Designing competitive industry sectors

George PEPPOU\textsuperscript{a}, Clementine THURGOOD\textsuperscript{a} and Sam BUCOLO\textsuperscript{a}

\textsuperscript{a} University of Technology Sydney

Industry sectors are typified by their complex, networked and open nature; characteristics making them well suited to innovation through the application of design. In spite of this apparent suitability there remains little research published specifically regarding the application of design to sector-level strategy formation. In response to this apparent suitability of design, a Design-Led Innovation (DLI) (Bucolo, 2016) approach was modified to scale to a sector. DLI is a design thinking method that integrates deep customer insights into business models informing organisational transformation and strategy. This paper explores the adaptations and challenges that occur when scaling design to a sector in the form of a proposed framework: The Sector Grand Challenge Framework (SGC Framework). This is described through a case study applying the SGC Framework to the development of a Food and Agribusiness (Agrifood) growth and competitiveness strategy in partnership with Food Innovation Australia Limited (FIAL), an Australian Federal Government Industry Growth Centres initiative. The SGC Framework uses many of the same principles as DLI, scaling from successful application to small and large firms to an entire industry sector. This scale exacerbates key challenges observed within a firm including: poor linkages between groups, large, complex stakeholder networks, and lack of unifying purpose or vision. Based on this initial experience there is significant opportunity for future research both into the new value created by a Design-Led approach to sector level challenges and the implications for design as a field.

Keywords: sector, grand challenge, design led innovation, food, agriculture

* Corresponding author: George Peppou | e-mail: George.Peppou@uts.edu.au
Introduction

The role of design has changed significantly over the past several decades, expanding from an emphasis on styling and product through to influencing everything from experience to strategy and venture investment (Ramlau, 2004). Simply put ‘design is now seen as a field of thinking, rather than making’ (Muratovski, 2016). This broad appeal of design is driven by the very nature of the discipline, since the publication of Henry Dreyfuss’ ‘Designing for people’ (Dreyfuss, 1955) there has been a general consensus in the design field that it is important that products meet the needs of the people that buy and use them. This practice of framing (and reframing) problems based on deep customer insights make design particularly suited for enabling innovations, particularly in long standing problems. This link between the innovation activity and sensibilities of design comes from the designer’s ability to develop deep customer insight (the nature of which has recently been debated by Price & Wrigley, 2016) through empathy and use this understanding to challenge the very nature of what a problem is (Wrigley, 2015).

The efficacy of design practice is increasingly being understood and embraced in industry, as both a new approach to problem solving and as a set of techniques to enable transformation (Brown, 2009). The implication for designers is an expansion of role and influence, increasingly involved in areas of the business outside of conventional product, service and experience design. Recognising the significantly expanded role of design is essential; for this paper we define design as the set of activities and behaviours where decisions are led by a deep understanding of customer and consumer needs. This definition is independent of any type of artefact being designed. In this we refer to the customer or market as ‘the group being considered in the design process’ and consumer as the ‘ultimate user’. For instance, in the case described in this paper the customer was ultimately considered to be the food manufacturer, whilst the consumer is the person consuming the food.

Considering the backdrop above on the changing role of design, DesignX: A Future Path for Design, authored by Friedman, Lou, Norman, Stappers, Voûte and Whitney in 2014 presents a vision for the future function and increasing scale of design. In this 2014 essay, Friedman et al describe the changing roles of problems being faced and how the conventional approach taught does not enable individuals to effectively solve these large-scale sociotechnical challenges. Friedman et al provides a useful context to consider the need for an approach to solving these complex problems.
PEPPOU, THURGOOD AND BUCOLO

Norman’s 2015 discussion on the state of DesignX summarises both the changing role of design and of practitioners:

