In pursuit of ‘what might be’: Exploring the use of design thinking in sport organisations

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Certificate of original authorship

I, James Gregory Joachim, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the UTS Business School at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis. This document has not been submitted for qualifications at any other academic institution.

This research is supported by the Australian Government Research Training Program.

[Greg Joachim signature – removed for publication]

23 February 2021

Note about thesis format and presentation

This thesis is submitted in compilation format and includes four journal articles: two published, one in revision, and one under review. First, an opening chapter introduces the thesis and the overall doctoral project. Thereafter, each component study is presented within a dedicated chapter. Finally, a discussion chapter concludes the thesis by highlighting key findings, implications, contributions, and opportunities for future work.

While the component journal articles are presented in this thesis in accordance with the format required by their corresponding journal publication or submission, three broad changes have been made for the clarity and coherence of the thesis as a discrete document. First, all tables and figures have been renumbered in line with the thesis numbering system rather than that of each individual article. Second, in lieu of placing a reference list at the end of each component article, the references for each article have instead been consolidated into the master reference list at the end of the thesis. Finally, to ensure ease of reading and grammatical consistency throughout the thesis, the text of each journal article has been converted to Australian English (ise/yse) where necessary.

Dedication

I dedicate this thesis – along with all of the effort that went into creating it, and all of the outcomes it has generated and will hopefully continue to generate – to the memory of my paternal grandmother:

Eva Pearl Joachim (née Vanscoy)

As with all undertakings throughout my life – from my earliest handwriting lessons through to my undergraduate and masters degrees – I have approached my doctoral research in a way that I hope would have made her proud. I wish I could take this thesis to her house after school, as I did those sheets of handwriting practice. Her idea of my potential was always greater than my own. As a result, my work would always impress her, but it would never surprise her. If there is a higher form of praise, it is not known to me.

Her relationship with me was hardly a unique case. She distributed love as she distributed Nilla Wafers: frequently and generously. The walls of any room she was in reverberated with this warmth – it enveloped all those who were in her company. She was the Sun in many a personal solar system.

I miss her every day, but she lives on not only in my heart but in the hearts of all who had the pleasure of knowing her. We continue to orbit around her eternal warmth.

Acknowledgements

First, thank you to my principal supervisor, Associate Professor Nico Schulenkorf. This project began with Nico and I enjoying a beer at the Manly Wharf in the months after I had completed my MBA at UTS. During those MBA studies I had been particularly invigorated by key concepts to which Nico introduced me in his sport management subjects. I suspected there was more to learn, and it took Nico all of about five minutes to convince me that there were indeed further and compelling depths to explore through a doctoral study. From that day and throughout this entire process I have never felt any less than completely supported by him. He is not only my valued mentor, but also a true friend.

I would also like to sincerely thank my alternate supervisor, Dr. Stephen Frawley, and co-supervisor, Associate Professor Katie Schlenker for their considerate and thoughtful guidance throughout this project. Their influence on my development and this project was invaluable. Likewise, thank you to Dr. Adam Cohen for guidance both professional and personal in the latter stages of my candidature.

I also owe a great debt of gratitude to the Sydney Sixers organisation and front office staff. As an introvert, the component of my project which most intimidated me was that of data collection. However, by embracing my presence with warmth, patience, and ceaseless good humour, the Sixers made data collection the part of my project that I will remember with the greatest fondness. Smash ‘em, Sixers!

Thank you also to UTS and the UTS Business School for hosting my doctoral candidature and providing a UTS Doctoral Scholarship and the Gordon Young Memorial Scholarship to financially support it. In particular I would like to acknowledge Associate Professor Hussain Rammal, Associate Professor Bhuva Narayan, Associate Professor Daryl Adair, and Professor Peter Fleming for their various forms of support at key times in the project. I would

also like to thank my students at UTS, who often inspired me with their manifest curiosity. Further, my time at UTS was populated by an incredible cohort of fellow PhD researchers – Hunter, Lewis, Lloyd, Paul, Loïc, and Jack, among others – who I am honoured to count among my friends.

I would also like to acknowledge the support of family and friends. Naturally, I owe a great debt of personal gratitude for a lifetime of support from my parents, Diana and Don. Casey offered, as always, unwavering moral support. Zina kept my mind sharp with philosophical conversations neither of us ever wanted to conclude. Jake is to blame for introducing me to cricket, not realising he would become data one day. After I became enchanted with the sport, Safaa attended more matches with me than can reasonably be counted. I was also ceaselessly supported by my wife's parents and sisters – my Australian family.

I would also like to acknowledge my bone-deep roots as an Appalachian-American born and raised in West 'By God' Virginia and educated at West Virginia University. Long ago I adopted the motto of the state – Montani Semper Liberi ('Mountaineers [are] always free') – as my own motto because it highlights an unimpeachable truth about those who come from the West Virginia hills: we are free in a way that nobody from within or without can take away. Existentially, we are as unassailable as the mountains themselves. Though I now live in Australia, where "the radio reminds me of my home far away" (Danoff, Denver, & Nivert, 1971), my ties to Appalachia and West Virginia remain strong, as they forever shall.

> *Oh, the West Virginia hills! I must bid you now adieu.*
> *In my home beyond the mountains I shall ever dream of you;*
> *In the evening time of life, if my Father only wills,*
> *I shall still behold the vision of those West Virginia hills.*
> (Engle, 1886)

Finally, my deepest thanks of all are owed to my wife, Claire. On our wedding day I shared these feelings with our guests:

> *She walked toward me today with ethereal fluidity, her movement in step with one of nature's most ancient yet fleeting cadences. Hers is a rare grace to which she allows only a select few to tune their senses. Those who behold her grace embrace slumber each night in the hope they will experience it again in a dream.*
>
> *After my own first, oneiric encounter with that grace, I promptly chased it over mountains, deserts, and oceans. It is not a dream from which I am eager to wake. Hers is not a melody I am capable of ignoring.*

In step with this cadence and melody, The Girl continues to let me write verses of her song with her. Were I not doing that writing with her, I would not have been able to do the writing which generated this thesis. To both ends, her support has been unwavering.

Thanks for everything, Bear.

Preface

Marty: Hey Doc, we better back up. We don't have enough road to get up to 88 [miles per hour].

Doc Brown: Roads? Where we're going, we don't need *roads*.

In the above exchange – which constitutes the final scene of one of my favourite movies, *Back to the Future* (Zemeckis, 1985) – teenager Marty McFly demonstrates an unfortunate lack of imagination. He has limited his thinking to the predictable parameters of the world he knows and is used to – a world where cars are almost exclusively driven on roads (and always on the ground). Despite his youth (and having only moments earlier witnessed Doc Brown feed organic matter into his time-traveling DeLorean's 'Mr. Fusion' power generator), Marty doesn't consider that there might be a way to get the DeLorean up to 88 miles per hour – the speed at which the car time travels – without a long enough length of road on which to accelerate. Doc Brown prompts him to free his imagination from the need for roads just before the car lifts into the sky and rockets up to 88 miles per hour and into the future.

We have all been the Marty in the car at one point or another – perhaps at many points. Our brain runs on autopilot and we go through rote repetitions of the way things have always been done. As the old saying goes: 'if it ain't broke, don't fix it'.

In undertaking this research project, I have rejected any such notion. In fact, the very framing of this phrase restricts our way of interpreting and engaging with it. To suggest that only broken things can be fixed suggests that fixing is inherently (and exclusively) a response to a negative; that by trying to improve something we are implicitly suggesting there is something wrong with it – that it is in some way broken.

But this is simplistic framing. By liberating ourselves from such conceptual shackles we are free to reinterpret problems and opportunities. Suddenly we can begin to approach perfection with things we previously would not have touched until they became problematic. We can stop and ask: why *is* that the way we have always done things – and should we still be doing them that way?

When we wait for things to be broken before investing any energy or other resources into them, we find ourselves having to put out fires even as they ignite. If we transcend such limited thinking, we could use the time we currently sit around waiting for fires to start to instead start investigating, say, the *cause* of the fires. We can attempt to cure the disease rather than trying to mitigate the harm of the symptoms.

What we are not freed from in this course of action are the practical restrictions imposed by resource limitations. Many of us do not have the luxury of daydreaming about flying cars when the needs of the present moment dominate our attention and cognitive capacity. Even if we had the time to imagine such things, acquiring the funding and other resources required to make those dreams into a reality is another mountain sometimes even more difficult to climb.

What we all *can* do, however, is make real the impacts that something like a flying car would offer. For it is not necessarily the flying car that people want, but the outcomes that a flying car could generate – concepts like the freedom to explore the unpaved world, among others. While a flying car requires several feats of engineering, generating freedom of exploration is somewhat easier – indeed, it is downright *achievable*. Further, unlike a new technology that must be researched and developed, such freedom is something we can have *now*.

This thesis aims to show how and why we might fix what ain't broke – and when it gets up to 88 miles per hour, you're going to see some serious shit.

Nothing in the world, I thought to myself,
is as old as what was futuristic in the past.

- Ben Lerner, *10:04*

Abstract

This doctoral project is concerned with the use of design thinking in the field of sport management. Design thinking is a human-centred approach to generating value for users which makes the thinking and the doing of expert designers accessible to practitioners in non-design fields (Brown, 2009; Carlgren, Rauth, & Elmquist, 2016). At the outset of this project design thinking had received no attention in the field of sport management, despite representing a potential means of overcoming user-centric challenges currently faced by sport organisations.

The project began with a scoping study, which allowed for the review and rapid mapping of existing literature in the field. Findings of the scoping study revealed the existence of at least nominal design thinking alignment in each sport organisation captured in reviewed articles. Sport organisations which align with all five themes of design thinking were found to share traits which represent points of entry for the possible implementation of design thinking practice into the field.

To explore how such engagement with design thinking might unfold in sport management practice, a case study was undertaken with the Sydney Sixers, one of eight clubs in the Big Bash League, Australia's professional Women's and Men's Twenty20 (T20) cricket competition. The initial exploration revealed the existing practice of the Sixers to be aligned with all five themes of design thinking, which suggested they were capable of the performative component of design thinking and needed only to engage with the ostensive component – the *idea*. A subsequent intervention sought to initiate engagement with the ostensive component by identifying a design activity which would both suit the Sixers' preferred way of working and maintain, if not enhance, their existing links to design thinking themes. A structured brainstorming activity known as the Lightning Decision Jam (LDJ)

achieved these objectives. Thereafter, the final study explored the Sixers' adoption of the LDJ into their ongoing practice and planning cycle.

Six contributions are made to the field of sport management. First, design thinking is shown to be useful in sport management as a derivative theory. Second, a framework is provided for 'fitting' design thinking for sport management practice. Third, design thinking is foregrounded as a means by which human-centred innovation can be achieved in sport. Fourth, the LDJ is highlighted as a means by which reflection can be restored to the practice of professional sport organisations. Fifth, increased adoption of design activities (the performative component of design thinking) which are utilised toward achieving human-centred outcomes (the ostensive component of design thinking) by sport organisations can have flow on effects beyond the designs being pursued, such as enhanced perceptions of organisational performance. Finally, the value of shadowing as a data collection technique in qualitative sport management research is highlighted.

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Publications arising from this project

Journal articles

Joachim, G., Schulenkorf, N., Schlenker, K., & Frawley, S. (2020). Design thinking and sport for development: enhancing organizational innovation. *Managing Sport and Leisure*, *25*(3), 175-202. doi:10.1080/23750472.2019.1611471

Joachim, G., Schulenkorf, N., Schlenker, K., Frawley, S., & Cohen, A. (2021). 'No idea is a bad idea': Exploring the nature of the design thinking alignment of an Australian sport organization. *Journal of Sport Management.* Advance online publication. doi:10.1123/jsm.2020-0218

Conference presentations

Joachim, G., Schulenkorf, N., Schlenker, K., Frawley, S., & Cohen, A. (2020, December). *An Intervention to Introduce a Design Thinking Activity into the Practice of a Professional Sport Organisation*. Paper presented at the Annual Sport Management Association of Australia and New Zealand Conference, Canberra, Australia.

Joachim, G., Schulenkorf, N., Schlenker, K., Frawley, S., & Cohen, A. (2019, December). *Using Design Thinking to Enhance the Innovation of Sport Organisations*. Paper presented at the Biennial Australian and New Zealand Association for Leisure Studies Conference, Queenstown, New Zealand.

Joachim, G., Schulenkorf, N., Schlenker, K., Frawley, S., & Cohen, A. (2019, December). *Exploring the design thinking alignment of a professional sport club*. Paper presented at the Annual Sport Management Association of Australia and New Zealand Conference, Christchurch, New Zealand.

Joachim, G., Schulenkorf, N., Frawley, S., Schlenker, K., & Cohen, A. (2019, May). *Enhancing Innovation in Sport Management With Design Thinking: The Case of an Australian Professional Cricket Franchise*. Paper presented at the Annual North American Society for Sport Management Conference, New Orleans, USA.

Joachim, G., Schulenkorf, N., Frawley, S. & Schlenker, K. (2018, November). *Approaching 'wicked problems' in sport management through the use of design thinking*. Paper presented at the 24th annual Sport Management Association of Australia and New Zealand Conference, Adelaide, Australia.

Joachim, G., Schulenkorf, N., Frawley, S. & Schlenker, K. (2017, December). *Empowering Change Agents Through Adaptable Design Thinking (aDT)*. Paper presented at the 13th Biennial Australian and New Zealand Association for Leisure Studies Conference, Hobart, Australia.

Joachim, G., Schulenkorf, N., Frawley, S. & Schlenker, K. (2017, November/December). *Adaptable Design Thinking (aDT) for Sport Management*. Paper presented at the 23rd annual Sport Management Association of Australia and New Zealand Conference, Gold Coast, Australia.

Joachim, G., Schulenkorf, N., Frawley, S. & Schlenker, K. (2016, November). *Design Thinking and Sport [for] Development: Maximising Social Capital*. Paper presented at the 22nd Sport Management Association of Australia and New Zealand Conference, Auckland, New Zealand.

Conference poster

Joachim, G., Schulenkorf, N., Schlenker, K., Frawley, S., & Cohen, A. (2020, May). *Shadowing as a Data Collection Method in Qualitative Sport Management Research*. Poster presented at the Annual North American Society for Sport Management Conference, San Diego, USA.

