. H. (2000). Managing for Value: Organizational Strategy in for-Profit, Nonprofit, and Governmental Organizations. *Nonprofit and Voluntary Sector Quarterly*, 29(1), 183–204. doi:10.1177/089976400773746391
- Mulgan, G., & Albury, D. (2003). *Innovation in the public sector*. Strategy Unit, Cabinet Office (pp. 1–40). London.
- Mumby, D., & Putnam, L. (1992). The politics of emotion: A feminist reading of bounded rationality. *Academy of Management Review*, 17(3), 465–486.

- O’Cass, A., & Sok, P. (2013). Exploring innovation driven value creation in B2B service firms: The roles of the manager, employees, and customers in value creation. *Journal of Business Research*, 66(8), 1074–1084. doi:10.1016/j.jbusres.2012.03.004
- Osterwalder, A., & Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*.
- Porter, M. E., & Kramer, M. R. (2006). The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), 78–92.
- Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review*, 89(1/2), 62–77.
- Prahalad, C., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18(3), 5–13.
- Sklar, B. Y. A., & Madsen, S. (2010). Design for Social Impact. *Ergonomics in Design*, 8, 4–5.
- Smith, M., Busi, M., Ball, P., & Van Der Meer, R. (2008). Factors Influencing an Organisation’S Ability To Manage Innovation: a Structured Literature Review and Conceptual Model. *International Journal of Innovation Management*, 12(04), 655–676. doi:10.1142/S1363919608002138
- Swan, W. (2010). *Australia to 2050: future challenges*.
- Tyler, M. C. (2005). Benchmarking in the non-profit sector in Australia. *Benchmarking: An International Journal*, 12(3), 219–235. doi:10.1108/14635770510600348
- UK Design Council, Danish Design Centre, Design Wales, & Aalto University. (2013). *Design for Public Good*.
- Ward, A., Runcie, E., & Morris, L. (2009). Embedding innovation: design thinking for small enterprises. *Journal of Business Strategy*, 30(2), 78–84. doi:10.1108/02756660910942490
- Weerawardena, J., McDonald, R. E., & Mort, G. S. (2010). Sustainability of nonprofit organizations: An empirical investigation. *Journal of World Business*, 45(4), 346–356. doi:10.1016/j.jwb.2009.08.004
- Weerawardena, J., & Mort, G. S. (2001). Learning, innovation and competitive advantage in not-for-profit aged care marketing: A conceptual model and research propositions. *Journal of Nonprofit & Public Sector Marketing*, 9(3), 37–41.
- Weerawardena, J., & Mort, G. S. (2012). Competitive Strategy in Socially Entrepreneurial Nonprofit Organizations: Innovation and Differentiation. *Journal of Public Policy & Marketing*, 31(1), 91–101. doi:10.1509/jppm.11.034

- Wrigley, C., & Bucolo, S. (2012). New organisational leadership capabilities: transitional engineer the new designer? In E. Bohemia, J. Liedtka, & A. Rieple (Eds.), *Leading Innovation through Design: Proceedings of the DMI 2012 International Research Conference* (pp. 913–922). Boston, Massachusetts.
- Zuber-Skerritt, O. (2001). Action learning and action research: paradigm, praxis and programs. In *Effective Change Management through Action Research and Action Learning: Concepts, Perspectives, Processes and Applications* (pp. 1–20). Lismore, Australia: Southern Cross University Press.