Major challenges presented by DesignX problems stem not from trying to understand or address the issues, but rather arise during implementation, when political, economic, cultural, organizational, and structural problems overwhelm all else. We suggest that designers cannot stop at the design stage: they must play an active role in implementation, and develop solutions through small, incremental steps—minimizing budgets and the resources required for each step—to reduce political, social, and cultural disruptions. (Norman, 2015)

Responding directly to many of the needs raised by Norman regarding the many challenges that emerge during implementation the Sector Grand Challenge Framework (SGC Framework) has been developed. Considering the effectiveness of design led organisations, particularly when considering design as a leadership skill influencing strategy (Rae, 2015), there appears to be significant opportunity to scale the role of design further, both in terms of the types of problems being addressed and the extent of involvement of those practicing design. This extension of design is represented in the final step in the adapted Danish Design Ladder in Figure 1: ‘design as a national competitiveness strategy’ (Bucolo & Wrigley, 2015). The Sector Grand Challenge framework has been developed, building on the success of Design Led Innovation as previously applied at the individual firm level (Bucolo, 2016).
**Figure 1:** adapted Danish Design Ladder, the increasing role of design in corporates is step four. This paper describes step six, an experimental implementation of design as a national competitiveness strategy (Bucolo, 2015).

Norman describes DesignX as a frontier subfield of design, specifically to address significant sociotechnical challenges, or the nexus of social and technical fields. Whilst we recognise and consider the term sector to be fully inclusive of the social, technical, and economic components that make up an industry sector, for the purpose of this paper sector growth is referring to economic growth unless specifically stated otherwise.

**Sector strategy formulation: practice today**

Australian industry intervention best practice typically involves a linear and analytical process, exemplified by a highly consultative approach, ultimately seeking objectives that approach consensus with the industry stakeholders. Consequently, outcomes of this process seek to arrive at a consistent set of challenges over time; this typically leads to short term thinking in programs and policy. In the case of the Australian Agrifood industry over eighty reports on competitiveness have been published within the last decade, all with significantly overlapping recommendations, as well as substantial disagreement. A generalised framework of this conventional consultative, approach is included in Figure 2. Typically this process is undertaken through intensive consultation with end users through focus
groups, surveys and workshops, with projects defined, and frequently advised on by industry. In practice, this process frequently involves asking representatives of the industry ‘what they need’, and rarely is there an opportunity for these requests to be challenged. This typical process assumes the industry already possess the necessary knowledge to both understand and address these issues.

![Diagram](image)

*Figure 2: Generalised, typical approach to sector innovation*

**Sector Grand Challenge: an experimental framework for applying design to a sector**

This case describes the first application of a method drawing on these same design principles described at the start of the introduction section and practices to a whole industry sector challenge. The key stages of the Framework reflect key stages of DLI at a firm level, though the application of the SGC Framework differs significantly. Applying design to a sector, unlike a firm, does not have a strict hierarchical structure; frequently there is no direct authority through which to make change. It is only through a combination of influencing the policy environment, and providing desirable products or services that support individual firms or groups of firms in aligning to a shared vision for the future, that a sector can be influenced.

The key stages of the SGC Framework are described on the following page and in Figure 3.
**Envisage**
Envisage develops the customer-focused vision of the sector by developing empathy and insights around potential customers to derive new meaning. These insights are refined through a process of prototyping and customer co-design to ensure they are valid. This phase draws heavily on Design Led Innovation tools, techniques and practice. During the Frame, Innovate and Impact phases of the program the vision is referenced, refined and updated with any new information that emerges. This vision is intended to be dynamic throughout the process, constantly being refined and challenged as new information is acquired. This paper describes the envisage phase of this Framework through a case study example.

**Frame**
Frame contrasts the envisaged future with today using back casting techniques to bridge current and future states. This considers capability gaps, knowledge gaps as well as resource gaps present in the sector. The frame typically includes: a hypothesis, necessary changes to enable this
hypothesis, possible barriers, suggested approaches to surmount these barriers, first steps and indicators for success. These frames are developed and refined through co-design with industry.