Contribution of authors to component studies

Study One

Joachim, G., Schulenkorf, N., Schlenker, K., & Frawley, S. (2020). Design thinking and sport for development: enhancing organizational innovation. *Managing Sport and Leisure, 25*(3), 175-202. doi:10.1080/23750472.2019.1611471

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Author	**Contribution**	**Signature**
Greg Joachim	Lead author: all data collection, primary data analyst, writing of manuscript.	Removed for publication
Nico Schulenkorf	PhD principal supervisor; primary conceptual and theoretical feedback; methodological guidance.	Removed for publication
Katie Schlenker	PhD panel; secondary conceptual and theoretical feedback.	Removed for publication
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Study Two

Joachim, G., Schulenkorf, N., Schlenker, K., Frawley, S., & Cohen, A. (2021). 'No idea is a bad idea': Exploring the nature of the design thinking alignment of an Australian sport organization. *Journal of Sport Management.* Advance online publication. doi:10.1123/jsm.2020-0218

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Greg Joachim	Lead author: all data collection, primary data analyst, writing of manuscript.	Removed for publication
Nico Schulenkorf	PhD principal supervisor; primary conceptual and theoretical feedback; methodological guidance.	Removed for publication
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Study Three

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Greg Joachim	Lead author: all data collection, primary data analyst, writing of manuscript.	Removed for publication
Nico Schulenkorf	PhD principal supervisor; primary conceptual and theoretical feedback; methodological guidance.	Removed for publication
Katie Schlenker	PhD panel; secondary conceptual and theoretical feedback.	Removed for publication
Stephen Frawley	PhD panel; secondary conceptual and theoretical feedback.	Removed for publication
Adam Cohen	Conceptual and theoretical feedback; methodological guidance.	Removed for publication

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Study Four

Joachim, G., Schulenkorf, N., Schlenker, K., Frawley, S., & Cohen, A. (2021). "It's given us a much wider perspective": Exploring the adoption of a design thinking activity into sport management practice.

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Greg Joachim	Lead author: all data collection, primary data analyst, writing of manuscript.	Removed for publication
Nico Schulenkorf	PhD principal supervisor; primary conceptual and theoretical feedback; methodological guidance.	Removed for publication
Katie Schlenker	PhD panel; secondary conceptual and theoretical feedback.	Removed for publication
Stephen Frawley	PhD panel; secondary conceptual and theoretical feedback.	Removed for publication
Adam Cohen	Conceptual and theoretical feedback; methodological guidance.	Removed for publication

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Introduction

In the broadest sense, design thinking is a means of pursuing innovation that makes the thinking and the doing (the cognition and the action) of expert designers accessible to non-design practitioners, such as sport managers (Carlgren et al., 2016). While traditional approaches to innovation rely on inductive and deductive logic (which are typically informed by past results), design thinking enables non-designers to engage in abduction – "the logic of what might be" (Dunne & Martin, 2006, p. 513) – as a means of generating outside-of-the box solutions which satisfy the unmet needs of their end users (Carlgren et al., 2016; Dunne & Martin, 2006). These unmet needs are uncovered through empathy research that allows managers to assume the perspective of their end users in order to make sense of how they will engage with the product or service being designed (Brown, 2008, 2009; Brown & Wyatt, 2010), underscoring the fact that design techniques have value to practitioners in non-design fields (Dorst, 2011, 2015). While early evidence of the value of design thinking was anecdotal (Kimbell, 2011), the nascent but evolving field has over the last decade matured (Johansson-Sköldberg et al., 2013) to the point that it is now possible to empirically study design thinking in management practice (Carlgren et al., 2016). The aim of this doctoral project, then, is to study the potential usefulness of design thinking to sport management practice.

At the outset of this project in January 2016, design thinking had received no attention in the field of sport management. However, in the time since, the concept has been identified by Schulenkorf (2017) as a valuable avenue for future research in the sport sub-field of sport for development (SFD) and has also been proposed as a structure for sport management university capstone courses (Pierce et al., 2019), suggesting that researchers see the potential value design thinking purports to offer sport researchers and practitioners alike. Indeed, other researchers have engaged with the first published article that arose from this doctoral project in highlighting that design thinking traits characterise the culture of innovative SFD organisations (Svensson & Mahoney, 2020). Despite this growing interest, however, this thesis and the studies within still represent the first empirical study of design thinking in sport management practice. Hence, this thesis contributes to the nascent but evolving canon of design thinking work in sport management while also introducing the theory to sport management practice. As such, it highlights design thinking as a useful and human-centred means by which sport organisations can generate value for the sport user. Further, it illustrates the means by which design thinking can be most meaningfully adopted into the practice of sport organisations to achieve such outcomes.

This chapter introduces the overall doctoral project. First, an exploration of the context and problem establishes a need for human-centred approaches in sport management. Next, the evolution of design thinking as a management concept is outlined along with the foundational models of the process. The research aims are then articulated as they relate to the four component studies which constitute this thesis by compilation. Thereafter, the research paradigm is defined, as is the overall qualitative approach and the three approaches to data collection. The overall doctoral project is then outlined, illustrating how the four component studies build on one another to constitute the whole of the project. Finally, broad limitations are noted ahead of a brief conclusion to the chapter.

Exploration of context and problem

Ratten (2016) identifies research into sport innovation management as a means of advancing the broader academic field of sport management. She notes that innovation within the sport context differs to that of traditional businesses, as sport organisations enjoy more intimate connections to their consumers (Smith & Stewart, 2010) and are more likely to pursue both profit and non-profit [i.e. hybrid] goals (Ratten, 2016). The potential complications of attempting to reconcile these hybrid profit/non-profit goals are made clear by the differing motivations to innovate in organisations dedicated to profit or non-profit goals exclusively. Non-profit sport organisations do not appear to be risk-averse in their pursuit of social innovations (Winand et al., 2016), possibly owing to the fact that their funding sources (primarily grants and/or donations) are not dependent upon implemented innovations generating a financial return (Ratten 2016). Meanwhile, despite the fact that they typically enjoy more research and development capabilities – to say nothing of human and financial resources – than do non-profit sport organisations (Winand & Anagnostopoulos, 2017), professional (typically commercial) sport organisations tend to not be flexible enough to foster innovation in the manner non-profit sport organisations can and do (Ratten, 2016). Hence a conundrum arises: the sport organisations that tend to be the most willing to pursue innovation also tend to be the least capable of doing so, and vice-versa. To merge the best of both worlds, then, requires new approaches to innovation in sport. Accordingly, this project explores the value that design thinking might hold for both for-profit and non-profit sport organisations.

The broad differences between for-profit and non-profit sport organisations in regard to motivation and capacity to pursue innovation highlight that attempting to balance hybrid profit/non-profit goals within a single sport organisation presents a unique and complex challenge for sport managers. Even the language used by non-profit sport practitioners to

describe their innovation efforts differs from that of profit-oriented organisations, underscoring that porting the frameworks used in for-profit contexts into the non-profit context is an imperfect approach that could prove futile, if not harmful (Svensson et al., 2020). Indeed, Ratten (2016) notes that the explicit and tacit knowledge of a sport organisation (and its members) must be incorporated into adopted innovation techniques, which highlights such organisational knowledge as a potential focal point for identifying and modifying adopted innovation approaches for use in different contexts. However, Edwards, Skinner, and Gilbert (2002) outline that energy and time for reflection is often absent within the practice of commercial sport organisations. Given the unpredictable nature of the sport environment, this lack of reflection has the potential to limit the ability of sport practitioners to convert their lived experiences into individual and, by extension, organisational knowledge (Edwards et al., 2002). Hence, innovation activities which facilitate reflection might be more readily adaptable to both the for-profit and non-profit contexts than would any activity merely ported from one context to the other without modification.

What for-profit and non-profit sport organisations have in common is a focus on the sport user. While the nature of this focus differs, that the sport user is always the target of innovation suggests that the successful pursuit of hybrid organisational goals might usefully centre on said users. Ratten (2016) outlines three broad forms which innovation takes: service, disruptive, and technological. Service innovation has the potential to enhance the already-strong relationship between a sport organisation and its users. Disruptive innovations, meanwhile, can and often do arise from the direct involvement of users in open innovation processes. These sometimes include innovations of the third type – technological – as in action sports, where athletes often drive the creation of new or enhanced equipment (Ratten, 2016). Thus, any new approach to innovation in sport would ideally also find a way to capitalise upon the centrality of the sport user in sport innovation management.

The sport user is always evolving, as is our understanding of them. This ongoing evolution is traceable within the sport management literature. At the turn of the century, Stewart and Smith (1999) outlined the unique features of the sport industry, including strong team-level (brand) loyalty of sport consumers tied to what the authors deemed the 'irrational passion' of fans. Eleven years later the authors had developed a more nuanced view, ultimately concluding that sport consumers are not as different to traditional consumers as once believed and, notably, that components of a consumer's passion for sport serve as proxies for the fulfilment of inter- and intra- personal needs (Smith & Stewart, 2010). This development over a single decade highlights underlying *human* needs – be they psychological, social, or cultural – which the sport experience ostensibly fulfil (Smith & Stewart, 2010).

Nonetheless, the sport user remains elusive in many ways, making it difficult for sport organisations to identify their unmet needs, let alone deliver on them. Indeed, demand for sport in Australia is itself shifting, in some cases seeing Stewart and Smith's (1999) 'irrational passion' dissolve into loyalty spread across multiple teams within the same competition (Fujak et al., 2018). Meanwhile, the ongoing blurring of boundaries between the commercial, non-profit / volunteer, and public sport sectors continues to impose change on sport users from the industry side, leaving such users under- or un- served (Misener & Misener, 2017). Human users and their unmet needs are common factors in both of these situations, highlighting a need for sport managers to better understand said users as a way of enhancing the experience(s) sport might offer them.

Recognising these ongoing changes and the challenges they present to sport organisations, Funk (2017) proposed a Sport Experience Design (SX) framework that adopts a 'consumer-centred' approach which acknowledges the psychological needs of the sport user. This evokes the human-centred process of design thinking, and the empathy for the user on which

it relies. Funk illustrates three interrelated elements of sport experience design which also represent three differing perspectives on sport consumer behaviour: sport context ('user experience'), sport user ('consumer needs') and sport organisation ('business goals'). Only where all three of these elements overlap, he explains, can a holistic sport experience be achieved. While attention has been paid to researching sport consumers from the perspective of the sport context or the sport user, little research has integrated the two. Further, the third perspective – that of the sport organisation – tends to be overlooked (Funk, 2017). This doctoral project seeks to address this shortfall.

As the dearth of sport consumer research from the organisational perspective suggests, there is no existing theory or approach to achieving such user understanding within the sport management field. Doherty (2013) and Funk (2019) explain how, in such instances, sport researchers might look to other fields to identify how similar challenges were overcome within those fields. In line with these suggestions, this doctoral project draws inspiration from the broader fields of management and design to identify design thinking as a concept of promise; a phenomenon of interest. As a human-centred means of value generation that makes the thoughts and actions of expert designers accessible to non-design practitioners (Carlgren et al., 2016), design thinking may help sport organisations attempting to navigate a dynamic sport landscape and the human-centred challenges it poses.

The evolution of design thinking

The phrase 'design thinking' entered the design research vernacular when Peter Rowe used it as the title for his 1987 book (Dorst, 2011). Since that time, attitudes toward design and the methodology of design have shifted. Initially design was conceived as a purely creative pursuit but it has since evolved into a reflective practice (Lloyd, 2017). Along that same course it has also changed from rational problem-solving to more phenomenological concepts

such as ‘situation’, indicating an increasing awareness that strictly rational models and processes (often seen in management theory and practice) do little to address the inherent complexity of human life and the design problems that arise thereby (Bousbaci, 2008).

It has been suggested that bounded rationality prevents human designers from arriving at anything other than the most satisfying solution (be it the simplest, most direct, cheapest, etc.). Unfortunately, this is rarely the ‘truest’ solution that would best satisfy all stakeholders. In fact, because no one human designer can have total and objective knowledge, it is theoretically impossible for one to arrive at the ‘truest’ solution to a problem. Further, the bounded nature of a designer’s rationality impacts the generated solution to a problem by virtue of the manner in which the designer frames the problem itself. That is, the conceptualisation of the problem – down to the wording of the problem itself – limits the solutions to such an extent that the framing of the problem can sometimes be shown to also be the solution. However, it is not rationality which is self-binding; rather, it is all the elements of what makes us human, of which rationality is but one component (Bousbaci, 2008). Naturally, the idea that design is a discipline limited by that which makes us human is not altogether new. What *is* new, however, is the bold notion that this limit can potentially be overcome by shifting the focus of and approach to design efforts. This is the crux of the very concept of design thinking as we now know it.

In the time since Tim Brown introduced design thinking into the popular management discourse in 2008, numerous frameworks and/or processes for design thinking have been developed, enhanced, forgotten or ignored. In fact, the sheer volume of design thinking models and definitions has been identified as an obstacle to the maturation of the field (Carlgren et al., 2016). Toward providing clarity to this end, this section separates the signal from the noise to identify some key models of design thinking. These foundational models

have not only proven to be the most durable through the rapid development of the nascent field of design thinking, they also best illustrate the attractiveness of employing the thinking and the doing of designers in non-design fields such as sport management.

Roger Martin laid the groundwork for what we now know as design thinking (Dunne & Martin, 2006). In evaluating how to add value to MBA programs, Martin identified a need to move away from the traditional problem solving methods being used by managers and toward those used by expert designers. He argued that the difference between the two approaches comes back to the fundamental logic used by each. The traditional approach to solving management problems relies on deductive and inductive logic: a manager defines the problem at hand and goes about solving it based on available knowledge, established protocols, and their own experience. A designer, meanwhile, uses abductive logic – which Martin defines as 'the logic of what might be' (Dunne & Martin, 2006, p. 513) – to envision outside-of-the-box possibilities and thereby develop novel solutions. This was achieved through not only the consideration of the needs of the end user, but also through interfacing with them in order to better understand those needs. This collaboration – both with users and with one's peers – is necessary when considering how the design will fit into larger systems, including the whole of society (Dunne & Martin, 2006).

Martin (2009) took a psychological approach to design thinking that sought to overcome the obstacles presented by bounded rationality as highlighted by Bousbaci (2008). Martin saw design thinking as a *dynamic interplay* between analytical and intuitive thinking that relies upon the practitioner's ability to engage in leaps of abductive logic – that is, jumping ahead in reasoning and then testing that hypothesis rather than merely analysing history to inform the next steps. He described the traits of a design thinker based on methods of thought, a profile he called the design thinker's *personal knowledge system*. This system consists of the

designer's stance (a broad definition of the self), tools (including the concrete and theoretical), and experience (which can also inform and help develop one's tools) (Martin, 2009). Martin conceptualised the design thinking process itself as moving through three levels of a *knowledge funnel*. First a large *mystery* is broken down into *heuristics* which are then deduced into *algorithms*. Martin posited that neither experts nor non-experts can make sense of the mystery and that only experts can decode the resulting heuristics, but that anyone (expert or non-expert) can tackle the final algorithm (Martin, 2010). In this way, that which is abstract and complex is made simple through the knowledge funnel.

During the time Martin was developing and promoting his idea of design thinking, Tim Brown – CEO of design firm IDEO – was promoting his own concept of design thinking. Based largely on his experience working with clients, he conceived design thinking as a methodology for innovation that is human-centric and is focused on the needs and wants (simply: the desires) of the end user. Through observing the design practice of firms that had hired IDEO to help them spur innovation, Brown identified five personality traits common to a design thinker: empathy, integrative thinking, optimism, experimentalism, and collaboration. From here he developed the outline of a process for undertaking design thinking that involved three repeating steps of *inspiration* (identifying a problem and/or opportunity worth exploring), *ideation* (generating and testing designs to solve the problem and/or exploit the opportunity) and *implementation* (making the design a reality for users). This proposed process also offered recommendations for how to incorporate design thinking into organisational practice (Brown, 2008, 2009).

Meanwhile, Dorst (2011) approached design thinking by considering how organisations in fields other than design can adapt design practice into their operations. The inherent problem he saw was that design researchers and practitioners resist the simplification of their field.

Still, Dorst believed that understanding the nature of how designers work can carry benefits to virtually any organisation (Dorst, 2015). Of primary importance is the way in which designers reason. Evoking Martin's notion of abduction, Dorst (2011) drilled deeper to identify two types of abductive reasoning: *abductive-1* and *abductive-2*. The former resembles traditional problem solving: designers know *how* they would like to go about creating value, but not what *thing* will go through the *how* to create that value. Abductive-2 reasoning, meanwhile, begins with only the value and neither the *thing* or the *how*. Dorst (2011, 2015) posited that this is where design can best help with complex problems, and that the use of abductive-2 reasoning is best accomplished through the creation of logical frames that link the *how* to the value the designer wishes to create.

While these models of design thinking provided a foundation upon which to build a field of study, an apparent and growing divide between design thinking and the activities of professional or expert designers had, by 2013, become problematic to the academic study of design thinking. Recognising as much, Johansson-Sköldberg, Woodilla & Çetinkaya (2013) systematically reviewed the design literature in order to establish the nature of – and possible reasons for – this divide. They were consequently able to give definition to two streams in the literature: *designerly thinking* and design thinking. They related designerly thinking to the academic study of what expert designers do (practice) and the character of their competencies (theory). Their concept of design thinking, meanwhile, was a reduction and simplification of designerly thinking that allows it (designerly thinking) to be used by experts and non-experts alike in contexts outside of design.

Having defined the two discourses thusly, Johansson-Sköldberg, Woodilla & Çetinkaya (2013) were able to further divide designerly thinking into five theoretical perspectives that are each based in distinct epistemological foundations. These sub-discourses frame

designerly thinking as: the creation of artefacts (rationalism), a reflexive practice (pragmatism), a problem-solving activity (post-modernism), a way of reasoning/making sense of things (practice perspective), or the creation of meaning (hermeneutics). Importantly, these sub-discourses do not oppose each other; they can each be further developed alongside one or more other sub-discourses.

Still, conceptual problems with design thinking remained as of 2016 (the year this doctoral project began). Recognising that there was no single, univerally accepted definition of design thinking, Carlgren, Elmquist and Rauth (2016) developed a scholarly frame for future studies of design thinking in theory and practice. This frame was constructed from qualitative analysis of six companies who self-identified as practitioners of design thinking. Their findings revealed that although businesses implement various design thinking activities, all of those activities could be categorised under at least one of five themes: *user focus* (maintaining the unmet needs of the user as the focus of design efforts), *problem framin*g (engaging with and interpreting the problem and/or opportunity at hand), *visualisation* (the manner in which design thinking practitioners conceive of their path toward meeting unmet user needs), *experimentation* (iterative testing of solutions and/or ideas), and *diversity* (seeking and drawing upon differing perspectives within the team). Importantly, some companies focused more on one or more themes than did other companies, which suggests that the application of design thinking is greatly influenced by the context in which the application takes place. The five themes reflect the natural evolution of the 'founding' design thinking concepts of Brown (2009) and Martin (2009). Further, the identification of common themes provides a common language for the discussion of design thinking activities in practice.

As this review of key frameworks and processes indicates, the concept of design thinking has continued to evolve. However, it has arguably evolved in isolation from design research and theory. This split between design theory and design thinking was anticipated by Martin, who highlighted the differences between the two in discussing the value of design thinking to management education (Dunne & Martin, 2006). The persistence of this apparent split could be at least partially explained by the resentment of expert designers who perceive design thinking to be an over-simplification of their field (Dorst, 2011). Kimbell (2011) argues that this perceived simplification takes several forms, including but not limited to: the separation of the *thinking* and *doing* of the designer, the assumption that the actions of designers (the *doing*) are generalisable, and the maintenance of the designer as the central agent in the design process. Popular models of design thinking also do not call for the reflexivity found in professional design practice. That is: the importance of reflection in the work of expert designers is ignored. Furthermore, elements of design theory (such as creativity) are treated as goals (i.e., desired outcomes) within most design thinking models, rather than as practitioner attributes (Kimbell, 2011). Indeed, design thinking is often misinterpreted as mere creativity or, more reductive still, as a toolbox to be used situationally – not as a model by which to conduct all design activity (Johansson-Sköldberg et al., 2013). Accordingly, the correction of these conceptual shortfalls became one of the research aims of this study, as outlined in the next section.

Research aims

While design thinking has begun to receive attention from sport researchers (e.g. Schulenkorf, 2017; Svensson & Mahoney, 2020), the concept has yet to be empirically studied in sport management practice. An opportunity arose, then, to explore the possibilities and potential value of adopting design thinking in the field. As a result, the core and overarching research aim of this doctoral study was to explore the use of design thinking in

sport management practice in a way that links the concept to extant and evolving design theory. This was achieved through the undertaking of four studies with discrete objectives:

> **Study / Aim One:** Explore to what extent (if any) do current organisational activities in sport organisations and/or studies align with themes of design thinking – as a means of checking the general fit of design thinking for sport organisations in general.
>
> **Study / Aim Two:** Explore to what extent (if any) does the current practice of a professional sport organisation (the Sydney Sixers) align with themes of design thinking – as a means of assessing the suitability of design thinking for possible adoption into the Sixers' practice.
>
> **Study / Aim Three:** Undertake an intervention with the Sixers to identify a design activity which would suit their way of working and maintain – if not enhance – their organisational alignment with design thinking themes.
>
> **Study / Aim Four:** Explore the adoption of the design activity introduced in Study Three – the Lightning Decision Jam (LDJ) – into the Sixers' practice. Specifically: did their adoption of the LDJ maintain links to design thinking theory, and did their adoption of the activity result in alignment with design theory?

Taken as a whole, these studies and research aims consider design thinking as a way by which sport organisations can identify and deliver on the unmet needs of the sport user. While this carries implications for sport management research and practice, this doctoral project also makes contributions to the fields of design and design thinking. The research design employed to achieve these aims is outlined in the next section.

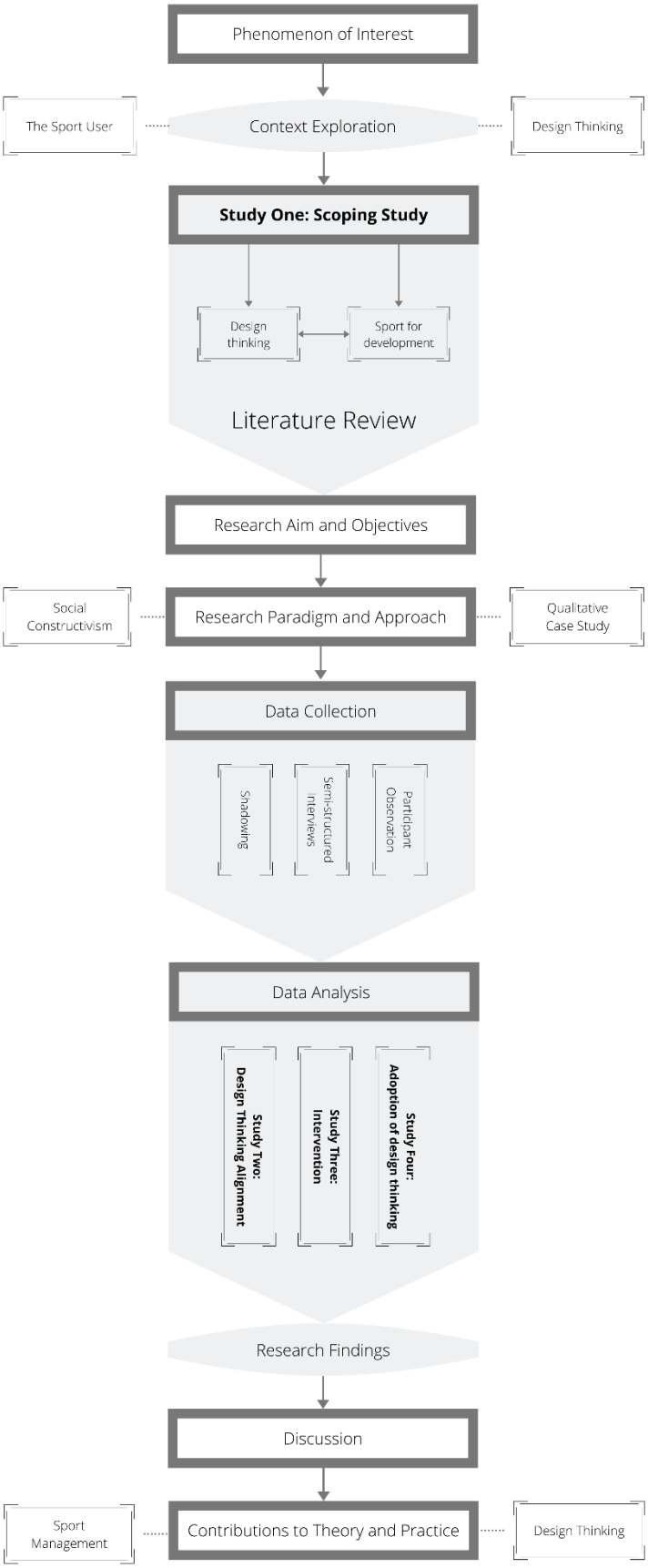
Research design

The overall research design of this doctoral project is illustrated in Figure 1 as a visual roadmap. Recall that a specific phenomenon of interest – in this case: the concept of design thinking, which had not previously been studied in a sport context – provided the impetus for the project. An exploration of both broad contexts – sport management (particularly the nature of the sport user) and design thinking – inspired and guided a literature review that employed a scoping study methodology. The scoping study (Study One) generated promise that design thinking might be usefully employed within sport and thus a more focused exploration was subsequently undertaken. This exploration led to the articulation of the guiding research aims discussed and outlined in the previous section.

The social constructivist paradigm of this doctoral project informed the selection of a qualitative case study approach to achieving the research aims (Studies Two, Three, and Four). More detail on the paradigm and approach is provided in the next section. Data collection techniques were selected in line with this paradigm and approach, as well as with the practical realities of the study. Data was then analysed in the manner presented in each of the final three component studies. The findings of these three studies – along with those of the initial scoping study – inform the discussion chapter of this thesis, which highlights the doctoral project's contributions to theory and practice in both the sport management and design thinking fields, and suggests promising future directions for research.

In the following sections, key aspects of the research design are discussed in more detail in order to provide a sound justification and methodological rationale for the chosen approach.

Figure 1: Research design of the doctoral project



Research paradigm

A research paradigm can be defined as beliefs that define and guide the action of the researcher. These abstract concepts of ethics, ontology, epistemology, and methodology represent the researcher's interpretation of reality (i.e. their worldview) and guide their attempts to conduct research and gain knowledge within that reality (Denzin & Lincoln, 2003). The phenomenon of interest in this doctoral project, design thinking, is by definition a social process (Brown, 2009; Carlgren et al., 2016) that relies on the presence of diverse individual perspectives (Carlgren et al., 2016). To search for objective truth here would yield little fruit, as design thinking practitioners are only able to engage with their operational environment as they interpret it. Consequently, this doctoral project (along with the component studies that comprise it) adopts a social constructivist paradigm, allowing for the pursuit of understanding through vicarious experience (Denzin & Lincoln, 2018).

The paradigm of constructivism is characterised by a relativist ontology and a transactional/subjectivist epistemology (Denzin & Lincoln, 2018), viewing reality as a socially-created construct that holds meaning only to the individual engaging with that construct (Flick, 2014). This paradigm assumes that there are multiple realities that can only be understood subjectively; that all participants in a study bring their own experience to social interactions within a studied setting, and that reality is jointly created as a by-product of this process of interaction (Creswell, 2018). The researcher, in turn, interprets this social reality in the broadest possible manner, allowing participants to reveal the meaning of a situation even as they interact with each other or the researcher (Crotty, 1998). Rather than seeking validity as in positivism, then, the social constructivist instead seeks credibility; the understanding and reconstruction of a social reality (Denzin & Lincoln, 2018). To these ends, research methods employed in a constructivist paradigm are concerned with credibly recreating reality for analysis, which is an approach that lends itself to qualitative inquiry.

Qualitative research

Qualitative inquiry is used extensively across the social sciences (Flick, 2014) and a growing canon of qualitative work has contributed to the growth of sport management as a distinct field of research (Hoeber & Shaw, 2017). By conceptual necessity (as discussed in the previous section), design thinking research is exclusively qualitative (Johansson-Sköldberg et al., 2013). Accordingly, and in step with the overarching constructivist paradigm, a qualitative approach was adopted for this doctoral study.

Qualitative research allows for the capture of representations – that is: data collected through multiple techniques – in natural settings; representations that are then interpreted against the social meaning people assign to them (Denzin & Lincoln, 2018). As such, qualitative research is more concerned with understanding human experience, where quantitative research tends to be interested in teasing out cause and effect relationships (Stake, 1995). In attempting to understand human experience, Stake (1995) notes that qualitative research questions seek both unexpected *and* expected relationships. Consequently, a qualitative approach is suited to pursuing the present research aim: to study a known theory (design thinking) in a new setting (sport management).