Innovate
Innovate describes the identification of key activities necessary to implement the future vision. Projects are formed around tangible research activities, which are highly collaborative, and reference the envisaged future vision as well as key customer insights. The process of formulation of the project, partners and research questions leverage the design led customer co-design process as a means of de-risking the innovation investment. Industry led research teams continue to use their envisaged future to guide decisions, research and commercialisation opportunities.

Impact
Impact ensures that successful innovation projects can scale and commercialisation activities are undertaken as required. The insights from all projects are mapped back to the envisaged future to refresh the vision and update the strategy. Significantly the SGC Framework requires practitioners to be involved throughout all stages, enabling solutions through incremental steps. This extended role is intended to address challenges of implementation of design, which have been observed in the application of design elsewhere.

This paper reports on the first application of this method to a live project involving development of a ten-year vision and strategy for the Australian Food and Agribusiness sector, in partnership with Food Innovation Australia Limited (FIAL) a new initiative of the Australian Federal Government. This paper discusses an ongoing project describing the Envisage and Frame phases of the Framework; at the time of writing, the Frame phase was still underway.
**Method and findings**

The SGC Framework has been developed to respond to the need for new approaches to sector-level innovation. It draws on established Design Led Innovation (DLI) practices developed and refined with small, medium and large business transformations led by design (Bucolo, 2016). Practically, the methodology is similar to DLI processes at an organisational level, conducted using a mix of large and small group workshops and individual co-design sessions. At each phase a proposition for the future of the industry was considered. Embedded within this proposition was at least one assumption about a growth enabler for the sector, tested either through a workshop exercise, or through a co-design using a pictorial narrative as a prototype. Each iteration led to an entirely new proposition or a refinement of an existing proposition. At each stage assumptions were validated, refined or invalidated through this process of testing, leading to the construction of a vision for the future of the sector.

The following section presents the evolution of a vision for the future of the Australian Agrifood sector, this case study presents only the envisage phase of the SGC Framework. This vision was used as a key input to the development of a ten-year strategy for the sector, however the information in this section is not presenting this strategy or vision verbatim, it is included only to illustrate the process undertaken.

**Envisage**

In the envisage phase initially sixteen senior leaders from firms in the Agrifood sector were recruited to an industry reference group to participate in both the group workshops and co-design sessions. These participants for the most part, represented medium sized food manufacturing businesses. These businesses purchase agricultural products as an input to a manufacturing process but do not farm these inputs within their organisation. The origin of these businesses is summarised in Table 1. All participants were owners, CEOs or at the Managing Director level in their organisation.
Table 1 Summary of types of businesses core industry participants originated from.

<table>
<thead>
<tr>
<th></th>
<th>Agricultural producer</th>
<th>Manufacturer</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (1-19 employees)</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Medium (20-199 employees)</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Large (200+ employees)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note: darker shading indicates higher number of businesses in that category.

Research data was collected through transcribed semi-structured co-design interviews. Thematic analysis (Braun & Clarke, 2006) was used to identify themes and sub-themes from this. This paper describes the envisage phase of the SGC Framework. Through this program there were several distinct transitions in focus for the vision. Each area of focus encompassed a provocation embedding assumptions, co-design and a refinement, these are indicated as subheadings throughout this section. Key challenges and recommendations for each phase are described throughout.

**Initial Grand Challenge: How can Australia feed 1% of the emerging middle market?**

The project began with a group workshop, attended by ten of the above group members. This workshop drew heavily on standard design tools to assist the businesses with reframing their perceived challenges. This workshop asked participants to discuss their perceived challenges, comparing these to trends and issues present in industry reports. Following this, the participants were asked to consider these issues from a consumer’s perspective using conventional Design Led Innovation tools of: persona (Prahalad & Ramaswamy, 2004), customer journey map (Katzan, 2011) and business model canvas (Osterwalder, 2010).