Two qualitative approaches were adopted in pursuit of the overall research aim and objectives of the doctoral project: a scoping study (Study One) and a case study (Studies Two, Three and Four). While the methods for each are discussed in greater detail within the relevant studies, the following two sections outline the broad goals of utilising each approach.

Scoping study

Having established design thinking as a phenomenon of interest, a scoping study (Study One) was undertaken to uncover to what extent (if any) current organisational activities in sport organisations and/or studies align with themes of design thinking. The scoping study

approach allows for the review and rapid mapping of the existing literature in a field regardless of differences in study design and without the need to account for research quality per se (Arksey & O'Malley, 2005; Daudt et al., 2013; Levac et al., 2010). The process of conducting a scoping review is iterative in nature, allowing researchers reflexivity in moving toward a better-focused research question as they become more familiar with the literature being reviewed. As a result, the scoping study ensured a comprehensive (but by design, not exhaustive) review, allowing for the identification of gaps in the existing research without compromising the overall quality of the scoping study itself (Arksey & O'Malley, 2005).

The scoping study was undertaken using the five-stage framework developed and outlined by Arksey and O'Malley (2005). Employing this framework resulted in the selection of a total of 80 sport for development articles for review. These 80 studies were charted against indicators of design thinking alignment that were adopted from Carlgren et al. (2016), allowing for a frequency analysis and thematic analysis to be undertaken as a means of exploring the nature of the alignment between the selected studies and themes of design thinking. A complete and detailed breakdown of the scoping study process is provided in Study One and the complete chart of all 80 articles is included in Appendix I.

The scoping study revealed that examples of the performative component of design thinking are present in the practice of at least some sport organisations, suggesting design thinking might be suitable for adoption into sport management practice.

Case study

Guided by the promising findings of the scoping study, a case study approach was adopted for the ensuing exploration of design thinking in sport management practice (Studies Two, Three and Four). Yin (2018) provides a nuanced definition of the case study method as one concerned with investigating "a contemporary phenomenon (the 'case') in depth and within

its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (pg. 15). The approach is theoretically based in social interaction and social construction of meaning (Stark & Torrance, 2004), which aligns with the social constructivist paradigm of this doctoral study. Indeed, case study research allows the researcher to engage with – and interpret – such social activity in situ in order to uncover the meaning that individual social actors bring to – and create within – those situations. Because case studies represent real-life situations, the approach allows for a nuanced view of reality to be developed (Flyvbjerg, 2006).

The case study approach further enables the researcher to confirm, disconfirm, and/or refine existing theory (Flyvbjerg, 2006). As such, case study research is uniquely suitable for achieving the aim of this study to explore the use of a derivative theory (design thinking) within a context in which it has not previously been studied (sport management). Specifically, Studies Two, Three, and Four are concerned with what Stake (1995) defines as an instrumental case, the study of which is undertaken in order to understand a phenomenon of interest other than the case itself. Indeed, in studying the case at hand – the Sydney Sixers (introduced in the next section) – this doctoral project sought evidence of the principles and mindsets, practices, and techniques associated with the performative component of design thinking. While case specific findings are not generalisable as such (Denzin & Lincoln, 2018), it is possible for readers of a case study to make connections between aspects of the case and their own experience – thus they allow for *intuitive generalisation* (Stark & Torrance, 2004). The use of the case study approach in qualitative sport management research is well-established (see, e.g., Andrews et al., 2005) and has also been favoured in design thinking research to date (Carlgren et al., 2016).

Case study selection and background

While a detailed description of the selection of the case for this study – the Sydney Sixers – is provided in the relevant sections of Studies Two, Three, and Four; it is pertinent to introduce the case here for context. Accordingly, this section offers background regarding the operational environment of the Sixers and thereafter outlines the process of selecting them for participation in the doctoral project.

Within the commercial Australian sport marketplace, the Big Bash League (BBL)[1] – the country's professional Women's and Men's Twenty20 (T20) cricket competition – presented an interesting and timely opportunity for studying the use of design activities in sport management innovation practice. T20 was first played at a high level in 2003 when the England and Wales Cricket Board introduced the format within county cricket with an aim of attracting a wider audience – specifically: women and children (English, 2011; Sturm, 2015). The success of the format in the years since has seen it become the most financially lucrative of the three international cricket formats (test, one day, and T20)[2], a fact which has led to the disembedding of T20 and those who play it from traditional cricket structures (Rumford, 2011). Rumford (2011) explains that commercial enterprises such as the clubs of the Indian Premier League (IPL), another popular T20 competition, are parasitic on these traditional structures; that they recruit players developed in those systems without contributing to player development themselves. Such disembedding has seen the rise of the *portfolio player* (Rumford, 2011) or *cricket mercenary* (Stoddart, 2011): a player who collects contracts with T20 clubs in competitions around the world, often at the expense of service to the player's

[1] As the name 'Big Bash League' and acronym 'BBL' refer to both the organisation and the Men's competition therein, confusion can arise with their usage. To avoid such confusion, this thesis uses 'BBL' to refer to the Big Bash League organisation, '[M]BBL' to refer to the Men's competition, and 'WBBL' to refer to the Women's competition.

[2] For more about the three formats of cricket, see ICC (2019).

national team (Rumford, 2011; Stoddart, 2011). English (2011) discusses how these fears saw Cricket Australia (CA) resist the T20 format at first, playing only laid-back exhibition matches (which even the players involved referred to as 'hit and giggle' cricket) and attempting to stop Australian players from playing in overseas T20 competitions such as the IPL. However, CA ultimately relented on both hesitations and went about forming what is now the BBL (English, 2011).

The franchise model of the BBL represented the first time since the founding of Australian cricket in the 1850s that high level cricket matches were played in the country not between states or colonies but between cosmopolitan clubs composed of players signed from around the country and world (English, 2011). As such, BBL clubs are (to some extent) disembedded from CA's development structures, despite being managed by CA. Still, early fears that star players would eschew their commitments to traditional cricket pathways and representative teams in favour of T20 club contracts have been largely unfounded or even subverted. For example, David Warner first starred as a T20 player but has more recently (2019/20) declined to sign with a BBL club in order to focus on international representative play. Meanwhile, Ellyse Perry signed with a new state representative side in 2020 but shortly thereafter re-signed with her WBBL club, which is managed by her former state side. Still, the clubs of the BBL must navigate not only blurring sector boundaries and evolving consumer needs but must also overcome the challenges associated with being an apparent manifestation of an ongoing tectonic shift in the global cricket landscape – a shift which has thus far unfolded in largely unpredictable ways, as the examples of Warner and Perry illustrate.

As the newest of the three main formats of cricket, T20 relies on modified rules that, according to Hyde (2009), generate a more exciting on-field product than other cricket formats – one day and test cricket – are thought to offer younger or more casual fans. To

capitalise on this heightened excitement, BBL matches are presented in a dynamic manner built around bright team colours (including magenta and electric green, among others), pyrotechnics ignited to celebrate big plays, the playing of popular music in venues during match down time, and broadcast innovations such as microphoning and interviewing players while they are playing on the field (Sturm, 2015). As the product differs so substantially from that of the other cricket formats (where the cricket itself tends to be the main draw and thus other aspects of entertainment are rare or absent), BBL clubs must constantly work not only to understand what ideas are or are not appealing to fans, but also to uncover deeper insights (including the unmet needs and desires of their users). However, the eight clubs of the BBL do not always have the luxury of analysing past performance to inform future practice, as the league is among the newest of the major sporting competitions in Australia (the first [M]BBL season took place in 2011/12; the first WBBL season in 2015/16). Consequently, the operational environment of the BBL and its member clubs is one of uncertainty where traditional approaches to innovation may or may not yield the best outcomes and thus new approaches – such as design thinking – are ostensibly needed.

Accordingly, a decision was made to approach and invite one of the Sydney-based BBL clubs – the Sydney Sixers – to participate in this doctoral project. The Sixers agreed to participate as they were interested in finding ways to identify and deliver on unmet consumer needs and desires. Indeed, in a preliminary meeting (in September 2017), the current general manager [then the marketing and communications manager] of the Sixers expressed a desire to find and implement new approaches to their innovation efforts so as to not fall into "a trap of doing things the way they've always been done." After further consultation (in May and August 2018) concerning the practical matter of how data would be collected, the [by then] general manager of the Sixers agreed for the organisation to participate.

At the time of this case study the Sixers organisation consisted of six permanent staff, and this front office team formed the unit of analysis for the case study. These six staff members were further supported by interns, volunteers, and employees from other related organisations. The organisation itself is embedded within the larger Cricket NSW (CNSW) organisation, the state body responsible for delivering and promoting cricket within the Australian state of New South Wales. CNSW is in turn embedded within CA, the sport's national body. In addition to these internal relationships, the Sixers are further supported by partnerships with external stakeholders including media organisations and broadcasting companies (who engage with the BBL at a national level), but also event presentation contractors, venue managers, and community ambassadors (who primarily interact directly with the Sixers at the club level). The six permanent staff represent the central planning unit for the Sixers and the structure of the organisation is accordingly flat, with all staff (membership, ticketing and hospitality [x2]; digital media; media partnerships; and event operations) reporting directly to the general manager. This central unit develops, executes, and reflects upon strategy in annual cycles in line with the WBBL and [M]BBL seasons (see Figure 2). The primary strategy planning event in this cycle is the Sixers' annual planning days, which take place off-site after the conclusion of the competition seasons. These planning days see the Sixers staff analyse the recently concluded seasons with an aim to make improvements and generate new ideas for the season to come. The months in between these planning days and the proceeding seasons are dedicated to preparation, which sees the Sixers developing implementation strategies for the ideas generated during planning days. The developed ideas are then put into practice and monitored during the seasons before being formally assessed during debriefing sessions after the season has concluded, at which point the cycle begins anew. Work in progress (WIP) meetings are the Sixers' forum for ongoing

planning and execution, and thus take place at regular intervals throughout the cycle – less frequently out of season, then more frequently in season.

Figure 2: Illustration of the Sydney Sixers annual planning cycle

In step with this cycle, data collection for the present study began in November 2018 as the Sixers were preparing for the start of the 2018/19 seasons, and continued through April 2019 as they began to look ahead. I was introduced to the team at the November 7, 2018 WIP meeting, during which I outlined the aim of the study and provided consent forms and general information to all participants. All data was collected at the CNSW offices (within which the Sixers were housed at the time), at the Sydney Cricket Ground (the Sixers' primary venue used for standalone Men's matches and – during the time of data collection – Women's/Men's doubleheaders), or at Hurstville Oval or Drummoyne Oval (suburban venues used for standalone Women's matches).

Data collection techniques

An important strength of the case study approach is that it allows for the collection and analysis of multiple sources and/or types of evidence (Yin, 2018). As such, multiple data collection techniques – semi-structured interviews, observation, and shadowing – were utilised in order to generate a fuller picture of the Sixers case study. While the manner in which this data was collected and analysed within each component study is discussed in more detail within the method section of each of those studies, the following sections provide an overview of the three techniques and a rationale for the manner in which they served the overarching qualitative case study approach.

Semi-structured Interviews

Data gathered in semi-structured interviews was utilised in all three component studies representing the overall Sixers case study. Such interviews are widely used in sport management case studies, as they enable researchers to explore depths that are inaccessible through other data collection methods (Andrews et al., 2005). As such, interviews have the potential to help researchers drill deeper and uncover what is 'real' (Barbour & Schostack, 2004). Further, interviews allow for the reconstruction of subjective viewpoints (Flick, 2014), thus giving 'shape' to a case study. Accordingly, both pre- and post- interviews were used in this study, with pre- interviews allowing for the exploration of the existing Sixers practice and post- interviews revealing the effect(s) that the use of design thinking had on that practice.

Employing a prepared interview guide containing a variety of open-ended questions, semi-structured interviews are a powerful means of making sense of existing concepts in practice (Ayres, 2008), making them especially useful in understanding the use of derivative theories at the core of this project. By basing interview questions in existing theory and overarching

assumptions of the project, the implicit knowledge of the interviewee was made explicit (Flick, 2014). As such, the interview guide for this project (Appendix II) was designed in this manner, drawing on guiding theoretical frameworks of designerly thinking (i.e. design theory; Johansson-Sköldberg et al., 2013) and design thinking (Carlgren et al., 2016) in order to link the Sixers practice to each. The design of the interview guide is discussed in more detail within the method sections of Studies Two, Three and Four.

Observation

Data from observation was also utilised in all three component studies representing the overall Sixers case study, as observation captures practice as it occurs in real time (Yin, 2018). Stake (1995) states that observation enables greater understanding of the case, as good records of observation serve to provide "a relatively incontestable description for further analysis" (pg. 62). To ensure such 'good records' were captured in this study, field notes from live observation were reinforced with audio and/or video recording. The gathering of observation data complemented the gathering of interview data, as observation allowed for the insights gathered from those interviews to be witnessed in situ. Indeed, while it can be difficult to select the 'truest' focus point for observation (Flick, 2014), interview data assisted in identifying the appropriate targets for such observation.

Accordingly, observation took place in four different settings: WIP meetings, an intervention workshop (Study Three), two planning sessions during the Sixers' annual planning days (Study Four), and match day events. WIP meetings were chosen for observation as they serve as the primary *ongoing* setting for innovation planning within the Sixers practice. As such, the context of these WIP meetings was a critical one to understand in the exploratory phase of this study (Studies Two and Three). As they are regularly scheduled and consistently structured, the WIP meetings were uniquely suitable for observation (Yin, 2018). Observation

was also utilised to capture the manner in which the Sixers engaged with a design thinking activity: once during a workshop (which constituted the intervention described in Study Three) and twice more during separate sessions of the Sixers' annual planning days (Study Four). Finally, observations captured at various match days (including, notably, the 2019 WBBL Big Final in which the Sixers competed) provided valuable context for practices observed in the other settings, as the outcomes of planned strategies could be observed in a live and natural setting. These approaches to observation in different settings are discussed within the method section of each corresponding study.

Shadowing

Finally, data gathered through shadowing of Sixers staff as they navigated their match day operations was utilised in Study Two. As qualitative research has become more common in sport management studies, researchers have been encouraged to adopt contemporary and innovative methods of approaching such projects (Hoeber & Shaw, 2017). Seeking to advance the existing repertoire of research techniques in sport management, Shaw and Hoeber (2016) propose looking to other fields for such contemporary methods, including to parent-disciplines such as management or related management areas such as organisational studies. Shadowing, which has chiefly been used and developed in the latter (Ferguson, 2016), is one such method of promise.