The assumption tested in this workshop was that having a greater understanding of export consumers would enable businesses to be competitive in export markets. The intention of this workshop was to discover the degree of understanding of the consumer by these industry leaders, as well as identify any perceived pain points that may be considered in more detail. However, in this workshop it was revealed that there was
generally a low understanding of consumers in export markets, described by one participant as the “black box of the consumer”, meaning there was little, if any existing knowledge of the customer to build on. For nine of the ten participants, this was their first exposure to these design tools. This, combined with the lack of understanding of consumers outside of Australia, led to the conclusion that the present level of consumer and export market understanding was not sufficient to continue with an end consumer-centric perspective.

**Key challenges and recommendations**

Conventionally, the discovery phase of a design process is imperative for the business undertaking the design process. This phase typically considers the customer in some detail through interviews, co-design and observation. Resources are allocated by the firm undertaking the design project. In contrast the SGC Framework works with leaders of individual firms to create a vision and strategy for an entire industry sector. There is no imperative for the business leaders to allocate resources to this, other than time attending workshops. Alternative models may be considered in future projects to increase engagement; these may use a series of independent projects working within individual firms, collectively the outputs of a number of projects may be used to frame the future of the sector.

**Common issues across the value chain to create focus**

Recognising the low levels of understanding of the consumers in export market, the second workshop was also a group workshop attended by twelve members of the above group described in table 1, seeking to identify common needs across the value chain. For this value chain, shown in Figure 3 below, it included all key groups from agriculture through to consumer in an export market, as well as considering regulatory and trade environments, as depicted on the value chain as government and terms of trade, respectively. We refer to value chain as being all of those individual organisations between agricultural production and consumption. This was to test the assumption that common issues exist across several groups both within and outside of Australia, which could be used as a starting point to envisage a future. For each of these organisations along the value chain, participants in pairs were asked to consider similar details to a persona: who
PEPPOU, THURGOOD AND BUCOLO

are they, what are their motivation and aspirations; before considering what their challenges are likely to be.

![Value chain diagram](image)

*Figure 3: Value chain used in this group workshop.*

Through this process, it emerged that there was a range of different levels of understanding of who these groups in the value chain are, let alone the challenges experienced. The responses, and themes that emerged from these responses varied widely, with one group determining that increased transparency was needed throughout the value chain; whilst two other groups reached the theme of a reliable, opaque value chain. Meaning that the origin and handling of the product is invisible to the consumer. At another extreme one group was simply unable to identify the different organisations in the value chain situated outside of Australia, in spite of operating an active export business in Asia.
Key challenges and recommendations

Recognising the limitations of the industry participants’ knowledge challenges the role of the facilitator in this process. Hereby challenging the very nature of the program, shifting the role of participants from design being an active process, to design having a role facilitating negotiation. For the remaining sections prototypes were developed to critique and co-design with industry rather than asking the industry to develop the content themselves.

SMEs as the customer, channel to market as need

Following the analysis of the second group workshop, it became apparent that the challenge for these businesses was not a greater understanding of the consumer, rather, it was to develop an understanding of the consumer. Accordingly the customer was reframed from the consumer in an export market to the companies themselves, whose core need is a way to get direct access to their consumers and have a channel to sell through. A prototype, in the form of a pictorial narrative, was used to challenge and provoke the participants. This narrative embedded these assumptions in the proposition of ‘armchair export’, using an e-commerce platform to link the organisations with the customers directly reducing the number of value chain participants.

With the shift in focus, the original industry reference group was reduced to only those operating small to medium (SME) food businesses. These businesses have 0-200 employees. A pictorial narrative was used as a provocation in targeted one to one co-design interviews. From these initial co-design sessions, this was quickly iterated to the concept of an ‘Export Incubator’. This proposition was then used to test the assumption that: successfully exporting businesses had received significant support and mentoring to achieve this. This narrative was then co-designed with a further three firms to refine and develop the underlying themes.

Analysis of semi-structured interviews was conducted using thematic analysis (Braun & Clarke, 2006), outcomes of this are summarised in Table 2 below. All participants in this section were CEO or board-level in their organisation.
**Table 2 themes and quotes from this phase of the project.**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>Quotes</th>
</tr>
</thead>
</table>
| Organisational support               | The need to provide significant support for export – high incremental costs | “Changing branding is cheap, changing a product is expensive. It can easily cost $100,000 to get a product ready for an export market.” – participant A  
“The cost of paperwork alone is enormous.” – participant B  
“To understand the market you are looking at up to ten international trips, it’s a big cost when you have a business to run.” – participant C |
| Ineffective support organisations    |                                                                           | “These organisations are so variable, you might work with someone fantastic and knowledgeable, once they leave you get someone who just doesn’t have the skills.” – participant A |
| Understanding and accessing export markets | The need to provide significant support for export - enabling power of experts | “Someone else is the fast track to export, you need someone who knows what it’s like to hold your hand and get you on this track.” – participant D  
“We worked with [state-based support organisation], they took us through every step, without them we wouldn’t be here today.” – participant A  
“Someone with the local knowledge and networks is the only way to get into these markets.” – participant C |
| Ineffectiveness of conventional market research |                                                                           | “Nobody is really investing in putting people in market.” - participant E  
“Market insights aren’t being used strategically in where to sell and what to sell.” - participant E  
“I don’t use market reports” – Participant D  
“Getting on a plane is the only way to understand a market, not market reports.” – participant A |
| Selectivity                          | The need to be selective (picking winners)                                | “This isn’t for everyone.” - participant E  
“This would need to be selective, it wouldn’t work otherwise.” – participant A |
“There are enough people out there who fit [the selection criteria].” – participant B

Key challenges and recommendations

With this phase of the program the role of design shifted drastically. The participants were no longer tasked with undertaking the steps of the process, instead they were asked to critique prototypes developed by the practitioners. This arose, at least in part, from the selection of participants. Successful business leaders were invited to participate, however, as the program progressed it became apparent that those participating in the program were not the customers of the program. A possible alternative approach would be having a two stage program: work with a group of industry leaders to first frame who the customer of the process is, then recruit a second group of participants.

Ability to respond to rapidly changing market environment as driver of competitiveness

Based on the above themes, particularly the themes of the need to be selective and the ineffectiveness of conventional market research, the prototype, in the form of a pictorial narrative, was updated. This narrative was underpinned by assumptions that the ability to respond to a rapidly changing market are necessary to succeed in global export today. Typically, in Australian industry the emphasis is on analysing and understanding consumers or creating demand. However this proposition tested the assumption that neither this control nor retrospective understanding of consumers is possible or desirable. Instead, recognising that in a rapidly changing global market unrelated or seemingly unrelated global incidents can create or decimate markets overnight, this proposition looked to respond directly to these challenges.

Ultimately, a prototype vision, in the form of a one-page text summary of the future of the Australian Agrifood Industry, was developed. This was tested and refined through twenty thirty-minute semi-structured co-design interviews with industry leaders who had not participated previously in this project. These were used to test four key criteria with industry leaders: will there be any impact on their business, does this consumer-led approach differ from conventional strategy development and would this lead to a change in behaviour in your business? The responses to this were once again analysed using thematic analysis (Braun & Clarke, 2006), the results of
PEPPOU, THURGOOD AND BUCOLO

this are presented in Table 3 below. Using this feedback from these co-design sessions, the vision was updated.