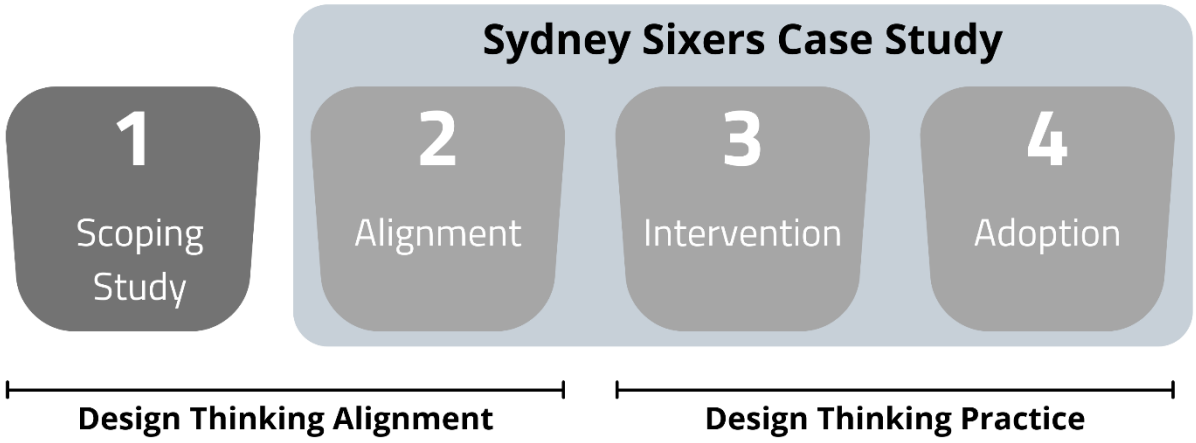
Although shadowing is perhaps best known as a tool for experiential learning, it also holds value to qualitative researchers (McDonald, 2005). Shadowing allows the researcher to make sense of the observed actor and their path in multiple dimensions (including time and place), as well as in micro events (such as 'water cooler chats' after an observed meeting) that don't tend to be captured through traditional data collection techniques such as interviews and/or observation (McDonald & Simpson, 2014). Importantly, shadowing can be combined with

additional data collection means such as photography, field notes, and audio/video recording. More detail about the use of shadowing in this doctoral project is included in the method section of Study Two.

Doctoral project outline

As previously noted, and presently illustrated in Figure 3, this doctoral project and thesis has been completed by compilation of studies currently published, in revision, or under review. In addition to the graphical breakdown in Figure 3, this section provides a brief overview of each study and the linkages between them. Consequently, this section illustrates the integration of the four studies into a collective body of research – the overall doctoral project – that addresses the central research aims.

Figure 3: Conceptual illustration of component studies and their linkages



Study One provides a foundation for the overarching research project by establishing the presence of design thinking alignment in sport organisations, specifically those in the sub-field of SFD. This scoping study allowed for the identification of design thinking indicators within 80 SFD academic journal articles published in prominent sport journals over a five-year period. These indicators manifested to varying degrees across the sample of reviewed articles but 14 reviewed articles presented alignment with all five themes of design thinking.

This suggests design thinking would be a good ‘fit’ for at least the researchers and/or participants in those 14 studies, as they are evidently already capable of the performative component of design thinking practice.

Study Two extends the exploration of Study One into primary research of the Sydney Sixers and, thus, from SFD into sport development. While the Sixers are ostensibly a commercial sport organisation, preliminary discussions with their general manager revealed that they seek hybrid for-profit/non-profit goals including, among others, working toward inclusion of those in the LGBT (lesbian, gay, bisexual, and transgender) community. Data was collected from semi-structured interviews, observation of WIP [strategy] meetings, and field notes from the shadowing of staff during match day operations. Thematic analysis utilising the same theoretical framework employed in Study One revealed that the Sixers practice aligns with all five themes of design thinking. Thus, where Study One establishes the presence of design thinking alignment in the field of SFD, Study Two establishes that design thinking alignment can likewise be found in commercial sport organisations that pursue not just financial returns, but also non-profit and community-enhancing goals similar to those of SFD organisations. Studies Three and Four then introduce the concept of design thinking into the Sixers’ – and thus, sport management – practice.

Study Three is concerned with an intervention. An exploration was undertaken to identify a design activity – ultimately: the Lightning Decision Jam – for implementation into the Sixers practice in a manner that (a) suited their existing way of working and (b) connected their practice to design thinking theory. Observation of and reflection upon the Sixers’ use of the Lightning Decision Jam (as coordinated by the author in a standalone workshop setting) illustrates the usefulness of introducing design activities into sport management practice as a means of building organisational design thinking and innovation capabilities.

Finally, Study Four extends this research by exploring the Sixers' subsequent use of the Lightning Decision Jam – which they had by then modified – in two workshops with no direction from the author. Semi-structured interviews with the members of the Sixers permanent staff who participated in all workshops reveal enhanced perceptions of their innovative capabilities. Further, observation of and reflection upon these workshops contributes to understanding how design thinking can be adopted into the practice of sport organisations and the outcomes that such adoption has on the nature of that practice.

In an effort to contribute to the more rapid spreading of innovation in sport management research (Funk, 2019), each component study was submitted to relevant journals as it was completed, rather than waiting for the completion of this thesis. At the time the final version of this thesis was submitted, two studies had been published, one was in revision, and one more was under review. The status of each component study is outlined in Table 1.

Table 1: Status of doctoral project research outputs (at time of thesis submission)

Study	Study Title	Submission Journal (ABDC Rating)	Status
1	Design Thinking and Sport for Development: Enhancing Organisational Innovation	Managing Sport & Leisure (B)	Published
2	"No idea is a bad idea": Exploring the nature of the design thinking alignment of an Australian sport organisation	Journal of Sport Management (A*)	Published
3	"This is how I want us to think": Exploring the use of a design thinking activity in sport management practice	Sport Management Review (A)	In Revision
4	"It's given us a much wider perspective": Exploring the adoption of a design thinking activity into sport management practice	Sport Management Review (A)	Under Review

While Study One generated data through a manual review of extant literature, that exercise proved the usefulness of Carlgren, et al.'s (2016) thematic design thinking framework as a

guiding theoretical framework for this doctoral project. Thus, the framework was employed in a similar manner in Study Two, assisted in identifying an intervention activity in Study Three, and was then also employed to explore the ongoing use of the intervention activity in Study Four. In this way the studies build on each other in addressing the core research aims and objectives of the doctoral project.

Limitations

As with all research studies, this doctoral project is not without limitations. Detailed discussion of the limitations specific to each component study is carried out within each relevant study. Accordingly, this section discusses the broad limitations of the overall qualitative case study approach discussed in this introductory chapter, of which there are two.

First, it has been argued that the findings of a single case study (or small number of case studies) are not essentially generalisable to a larger population. However, it is possible for readers of a case study to make connections between aspects of the case and their own experience, thus establishing a kind of *intuitive generalisation* (Stark & Torrance, 2004). This suggests that while the findings from this single case study of the Sixers may not be generalisable to sport management at large (or even generalisable to another sport organisation), the case study will still provide the possibility for readers or researchers to make sense of the findings through the lens of their own experience and then adapt those insights for their own use. Indeed, as discussed in Studies Two, Three and Four, such reading might usefully inform further research. Further, deeper engagement with a case study allows for future researchers to interpret it in useful ways. Accordingly, three methods for collecting data (outlined earlier in this chapter) allowed for a fuller, more credible, picture of this case study to be obtained. With the qualitative groundwork thus firmly laid, future studies may

adopt the same approach of this doctoral study in 'fitting' design thinking for adoption into the practice of a sport organisation.

Another (de-)limitation of the case study approach is the need to establish boundaries around the case. The presence of multiple stakeholders – some of whom may exist outside of the study in situ – makes the establishment of such boundaries difficult to achieve (Stark & Torrance, 2004). While a perfect boundary is virtually impossible to establish (given the complexity of social activity), the design thinking process itself served as a conceptual boundary for this project. That is, this doctoral project was only interested in organisational practice in service of a design thinking purpose. While experiences and interactions outside of this boundary may come to inform the design thinking practice, the present project was only interested in how this contributes to a diversity of perspectives within the design space. As such, the boundaries should in fact be seen as a delimitation of this work, not a limitation per se. Moreover, the notion of this conceptual boundary ultimately emerged as a promising avenue for future research, which is outlined in more detail in the discussion chapter of this thesis.

Potential for bias

Because the case study approach requires existing knowledge of the subject and the phenomena being tested, there is potential for researchers to be biased toward confirming a preconceived notion (Yin 2014). Indeed, qualitative research at a broad level is influenced by the researcher's lived experience (Denzin & Lincoln 2018). Accordingly, it is worth noting a potential bias for me as the researcher in this doctoral project.

As a practitioner and teacher of design thinking, I clearly believe that design thinking holds value and is worth undertaking. However, my exploration within this thesis is less concerned with the question of *if* design thinking works within sport management practice than it is

concerned with understanding *how* design thinking might work. Even the discovery that design thinking does not work at all in a sport management environment would have been a valuable finding, and this is the attitude with which I proceeded.

In conclusion

This introductory chapter has provided a general overview and outline of this doctoral study. The background and context of the study were explored ahead of a clear articulation of the research aim and objectives, as well as the justification for undertaking this research. The research design was then outlined and explained, as were the four component studies of which this thesis is comprised and the linkages between the same. The following four chapters present Studies One and Two in the form they were published, Study Three as most recently revised in peer review, and Study Four as submitted. Subsequently, the final chapter of the thesis offers a discussion of the linkages between the four component studies and their respective findings. Finally, the contribution of the thesis to theory and practice is identified and explained in a concluding discussion chapter, as are opportunities for future research.

Study One:

Design Thinking and Sport for Development: Enhancing Organisational Innovation

Abstract

Rationale/purpose: To determine if the field of sport for development (SFD) presents opportunities for the employment of design thinking approaches toward enhancing organisational innovation.

Design/methodology/approach: We undertook a scoping study to determine if and how SFD research and practice aligns with five established themes of design thinking practice.

Findings: Design thinking indicators are present across the breadth of SFD research. A total of 14 SFD articles display total thematic alignment with design thinking practice, particularly in regard to five key indicators of such alignment: (a) deep user understanding, (b) diversity of perspectives, (c) testing for user feedback, (d) futuristic thinking, and (e) bias toward action.

Practical implications: Five key indicators represent logical points of entry for the employment of design thinking in SFD research and practice.

Research contribution: Design thinking has become popular in the broad field of management, but this is the first study of the concept in the sport management domain.

Introduction

The field of sport for development (SFD) has experienced significant growth and diversification over the past 15 years (Schulenkorf, 2017; Schulenkorf, Sherry, & Rowe, 2016). Research over this time period has been approached from various angles and disciplines. From the sport management perspective, studies have traditionally focused on the broad areas of programming and design, sustainable management and capacity building, the creation and leveraging of impacts and outcomes, and the advancement of concepts and theory (Schulenkorf, 2017). Meanwhile, management scholars have highlighted the need for further investigations to address current issues and future challenges in the field. In particular, management concepts such as organisational innovation (Hoeber, Doherty, Hoeber, & Wolfe, 2015; Svensson & Hambrick, 2018), leadership, entrepreneurship, and design thinking have been identified as fruitful areas for SFD research (Schulenkorf, 2017).

The last of these suggested research topics – *design thinking* – is a human-centred approach to generating innovation in non-design fields. It provides a way for non-design practitioners, such as many of those who design and deliver SFD programs, to incorporate the *ostensive* (thinking) and *performative* (doing) dimensions of expert design practice into their own non-design practice in pursuit of organisational innovation (Carlgren, Rauth, & Elmquist, 2016). As such, design thinking may well provide SFD practitioners with improved opportunities for program design and delivery – particularly in social contexts in which the resources or capacity for extra-operational activities such as pursuing innovation are limited (e.g. Svensson & Hambrick, 2016).

The need for improved designs in sport programs (as a function of management) has become apparent in the literature. For instance, program design is seen as a significant factor in the success of youth sport development programs (Jones, Edwards, Bocarro, Bunds, & Smith,

2017). In the SFD context specifically, program and intervention design have gained greater importance as research in the field has begun to shift toward a focus on the managerial aspects of programs (Bruening et al., 2015; Schulenkorf, 2017; Sugden, 2006). Against this background – and in line with the focus of this special issue – we answer the call for research addressing human-centred design thinking for social innovation. In particular, we undertook a scoping study of recent SFD research as a means of determining if, and in what ways, the field presents opportunities for the meaningful employment of design thinking approaches, specifically toward enhancing organisational innovation. In doing so, we not only determined the extent to which design thinking mentalities and/or approaches already exist within SFD research and practice, but also the various ways in which they manifest. Building on our findings, we offer both theoretical and practical implications for SFD management. Theoretically, our research contributes to the recommended shift toward the study of design thinking in the SFD context and is, to our knowledge, the first study of design thinking not only in the field of SFD but also in the broader field of sport management. Practically, our study provides specific recommendations for SFD organisations, particularly those with limited organisational capacity, regarding logical points of entry for employing design thinking in the pursuit of organisational innovation.

Literature Review

Drawing from literature on social innovation, Svensson and Hambrick (2018) offered a broad definition of *innovation* specifically framed for the SFD context: "The implementation of new or improved ways of promoting social change … includ[ing] program, process, and socially transformative advances focused on improving the ability of an organisation to promote social change" (p. 2). This definition provides a broad space within which to explore and consider the topic of organisational innovation in SFD. In examining the past and present

of SFD research, Schulenkorf (2017) recently provided a path for pursuing such innovation: through research into leadership, entrepreneurship, and design thinking.

First, leadership has enjoyed increasing attention in SFD research (Schulenkorf, 2017; Welty Peachey & Burton, 2017; Welty Peachey, Burton, Wells, & Chung, 2018). Specifically, concepts such as *servant leadership* have helped to expand the scope of leadership – beyond traditional leadership – to a broader consideration of the psychological needs and well-being of followers. Leaders in SFD have been shown to display the characteristics of servant leadership in practice, resulting in followers who are empowered to deliver on the goals of the organisation (Wells & Welty Peachey, 2016; Welty Peachey, Burton, et al., 2018). Second, more research is focusing on exploring entrepreneurship, especially as a concept interrelated to leadership (Svensson & Seifried, 2017). In particular, research has found social entrepreneurship (i.e. attempting to positively impact society without an expectation of profit) important in SFD practice. The development of such entrepreneurship has had positive impacts on not only organisations, but also individual entrepreneurs within an organisation (Cohen & Welty Peachey, 2015). Further, social entrepreneurship is an essential trait when facing increasing (and often conflicting) organisational demands, as it aids in keeping the organisation focused on its core mission and vision (Svensson & Seifried, 2017).