Table 3. Summary of themes from co-design testing of the vision.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>Quotes from industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on business</td>
<td>This wouldn’t change our strategy</td>
<td>“This reaffirms what we are already trying to achieve.” – participant F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Nothing new, it wouldn’t influence our business strategy.” – participant G</td>
</tr>
<tr>
<td></td>
<td>There isn’t enough detail</td>
<td>“What is the fundamental point?” – participant H</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“This is vague enough that without the word ‘Australia’ it could be any of our competitors.” – participant I</td>
</tr>
<tr>
<td></td>
<td>This vision isn’t bold</td>
<td>“There is lots implied here, it must be explicit.” – participant J</td>
</tr>
<tr>
<td></td>
<td>enough</td>
<td>“It has to be bolder, it sounds like it was ‘designed by committee’.” – participant K</td>
</tr>
<tr>
<td>Are challenges different from today</td>
<td>Not enough for non-believers in this future</td>
<td>“This is a good call to arms for the believers. There is not enough here for the non-believers.” – participant L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Right now this isn’t a call for change, it reinforces those who believe change is coming.” – participant M</td>
</tr>
<tr>
<td></td>
<td>Nutrition as focus</td>
<td>“Nutrition seems to mean reliability.” – participant H</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Nutritious is a supplier statement, something [a supermarket like] Coles might say.” – participant N</td>
</tr>
<tr>
<td></td>
<td>Changing nature of markets</td>
<td>“We must move away from commodity markets.” – participant O</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“SMEs are better suited to manage change and export.” – participant P</td>
</tr>
</tbody>
</table>
| Using customer intelligence to shape collaborations | Challenges of insights to strategy | “This is a big shift in the way the industry would operate.” – participant K  
“Almost no one in the Agribusiness sector could say decisions are market-led.” – participant M |
|---|---|---|
| Lack of collaboration | “The industry is reluctant to collaborate or invest in collaboration.” – participant G  
“There is a need for facilitated relationships and mentoring within the industry.” – participant F |
| Sharing market intelligence | “Firm led intelligence works for [supermarkets like Coles/Woolies, not export. Sharing will need a big shift in mind set.” – participant J  
“Right now firms see market intelligence as their responsibility.” – participant H |
| Being selective | Better allocation of existing resources | “Allocating resources (human, farm and gov support) by market needs will be needed to enable a non-commodity market.” – participant I  
“We allocate resources by market value today, not potential.” – participant L |
| Focusing R+D using consumer insights | “There is still a need for blue sky research, not everything can be market-led.” – participant O  
“There is a lot of opportunity to move to a seamless lab bench to shelf R+D system.” – participant K |
| Picking winners | “It is ok to be selective to show the comparative advantages we have.” – participant F  
“Picking winners is absolutely essential.” – participant N |
| Leadership and mentoring | “The industry is passionate, they want to help and grow.” – participant G  
“CEOs of companies MUST own and champion this vision.” – participant L |
Key challenges and recommendations

In this phase in particular, the independence of the practitioners is essential to allow the work so far to be challenged. Ensuring that now, as individuals who haven’t previously been exposed to the orthodoxies of the sector, the vision can be challenged.

Implications and Future Work

Design is increasingly being applied to business strategy at the individual firm level; we are now extending this success to sector-level strategy and innovation. In this paper we describe a proposed Framework based on Design-Led Innovation already successfully applied at the firm level. In total approximately forty businesses leaders were engaged through large group workshops, small group co-design and one to one co-design sessions between September 2015 and January 2016. We will now outline key findings and recommendations.

Due to the nature of this program it requires significant, long-term engagement as was apparent in this case study before commencing this project. The actual strategy development and engagement process took twelve months; and as of publication, there was nearly a two-year relationship with FIAL, the partner organisation. Based on our experience this work, it requires a great deal of trust between the partners to commence a project of this scope; otherwise this project could not have been effectively undertaken and achieved the results it did.

What design offered

Typically, the involvement of participants in a strategy development process is heavily rooted in the issues of today. Whereas the SGC, adopting a Design Led Innovation approach, focuses first on the customer and secondly on the future, forcing the issues of today and of the industry to be marginalised. In this project, design was seen to offer something significantly different to the conventional, linear approach (shown in Figure 2 in the introduction), however, managing this open ended, non-linear approach proved to be challenging in practice. By its very nature design is open and explorative, which enabled all parts of the system to be challenged by the participants. For participants, this means participation is not a passive process, their role, even in critiquing and co-designing, is an active one. This requires participant expectations and input to be carefully managed, even in
this early example a number of participants expressed surprise at how different this approach was from conventional food sector strategy development.

Whilst strategic design has been applied at a sector-level before, the scope of influence has been focusing on the creation of ‘new’ business models or services. In one of the better-known cases, IDEO applied a strategic design approach to schooling in Peru (Martin, 2014). This case could be retrofitted into the SGC Framework described in this paper, however, in this case the sector transformation is led by a single firm, which is seeking to establish a market for their new model. In contrast, the SGC Framework aims not to lead to the emergence of new businesses or services directly, but to create the environment for the incumbent industry to transform itself. Rather than the output of the program being an artefact in the form of the business or service model to be implemented, the SGC Framework is seeking to reach an envisaged future that includes frames seeking to enable this future through programs, policy and the resultant cultural changes. The objective of the SGC Framework is to design the field, in order to influence the government policy and program environment.

**Implications for practice**

It is only through a combination of influencing the policy environment, and creating deeply desirable products or services to be accessed by influencers in the sector that a sector can be swayed. The ultimate output of this sector-level strategy development process is actions, in the form of policy and programs, which demonstrate the value of alternative behaviours and support a change in perspective for the industry participants. This requires the practitioner to be simultaneously considering the policy and the program, project and service level. By considering all of these elements simultaneously and asking ‘what would the policies, programs and strategies need to be for this to be true?’ This shift requires the practitioners to have a strong ability to influence a range of actors within a sector, far beyond solely creating products or services that attract customers. This requires both the design of context and the design of the products and services as the first step towards enabling this.

Based on the experience in this project the application of design seems to offer significant benefits to sector-level strategy development by providing a context to manage uncertainty. For this approach to be scaled and ultimately compete with conventional approaches in practice, tools and
practices must be adapted or created specifically for this sector-level context.

**Future research**

Future work will focus on two main questions: was a design led approach able to create new value for the industry sector? Simultaneously, what does the application of the SGC Framework teach us about the practice of design? This program represents one of three substantial ongoing projects within Australian industry, all of which are currently at different stages of maturity. These projects are across multiple sectors: renewable energy, intelligent transport and continued work in food. There is significant opportunity for comparative study across multiple sectors, as well as longitudinal measurement of impact, as well as drawing on the experience of other practitioners.

Given this approach blurs the lines between design, strategic and management consulting, there appears to be a significant opportunity to relate the Framework to these fields. Due to the extent of engagement needed for the Framework to be enacted fully, from initial vision through to impact measurement, these related fields need to be, at the very least, engaged in the process. This integration across disciplines offers the largest opportunity for future research.

In many respects design for sector strategy is similar to design for social innovation whereby the apparent challenges are frequently a symptom of a much deeper issue. A key advantage offered by design over conventional strategy and innovation approaches is the ability and the project structure to (re)frame the perceived challenges. Testing integration between the SGC Framework and established approaches to framing applied in social, for instance, Frame Creation (Dorst, 2015 & Thurgood, 2015) may provide support to enhance the SGC Framework.

Based on this initial case there appears to be significant opportunity for design to scale to support the formulation of sector-level strategy. In doing so, there is significant opportunity for new tools and participatory approaches to enable this to be consistent and repeatable.

---

*Acknowledgements:* we would like to acknowledge the staff of the FIAL for coordinating industry engagement, in
Designing Competitive Industry Sectors

particular Dr Mirjana Prica, for her time and support throughout this and subsequent programs. We would also like to acknowledge the significant input from all industry participants through workshops and interviews. FIAL would also like to acknowledge the funding support of the Australian Federal Government through the Industry Growth Centres initiative.

Reference


PEPPOU, THURGOOD AND BUCOLO