Finally, design thinking is the only topic of the three that has yet to be explored in SFD, despite the fact that design thinking has already been employed toward social innovation within the broader field of management (Brown & Wyatt, 2010). The lack of design thinking studies is even more surprising given that design has been repeatedly identified as critical to the success of sport programs (see Jones et al., 2017; Schulenkorf, 2017) and has also been shown to contribute to achieving specific sport and social development goals such as social capital development (Bruening et al., 2015; Darcy, Maxwell, Edwards, Onyx, & Sherker,

2014) and leadership ability (Gould & Voelker, 2010). Given the apparent absence of design thinking in sport management research, it seems timely to provide a more detailed overview of the concept, including its development in the broader field of management, and its applicability to the SFD sector.

Roger Martin introduced design thinking to the management lexicon in 2006, describing the concept as a means of "approaching managerial problems as designers approach design problems" (Dunne & Martin, 2006, p. 512). Martin saw this change in approach as a way to add value to MBA programs by moving managerial problem solving away from the traditional approaches of deduction and induction – both of which are based in past outcomes – toward abduction, which is a means of generating entirely new ideas through leaps of logic. Martin's (2010) approach to design thinking was to move through the *knowledge funnel*, which he illustrates using the example of McDonald's and the creation of their Speedee service system. First, a *mystery* is identified which, in this case, was how the increased mobility of post-war Americans would change their dining habits (if at all). Then a *heuristic* – or "rule of thumb" – is formulated. The heuristic for McDonald's was that newly mobile Americans would want food that was prepared quickly but was also tasty. Finally, an *algorithm* is developed that codifies practice, addressing the mystery and heuristic. The Speedee service system standardised food preparation to ensure the speed and tastiness that newly mobile Americans were thought to desire, ultimately becoming the algorithm for McDonald's.

While Martin introduced design thinking as a means of creating value, it was Tim Brown (2008), CEO of the design consultancy IDEO, who centred that value creation around human end users and brought the concept into the popular management discourse. In Brown's (2008, 2009) view, design thinking is a methodology that allows organisations to focus all of their

innovation activities on achieving human-centred outcomes, a feat achieved through a three-step cycle of inspiration, ideation, and implementation. Problems and opportunities are identified in the inspiration phase, before ideas about how to approach them are generated in the ideation stage. The most ideal solution – that is, the solution that best serves the needs, wants, and desires of the end user – is finally realised in the implementation stage when it is turned over to those end users.

Martin and Brown both understood design thinking to be psychological in nature. As the nature of his knowledge funnel suggests, Martin (2009) saw design thinking as a dynamic interplay between analytical and intuitive thinking. This view relies upon the practitioner's ability to engage in leaps of abductive logic – jumping ahead in reasoning and then testing a hypothesis rather than merely analysing history to inform their next steps (Martin, 2009). This is similar to *integrative thinking*, which Brown (2009) defined as a personality trait of design thinking practitioners. This calls for a design thinker to be analytical but also capable of seeing all aspects of a problem in order to generate novel solutions. Both approaches enable a design thinker to engage in abduction, the form of reasoning that Martin felt was missing from management education and practice. Because abduction enables non-designers to transcend traditional approaches to solving problems and pursuing innovation, it continues to be of critical importance to design thinking practice (Carlgren et al., 2016; Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013).

The importance of abduction is foregrounded by the design perspective, which considers abduction in two forms. Dorst (2011, 2015) refers to these as *abduction-1* (or *normal abduction*) and *abduction-2* (or *design abduction*). Normal abduction resembles the traditional problem solving that most organisations employ (i.e. that which Martin had hoped to move managers away from). In using normal abduction, designers know *how* they would

like to go about creating value but not the *thing* that will go through the *how* to create that value. In other words, designers revolve between inductive and deductive approaches to solve this equation. Most organisations in management stop at this point and settle for a solution that is "good enough" (i.e. the cheapest, easiest, etc.). Design abduction, meanwhile, begins with only the *value* to be created and not the *thing* or the *how*.

Dorst (2015) uses the example of the desire for a burst of energy in the morning to illustrate the difference between the two forms of abduction. The desired value or outcome – a burst of energy – is known in both cases. If coffee (the thing) is a known (and desired) means of achieving a burst of energy, then only normal abduction is needed to determine that a satisfactory means of generating coffee is needed (the how). In this case, the team may design and test a brewing machine. However, if it is not known if coffee would achieve such an energy burst (let alone how such coffee would be made), then designer abduction is required to fill in both blanks: the thing and the how. In this scenario, coffee – and various ways of making coffee – may be tested before a solution is found. Alternatively, coffee and various ways of brewing it may be abandoned altogether – and a different thing tested – if those tests don't succeed in creating the desired burst of energy.

Dorst (2015) posits that it is design abduction that can best help organisations in pursuing innovation and that the use of this reasoning can be meaningfully accomplished through the creation of logical frames that link the how to the value. These frames are usually defined by the context in which the problem is being solved, making this reasoning a matter of perspective.

Against this background, Carlgren et al. (2016) identified *problem framing* as one of five core themes characterising design thinking practice, along with *user focus*, *experimentation*, *visualisation*, and *diversity*. User focus is concerned with developing empathy with end users

through activities such as ethnographic research, carrying out informal conversations with those users, or developing empathy maps. Problem framing allows practitioners to interrogate and reconceptualise the problem at hand through the use of techniques such as “how-might-we-questions”. Visualisation sees design thinkers structuring gathered data in a visual way (through sketching, storyboarding, wireframing, etc.) and/or developing rough representations of ideas using whatever materials they have on hand. Experimentation allows design thinkers (and users) to engage with hard (physical objects) or soft (role playing, etc.) prototypes in order to identify deeper insights. Finally, diversity allows integrative thinking to occur by ensuring that a diversity of perspectives (determined from the organisation’s hierarchy or even through personality tests) contributes to a democratic spirit.

Carlgren et al. (2016) concluded that taken together, these five themes of design thinking provide a robust framework for considering – and identifying – the concept of design thinking in practice. In particular, where all five themes are represented by existing organisational practice, it is thought that the intentional alignment of these activities toward design thinking outcomes – toward achieving design abduction outcomes rather than normal abduction outcomes – would be the only thing standing between such an organisation and the human-centred innovations that design thinking purports to offer. This is significant for SFD research and practice, as it suggests that SFD organisations may already be engaging in design thinking activities and can thus enjoy enhanced organisational innovation with relatively minor tweaks to their pursuit of such innovation. Considering this, we have adopted this thematic design thinking framework as the lens through which we have aimed to understand if, and to what extent, extant SFD research and practice displays design thinking potential as a means of organisational innovation.

Methodology

In line with the purpose of this research, we undertook a scoping study of SFD research as a means of (a) determining if and in what ways the SFD field currently features design thinking mentalities; and (b) how the field presents opportunities for the meaningful employment of design thinking approaches, specifically toward enhancing organisational innovation. We opted for a scoping study approach as it allows for the review and rapid mapping of the existing literature in a field regardless of differences in study design and without the need to account for research quality per se (Arksey & O'Malley, 2005; Daudt, van Mossel, & Scott, 2013; Levac, Colquhoun, & O'Brien, 2010). Moreover, the process of conducting a scoping review is iterative in nature, allowing researchers reflexivity in moving toward a better-focused research question as they become more familiar with the literature being reviewed. Thus, the approach taken for this study ensured a comprehensive (but by design, not exhaustive) review and thus allowed for the identification of gaps in the existing research without compromising the overall quality of the scoping study itself (Arksey & O'Malley, 2005).

For our scoping study, we employed the five-stage framework developed and outlined by Arksey and O'Malley (2005): (a) identify the research question; (b) identify relevant studies; (c) select studies; (d) chart the data; and (e) collate, summarise, and report the results. The Arksey and O'Malley framework has proven popular and durable, having already been successfully utilised in prior scoping studies in sport management and governance (e.g. Dowling, Leopkey, & Smith, 2018) as well as topic-specific SFD work (e.g. Gardam, Giles, & Hayhurst, 2017).

Identification of research question

Broad search parameters are recommended in the first stage of a scoping study in order to ensure no relevant studies are overlooked (Arksey & O'Malley, 2005). However, the pursuit of a broad research question has the potential of resulting in an unwieldy number of studies to analyse (Daudt et al., 2013). This potential problem can be overcome in two ways: by clearly defining terms in the research question (Levac et al., 2010) and through revision and refining of the research question as the researchers become familiar with the literature being reviewed (Arksey & O'Malley, 2005).

Considering this advice, we began our study with a two-part research question: (a) to what extent (if any) do the current organisational activities of SFD studies and/or programs align with Carlgren et al.'s (2016) five themes of design thinking, and (b) does the nature of this alignment suggest opportunities for the meaningful employment of design thinking in SFD?

In addition to providing a comprehensive framework through which to identify and analyse design thinking activity in practice, the use of the five themes of design thinking – user focus, problem framing, visualisation, experimentation, and diversity (Carlgren et al., 2016) – provided the clear definition of terms suggested by Levac et al. (2010). The broader second component of the question, meanwhile, guided our scoping study without restricting it. This was in line with Arksey and O'Malley's (2005) suggestion to allow for revision and refinement of the research question. Indeed, this structured but open-ended approach allowed us to subsequently employ thematic analysis as a relevant and useful tool for making sense of our findings, even as we undertook our initial charting of the identified studies.

Identification of relevant studies

Stage 2 involves identifying relevant studies for consideration in addressing the evolving research question. While it is essential to be as comprehensive as possible in this effort

(Arksey & O'Malley, 2005), researchers must also strike a balance between comprehensiveness and the limited resources available to them, such as time and financial support (Daudt et al., 2013; Levac et al., 2010). In our case, this balance was struck by deciding to focus specifically on the abstracts of articles, rather than full papers. Considering scoping studies do not account for research quality per se, and given that we focused on indicators of design thinking alignment, we selected this approach as an efficient and effective way of ensuring an inclusive and meaningful review.

The identification of relevant studies begins with the identification of relevant journals. To this end, we were guided by our socio-managerial focus and a specific interest in advancing studies through possibilities represented by design thinking. As such, we excluded sociology, physical education, and sport science outlets. Instead, we included only leading sport management and SFD journals that were indexed and highly ranked or rated: *Journal of Sport Management (JSM)*, *Sport Management Review (SMR)*, *European Sport Management Quarterly (ESMQ)*, *Managing Sport and Leisure (MSL)*, and the SFD-specific *Journal of Sport for Development (JSFD)*.

Next, we followed Arksey and O'Malley's (2005) recommendation of a manual search of the literature to ensure all relevant studies were considered. Because of the journal's focus on SFD research, we began with all original research articles published in *JSFD* (n = 48) from its establishment in 2013 through 28 July 2018 (Volume 6, Issue 11). To ensure consistency and currency across the board, this manual search was subsequently extended to all issues of the remaining journals for the same timeframe.

Study selection

To select relevant studies to include in the review, researchers must develop specific inclusion and exclusion criteria (Arksey & O'Malley, 2005). Hence, our search included only

those studies from the chosen journals which contained the phrase "sport[-]for[-]development" in the article title, abstract, or keywords. Excluded, then, were studies published in our target journals that did not specifically identify (in title, abstract, or keywords) as SFD but that may be classifiable as SFD upon inspection of the full article. For example, Misener, Taks, Chalip, and Green's (2015) study of how sport events may or may not lead to increased sport participation may have SFD implications. However, it was not selected given the absence of SFD terminology in the title, abstract, or keywords. Similarly, while our focus on the key phrase "sport[-]for[-]development" allowed us to capture and include articles relating to extensions of the phrase such as "sport[-]for[-]development and peace", it excluded articles using variations such as "sport for peace". We acknowledge that this chosen approach leads to an incomplete representation of all available SFD-related literature; however, rather than limiting our study, we argue that focusing our review on those studies which explicitly identify as SFD contributes toward a transparent, clear, and cohesive base of evidence in the field. Indeed, the focus on title, keywords, and abstract to identify studies for review is not unprecedented in sport management (e.g. Hermens, Super, Verkooijen, & Koelen, 2017; Schulenkorf et al., 2016). Finally, in an attempt to ensure consistency, we did not consider any studies that were in press or advance online publications. We decided to exclude these articles for consistency reasons, as in press studies were not available for all of the journals reviewed.

Overall, our search resulted in 32 research articles from *JSM*, *SMR*, *ESMQ*, and *MSL* that identified as SFD. Together with the 48 articles from *JSFD*, the total number of articles selected for review was 80 (see Table 2).

Table 2: Number of Selected Studies From Each Sport Management Journal

Journal	*N*
Journal of Sport for Development	48
Journal of Sport Management	14
Sport Management Review	17
European Sport Management Quarterly	1
Managing Sport and Leisure	0
Total	80

Our scoping study confirms previous SFD research which has suggested that *SMR* has been the leading sport management outlet for SFD research over the past 5 years (see Schulenkorf, 2017). Somewhat surprisingly, our search also revealed only one SFD-related article published in *ESMQ*, and no articles on SFD published in *MSL* during this time period. The present special issue seems timely, then, given the rising significance of SFD in the wider sport management literature and *MSL*'s aim of seeking "submissions from those investigating new and innovative areas of research and practice in sport and leisure management" (Adams, n.d., para. 2).

Charting the data

Stage 4 involved sorting – or "charting" – key data from these 80 selected articles. We used Microsoft Excel to conduct a clear and precise charting of articles according to the journal of publication, EndNote shortcode, abstract, category (research or research/practice), and qualitative indicators (if any) of each of the five themes of design thinking adopted from Carlgren et al.'s (2016) framework. These indicators are key phrases extracted from Carlgren et al.'s discussion of each theme and are listed in Table 3.

Table 3: Indicators of Design Thinking Alignment (by Design Thinking Theme)

Theme	Indicators
User focus	User orientation
	Customer focus
	Human-centredness
	Active user involvement
	Deep user understanding
	Empathetic
	Curious
	Non-judgmental
	Ethnographic approach
Problem framing	Unconstrained view of the problem
	Question the problem
	Problem exploration
	Problem Focus
	Futuristic thinking
	Identifying pain points
	Comfortable with complexity and ambiguity
	Open to unexpected
	Widen the problem
	Identify larger problem space
	Creating many alternatives

Visualisation	Prototyping
	Making tangible
	Thinking through doing
	Bias towards action
	Making sense of data
Experimentation	Iteration and testing
	Action orientation
	Curious and creative
	Playful and humoristic
	Optimistic and energetic
	Learning-oriented
	Eager to share
	Working on multiple solutions
	Test to obtain user feedback
Diversity	Collaboration
	Systemic perspective
	Integrate diverse outside perspectives
	Media Background research
	Combinations of different skills and personalities
	Considering ideas from other fields
	Integrative thinking
	Open to differences in personality
	Democratic spirit
	Diversity of perspectives

For the most accurate charting process, the lead author read each abstract twice to ensure comprehension and precision. Specifically, the first reading enabled a high-level understanding of what the article was about while the second reading was concerned with identifying the presence of any design thinking indicators from Table 2. As a next step, the co-authors engaged in cross-author checking (Patton, 2015) to ensure accurate interpretations of abstract phrases as indicators of design thinking themes (see Daudt et al., 2013, for a similar approach). In instances in which the authors disagreed with the charting of a particular indicator, all authors engaged in critical discussions until a consensus was reached. The final chart of all reviewed articles is included in the Appendix.

Collating, summarising, and reporting results

Lastly, in Stage 5, an analytical framework or thematic analysis was employed in order to construct a narrative around the literature reviewed (Arksey & O'Malley, 2005). In order to ascertain both the scope (Research Question A) and the nature (Research Question B) of design thinking indicators in SFD research and practice, we conducted both a frequency and thematic analysis. The findings are presented and discussed in the following section, highlighting the practical possibilities for design thinking in SFD that our scoping study ultimately revealed.

Findings and discussion

This scoping study of SFD research sought to (a) determine to what extent (if any) the SFD field currently features design thinking mentalities; and (b) how the field presents opportunities for the meaningful employment of design thinking approaches, specifically toward enhancing organisational innovation. The thematic design thinking framework developed by Carlgren et al. (2016) was used as a means of achieving both of these aims. A frequency analysis was first undertaken to understand the extent to which design thinking

themes were present in recent SFD research and practice, while a subsequent thematic analysis revealed the nature of the ways in which these mentalities manifested. Both analyses revealed how such alignment might be leveraged by using design thinking in research and practice as a means of enhancing organisational innovation.

Frequency analysis

We conducted a frequency analysis as a means of establishing the extent to which recent SFD research resembles design thinking practice in management. Carlgren et al. (2016) established that organisations engaging in design thinking conducted at least one activity that related back each of the five themes of design thinking. To be totally aligned with design thinking practice, then, SFD research and practice should thus include one indicator from each of the five themes of design thinking. Considering this, the concentration of any such indicators becomes a similarly important consideration. The frequency with which each of the five themes of design thinking was represented across the dataset is presented in Table 4.

Table 4: Number of Articles Presenting Indicators Under Each Design Thinking Theme

Theme	Articles presenting indicators ($N = 80$)
Visualisation	80
Problem framing	74
Diversity	63
User focus	60
Experimentation	20

All 80 reviewed articles presented at least one design thinking indicator (see Table 3), in at least one theme. This indicates that design thinking traits were present (to at least a nominal extent) across the breadth of recent SFD research. In fact, the theme of visualisation alone

featured at least one indicator from each of the 80 reviewed articles. Experimentation, meanwhile, was present in only 20 of the articles. While this wide spread of themes across the studied articles was an important finding in itself, the range of indicator concentration (i.e. the number of articles that presented indicators in one, two, three, four, or all five themes) contained further promise still. Fourteen articles (charted in Table 5) presented at least one indicator from all five themes of design thinking practice and thus represented total alignment with the thematic design thinking framework (as such, we henceforth refer to these articles as *totally aligned*).

Recalling that Arksey and O'Malley (2005) recommend revision of the research question through iterations of a scoping review, we undertook a further frequency analysis to determine if the frequency of specific indicators among totally aligned articles varied significantly from the larger (total) population of articles. This subsequent analysis was important to determine if there was something intrinsically different about these articles (see Table 5). That is, in addition to their complete set of indicators, were there any trends among the specific indicators present in these articles?

Table 5: Completed Chart of Articles Presenting Total Design Thinking Alignment

Journal	Citation	Indicators present				
		User focus	Problem framing	Visualisation	Experimentation	Diversity
JSFD	(Walters, Spencer, Farnham, Williams, & Lucas, 2018)	Human-centredness User orientation	Problem exploration Futuristic thinking	Making sense of data	Test to obtain user feedback Optimistic & energetic	Diversity of perspectives
JSFD	(Meir, 2017)	User orientation	Unconstrained view of the problem Problem exploration Identifying pain points Futuristic thinking	Bias toward action Making sense of data	Optimistic & energetic Learning-oriented	Diversity of perspectives
JSFD	(Wells & Welty Peachey, 2016)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback Optimistic & energetic	Diversity of perspectives Open to differences in personality
JSFD	(Mandigo, Corlett, & Ticas, 2016)	User orientation Deep user understanding	Widen the problem Identify larger problem space	Making sense of data Bias towards action	Test to obtain user feedback	Diversity of perspectives Considering ideas from other fields

JSFD	(Bean & Forneris, 2016)	User orientation Deep user understanding	Problem exploration Futuristic thinking	Making sense of data	Test to obtain user feedback Action orientation	Diversity of perspectives
JSFD	(Cooper, Blom, Gerstein, Hankemeier, & Indovina, 2016)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback Learning-oriented	Collaboration
JSFD	(Beacom & Golder, 2015)	User orientation Deep user understanding	Problem exploration Futuristic thinking	Bias toward action Making sense of data	Action orientation Learning-oriented	Systemic perspective Considering ideas from other fields
JSFD	(Gannett, Kaufman, Clark, & McGarvey, 2014)	User orientation	Problem exploration Open to unexpected	Making sense of data	Test to obtain user feedback	Systemic perspective Open to differences in personality
JSFD	(Whitley et al., 2013)	User orientation Deep user understanding	Problem exploration Identifying pain points	Making tangible Making sense of data	Test to obtain user feedback	Systemic perspective Diversity of perspectives
JSFD	(Burnett, 2013)	User orientation	Problem exploration	Making sense of data	Test to obtain user feedback	Diversity of perspectives Collaboration

JSFD	(Schulenkorf, 2013)	User orientation	Identify larger problem space Widen the problem	Making sense of data Making tangible	Test to obtain user feedback	Diversity of perspectives
JSM	(Welty Peachey, Cunningham, Lyras, Cohen, & Bruening, 2015)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback	Diversity of perspectives Open to differences in personality
JSM	(Welty Peachey, Bruening, Lyras, Cohen, & Cunningham, 2015)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data	Learning-oriented	Diversity of perspectives
SMR	(Olushola, Jones, Dixon, & Green, 2013)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data Making tangible	Test to obtain user feedback	Diversity of perspectives

Indeed, such trends were immediately apparent. Five indicators were found to be more heavily concentrated among totally aligned articles than they were across the total population of articles: (a) deep user understanding, (b) diversity of perspectives, (c) test to obtain user feedback, (d) futuristic thinking, and (e) bias toward action. These concentrations are outlined in Table 6.

Table 6: Concentration of Articles Presenting Key Indicators

Theme	Indicator	Totally aligned articles (n = 14)	All other articles reviewed (n = 66)
User focus	Deep user understanding	8 (57%)	16 (24%)
Diversity	Diversity of perspectives	11 (79%)	24 (36%)
Experimentation	Test to obtain user feedback	11 (79%)	4 (6%)
Problem framing	Futuristic thinking	4 (29%)	4 (6%)
Visualisation	Bias toward action	3 (21%)	1 (1.5%)

These trends of indicator concentrations led us to believe that there may be thematic links between and among the totally aligned articles – that the articles may, as a group, display unique traits or perspectives beyond the fact that they all present indicators in each of the five themes (which could otherwise be mere coincidence). In light of this, we undertook a thematic analysis in an attempt to go beyond the descriptive, to make deeper sense of the frequency observations and to generally build on the overall picture that had emerged.

Thematic analysis

Our first frequency analysis revealed that the totally aligned articles displayed thematic alignment with design thinking management practice but such alignment did not, of course,

indicate that design thinking practice was purposefully employed by the respective SFD organisations or program. In other words, in order to enjoy the benefits of enhanced organisational innovation, any SFD organisation would still have to intentionally engage with design thinking to enable and leverage desired outcomes.

The second frequency analysis assisted to this end by highlighting five design thinking indicators that were more heavily concentrated in totally aligned articles than in the larger population of reviewed articles (see Table 6). The higher concentrations suggested that these indicators were useful lenses through which to critically identify and analyse thematic similarities and differences among the totally aligned articles. We therefore undertook a thematic analysis as a means of making these comparisons. Such an analysis was critical in order to establish not only that there was alignment with design thinking practice, but also to determine the ways in which alignment existed and, consequently, how such alignment was leveraged in research and practice.

Deep user understanding (theme: user focus)

In design thinking practice, deep user understanding – which indicates alignment with the broader theme of user focus – is often the result of "extensive qualitative research" (Carlgren et al., 2016, p. 46). Our findings aligned with this claim. Deep user understanding manifested in a number of ways as there were a variety of different user groups represented across these studies, including coaches, coordinators, participants, or general "stakeholders" (some combination of coaches, participants, administrators, etc.). While most of the reviewed articles clearly articulated the user group being targeted (that is: the users which the program was designed to primarily serve), it was also clear that other groups of stakeholders – such as those administering SFD programs – might also stand to benefit incidentally from their involvement with the program (without being users, as such).

Many of the approaches to achieving such deep user understanding are common in academic research at large and within SFD in particular, ranging from the use of pre- and post-questionnaires (e.g. Welty Peachey, Cunningham, Lyras, Cohen, & Bruening, 2015) to highly focused approaches such as narrative inquiry (e.g. Cohen & Welty Peachey, 2015). However, novel approaches did stand out. Such unique approaches to deep user understanding went beyond traditional approaches to qualitative research and indicated a desire to access and establish empathy, another key feature of the user focus theme (Carlgren et al., 2016).

One example of such a novel approach was Wells and Welty Peachey's (2016) study of servant leadership in Street Soccer USA. Rather than attempting to understand the users (here, the leaders) by seeking the perspectives of those users, they instead sought the perspective of the followers. This lens allowed for a holistic understanding of not just the users themselves, but also the ways in which they fit within the organisational context. Similarly, Mandigo, Corlett, and Ticas (2016) considered the views of not just pupils but also the views of influential adults in their lives, such as teachers and school directors. This depth was further enhanced by the use of a 3-year longitudinal approach. Beacom and Golder (2015) likewise studied pupils, focusing on developing critical practitioners as a means of overcoming systemic patterns of thought toward disability sport. In this case, the deep user understanding was performed by the participants themselves as a component of their critical reflection on their practice, though the findings had implications for future placement learning activities.

Taken together, these different approaches highlight that deep user understanding is best achieved by considering multiple angles of the users involved. In SFD, this may usefully take the form of including disconnected (or subjugated) local voices in the design of programs, thus closing the gap between those who deliver SFD programs and those who stand to benefit

from them (Nicholls, Giles, & Sethna, 2011). Techniques for achieving such deep user understanding include informal conversations with users, the development of empathy maps, and ethnographic research (Carlgren et al., 2016). Pursuing deep user understanding and actively involving users in design thinking practice is the core of Brown's (2009) foundational model of design thinking in which human users are kept at the centre of all practice. Where SFD practitioners are already pursuing deep user understanding, Brown's three-stage model of ideation, inspiration, and implementation may represent a valuable means of focusing their practice on enhancing organisational innovation through design thinking. This recalls and aligns with another of the five themes of design thinking – diversity – and also provides a future pathway for SFD research and practice that would aim to achieve deep user understanding, particularly as a component of a design thinking practice.

Diversity of perspectives (theme: diversity)

The diversity of perspectives indicator relates to the broader design thinking theme of diversity. Rather than referring to demographic diversity (although that can certainly occur incidentally), diversity of perspectives instead relates to a diversity of skills, personalities, and even hierarchal positions (Carlgren et al., 2016). This indicator manifested in a variety of ways.

Multiple studies of homogenous stakeholder groups have demonstrated such diversity, such as in Whitley, Wright, and Gould's (2013) study of 19 coaches, in which data were collected from five different focus groups. While the coaches might have had a similar hierarchical perspective, views from the ground differed among coaches operating in different geographic locations. Similarly, Walters, Spencer, Farnham, Williams, and Lucas (2018) were able to generate a diversity of perspectives through the use of multiple data collection methods – individual interviews and focus groups – with the same participants. Elsewhere, diversity of

perspectives manifested as the consideration of views from multiple – and different – stakeholder groups. Such approaches ranged from the study of merely two groups (e.g. the participants and partners studied by Meir, 2017) to more comprehensive studies (such as Burnett's, 2013, study which considered the perspectives of managers, participants, and the significant others of participants). This variety of approaches to pursuing diversity of perspectives highlights that SFD researchers and practitioners are already capable of achieving diversity (and apparently desire to do so), yet an intentionally multidimensional approach may yield still greater insights.

One example of such an approach was the pursuit of a diversity of perspectives as a function of time. In totally aligned articles, this was achieved by incorporating interviews with both past and present players (Olushola, Jones, Dixon, & Green, 2013) and by conducting interviews over the course of an entire season (Bean & Forneris, 2016). Such approaches revealed how a diversity of perspectives emerged or evolved over time as a function of other variables and, in the process, highlighted potential obstacles and opportunities that could not be foreseen by studying past outcomes alone. Despite this potential, achieving a diversity of perspectives as a function of time was less common among the articles we reviewed. Although this multidimensional concern for diversity was promising as an indicator of design thinking alignment in SFD, the voices of potential beneficiaries of the program – participants, volunteers, coaches, and so on – were all but absent in the design of programs that were ostensibly being studied and improved with a goal of converting such potential users into actual users (Nicholls et al., 2011). Engagement with design thinking may help SFD organisations to close this loop in the pursuit of organisational innovation.

Practically, attempting to understand the potential user recalls Martin's (2009, 2010) knowledge funnel, which we highlighted in the literature review as being concerned with

identifying and interpreting a mystery before developing a heuristic for approaching it, and refining that heuristic into an algorithm for operational practice. Recall that in developing their Speedee service system, McDonald's aimed to cater to a market that was still emerging. In successfully doing so, they likely had a hand in shaping that market. By considering the potential user, McDonald's effectively solved a problem for Americans that Americans didn't know they had. Alignment of SFD articles with this indicator suggests that pursuing a diversity of perspectives – especially as a function of time – is but one way that SFD researchers and practitioners may solve problems for their users in unexpected but useful ways.

Futuristic thinking (theme: problem framing)

Unconstrained and futuristic thinking was found to be a critical mindset in the pursuit of user-centred innovation within Carlgren et al.'s (2016) design thinking theme of problem framing. Interestingly, all of the totally aligned articles that demonstrated futuristic thinking adopted similar perspectives: that future outcomes would transcend the program at hand and have larger positive effects. These articles tended to focus their futuristic thinking through a lens of the program itself and/or those who delivered the program.

A focus on the program itself was apparent in Bean and Forneris's (2016) study of the Nunavik Youth Hockey Development Program, which drew on identified themes and subthemes of program successes and challenges to offer not only recommendations, but also future directions for the program. Likewise, Meir (2017) studied the Leadership and Empowerment through Sport organisation in a manner that displayed obvious futuristic thinking. Rather than stopping with empirical observations, Meir sought to connect those observations to theoretical perspectives as a means of informing not only future practice in the program, but also future development of the same. As a result, his study not only

identified issues within the program (such as community engagement with the program) but also went on to suggest a specific theory-backed way to potentially overcome those shortcomings: in this case, the use of participatory action research in future studies. SFD work has been accused of generating only short-lived (Schulenkorf, 2013) or modest outcomes (Sugden, 2010) as well as being, at times, overambitious (Coalter, 2010). Considering these criticisms, such a focus on ensuring the longevity of the program itself is welcome and can be a component of design thinking practice in SFD.

Futuristic thinking was also presented through a focus on the program as a function of those who delivered it. For instance, the study of service learning students by Beacom and Golder (2015) displayed futuristic thinking through a focus on developing critical practitioners who would go on to correct stigmatising attitudes toward disabled athletes. The notion that these students would carry their critically reflective attitudes and lived experience into their studies and careers beyond that single class was an obvious consideration of future outcomes. Such a concern for outcomes beyond those enjoyed by immediate stakeholders signals more than just a concern for sustainability: It can also be seen as a response to concerns that SFD impacts are fleeting at best or neo-colonial at worst (for a detailed critique on neo-colonialism in SFD, see Darnell & Hayhurst, 2011).

Despite different foci, these studies share a multidimensional concern for outcomes – an aim to not only achieve positive outcomes in the short term, but for these short-term gains to ultimately translate into long-term gains. This reflects a widening of the problem space, which in turn leads to a widening of the solution space (Carlgren et al., 2016). The result of this ambitious embracing of ambiguity is an expansion of the scope of SFD work itself. Such an expansion has the effect of demonstrating that such programs can be sustainable and are capable of achieving more than only modest outcomes that some – such as Sugden (2010) –

have suggested might be the upper limit of SFD programs. Where organisations are already capable of futuristic thinking, the implementation of design thinking can focus their efforts on achieving design abduction, as outlined by Dorst (2011). Unlike traditional approaches to innovation, design abduction begins with only the value that the organisation wishes to create. In this case, that value has been identified (at least broadly) through futuristic thinking. From there, the organisation can work backwards to uncover what thing (most likely their users) will be put through a *working principle* (some creative phenomenon developed by the organisation) to create the desired value. Practical techniques for achieving such framing include the use of "how-might-we-questions" or separating available data into "FOG" (facts, opinions, guesses) so as to better synthesise findings (Carlgren et al., 2016).

Test to obtain user feedback (theme: experimentation)

Despite the wording, the test to obtain user feedback indicator relates to the broader theme of experimentation rather than user focus, and the difference is subtle but distinct. Carlgren et al. (2016) described experimentation within design thinking (which often includes working on multiple solutions at once) as "a bias towards testing and trying things out in an iterative way, and moving between divergent and convergent ways of thinking" (p. 47), a definition that focuses on learning as an organisational pursuit. Testing to obtain user feedback, then, is merely one means by which this iterative process of learning manifested in the SFD literature.

For example, recall that the Walters et al. (2018) study of Marist Institute graduates displayed futuristic thinking in considering the ways in which current practice would inform future practice and outcomes. One means by which this futuristic thinking was achieved was testing for user feedback. This testing was considered iterative as it resembled a feedback loop of continuous testing and subsequent improvements. Olushola et al. (2013) assumed a similar

focus in their study of female African American high school basketball players. Their testing for user feedback aimed to identify key values to ensure flexibility in future operations of the program rather than employing a standardised operating procedure. This suggests that the authors saw the future as flexible rather than fixed, thus calling for an iterative approach to learning and experimentation. Such iterative testing represents one way by which SFD researchers and practitioners can identify and test the working principle needed to achieve design abduction, as described at the end of the previous section (Dorst, 2011).

Elsewhere, this iterative nature of testing for user feedback took varying and more straightforward forms. These included pre and post methods of data collection (e.g. Burnett, 2013; Welty Peachey, Cunningham, et al., 2015), consideration of program sustainability based on user feedback (Schulenkorf, 2013), or merely a desire to utilise obtained user feedback in future practice of the studied program(s) in particular (e.g. Cooper, Blom, Gerstein, Hankemeier, & Indovina 2016; Gannett, Kaufman, Clark, & McGarvey 2014; Wells & Welty Peachey, 2016) or the field of SFD in general (e.g. Bean & Forneris, 2016; Mandigo et al., 2016; Whitley et al., 2013). These types of phrases are not altogether uncommon in academic studies, of course, but the multitude of different approaches to gathering user feedback underscores that there is more than one way to skin this particular cat. Clearly the manner in which user feedback is gathered is less important than the fact that it is being gathered at all. More critical still is the manner in which the gathered feedback is employed (Brown & Wyatt, 2010; Johansson-Sköldberg et al., 2013). All of these articles referred to user feedback not as the end goal, but as an intermediate step of a larger process: as one means of learning (through action). Such iterative testing for user feedback as a means of learning signals an orientation toward action, as well as a willingness to endure (and even welcome) intermediate failures as a feature of iterative progress (Carlgren et al., 2016).

Unfortunately, due to limited resources, many SFD organisations simply cannot afford to fail intermediately in the pursuit of success, let alone to fail repeatedly. As a result, they are largely limited to the use of normal abduction in their approaches to problems and/or opportunities – that is, the traditional approaches whereby most managers settle for what's good enough (Dorst, 2011, 2015). This has the potential to stall progress in programs such as the ones studied by Walters et al. (2018) and Olushola et al. (2013), both of which demonstrated a clear desire to be learning organisations. Because this desire (and their organisational practices) suggested a compatibility with design thinking, the concept may provide a way for both to achieve greater organisational innovation. Indeed, practical (and low-stakes) techniques for experimentation are still available even when resources are limited. These include the use of soft prototyping (role play, etc.) and, where possible, a physical space that is flexible enough to allow for experimentation without added expense (Carlgren et al., 2016).

Bias toward action (theme: visualisation)

The bias toward action indicator occurred almost exclusively among totally aligned articles. A bias toward action indicates alignment with the broader theme of visualisation and refers not to a willingness to take action in general, but to a willingness to learn through doing – and to likely fail along the way. As a method for visualisation, it relates to the creation of visual aids and even prototypes (Carlgren et al., 2016). In the case of recent SFD research, a bias toward action manifested in two primary ways: (a) undertaking practice as a means of learning immediately and improving future practice, and (b) in more quickly building effective practice by basing it on existing knowledge (perhaps from other fields).

Meir (2017) used the study of current practice in SFD programs in a novel way: by beginning with pilot programs. The program itself was a test, indicating a pull toward action rather than

getting mired in prolonged planning. Taking such immediate action is atypical of the approach traditionally taken by the academic researchers upon whom many SFD organisations have come to rely (Welty Peachey & Cohen, 2015). Because such work is often experimental, time must be taken to review relevant literature, establish or develop theoretical links, and to choose a proper methodology – all before any practical action is taken. So, while immediate action and (rapid, repeated) failure is encouraged within design thinking practice, the link between research and practice needs to be carefully negotiated to allow both parties to benefit from a bias toward action.

Relying on existing infrastructure may be a means of bridging this possible gap between researchers and design thinking practitioners in SFD, and two totally aligned articles took this approach. Mandigo et al. (2016) relied on physical education programs in order to take immediate action, ultimately applying their findings toward improvements in the program. Similarly, Beacom and Golder (2015) drew on existing theory from outside of SFD (specifically, critical pedagogy) to jump immediately into action on a small scale with an aim to grow from there. In each of these cases, the researchers and/or practitioners used immediate action as a source of feedback and learning – an approach that can be employed as the testing of a working principle (the phenomenon that users are put through in order to create a desired value) (Dorst, 2011). Such a cycle also evokes Brown's (2009) three-stage process of inspiration, ideation, and implementation. A design had already been implemented in all of the articles presenting the bias toward action indicator, but Brown's process allows for (indeed, calls for) the three stages to be repeated toward ever-improving outcomes.

Overall, bias toward action, as demonstrated by the totally aligned articles that presented the indicator, was perhaps the most critical point of difference between design thinking in practice and existing SFD research and practice. While academic research, by its very nature,

tends to proceed deliberately toward any eventual action in the field, design thinking practice is founded on the notion of physically trying ideas – whether they be prototypes or pilot programs – as soon as reasonably possible, and with the involvement of the stakeholders who will actually use the final output (Brown, 2008, 2009; Carlgren et al., 2016). However, as we have discussed, many SFD organisations – and academic researchers – simply cannot afford to fail. While a lack of resources is a commonly cited obstacle, there is also a justified concern that to expose a stakeholder group such as participants to a program that is only half-baked would represent a tremendous risk to those participants (Welty Peachey & Cohen, 2015). Where SFD programs are aimed at marginalised populations, the risk is greater still. Should a program fail to accomplish outcomes, the effect on participants might not be neutral, and indeed could be catastrophically negative. Any attempt to engage in design thinking, then, must take care to involve would-be users in a responsible manner. While a bias toward action is ideal in the pursuit of greater organisational innovation, it must be undertaken with care.

Conclusion and implications

By making the action and the thinking of expert designers accessible to non-design practitioners, design thinking has been shown to positively enhance the innovation efforts of organisations in a management context (Carlgren et al., 2016; Johansson-Sköldberg et al., 2013). While it has yet to be empirically studied in an SFD, our scoping study has confirmed the presence of design thinking indicators in recent SFD research and practice. Having demonstrated the presence and differing frequencies of these indicators, we have further analysed emergent trends among and between the indicators presented by the 14 totally aligned articles. Having analysed the similarities and differences in the ways in which the five key indicators were present in these totally aligned articles – deep user understanding, diversity of perspectives, test to obtain user feedback, futuristic thinking, and bias toward

action – we are able to confidently suggest that any or all of these indicators represent valuable points of entry for SFD organisations that might desire to incorporate design thinking into their practice, especially as a means of pursuing organisational innovation.

Carlgren et al. (2016) found design thinking to be simultaneously something that *is* and whatever it *becomes* in practice. Consideration of both the idea and the enactment is necessary when attempting to understand design thinking. Adopting this view, we can conclude that design thinking already is in SFD, especially where research and practice has presented total alignment with the thematic design thinking framework. Considering this, to enjoy the full innovation-enhancing potential of design thinking, organisations should employ the concept, allowing it to become what it will within their operational context. As we outlined in our thematic analysis, there are valuable points of crossover between recent SFD work and existing design thinking models. Where existing approaches align with the key indicators in such ways, practitioners can meaningfully engage with these models in order to focus their organisational innovation efforts toward achieving abduction and generating the human-centred outcomes that design thinking is capable of delivering.

Our study also highlights that such a dynamic conceptualisation of design thinking couples well with the thematic design thinking framework to provide a fruitful way of discussing and studying design thinking in practice. Future work concerning the use of design thinking to pursue organisational innovation in SFD (as well as in the broader field of sport management) can use this framework as a guide. In particular, it might be most immediately used in further scoping studies that either expand on our focus here by including more journals over a longer period of time, or in different thematic areas (such as sport development) as a contribution toward a wider understanding of the extent to which the broader field of sport management aligns with design thinking practice.

Meanwhile, empirical work may involve the implementation of models of design thinking through research interventions, or even the study of design thinking as an organic phenomenon, should SFD practitioners adopt the practice from management (the field from which much SFD work is derived; see Schulenkorf, 2017). These interventions could meaningfully study and seek to capitalise upon phenomenon revealed in this article (such as the fact that stakeholders other than those in the target population of a program stand to benefit from being involved with the program) or to approach larger issues that continue to plague the field of SFD, such as those relating to the SFD program delivery. The field of SFD has been accused of displaying neo-colonial tendencies (Darnell & Hayhurst, 2011) and despite an apparent awareness of this issue, many programs continue to be designed and delivered by international actors (and from higher-income countries, in particular) (Schulenkorf et al., 2016). Design thinking may provide a means by which this gap can finally be meaningfully reconciled. Local voices can be restored through user focus and the seeking of empathy, not just through the techniques mentioned in this paper (informal conversations, empathy maps, etc.) but through the involvement of the users themselves in pursuing the understanding that such techniques can generate.

Work along these lines may represent a compelling branch of SFD research that ESMQ and MSL could pursue should they wish to increase the extent of their (so far) limited SFD publications. To this end, we call for the undertaking of a variety of investigations and case studies to examine – and learn from – design thinking outcomes in sport management. Not only will such studies advance evidence in SFD and sport management, but they will also contribute to a developing canon of applied design thinking practice in the broader field of management.

Linking the scoping study and case study

The findings of the scoping study presented as Study One reveal design thinking indicators across the breadth of SFD research. Further, existing SFD work which aligns with all five themes of design thinking – the totally aligned articles – were found to share traits which, when considered thematically and holistically, represent points of entry for the possible implementation of design thinking practice into the SFD field. Recall that Carlgren et al. (2016) outline two components of design thinking practice: the ostensive (the idea) and the performative (the enactment). The SFD work captured in the totally aligned articles suggests that the organisations studied are already capable of the performative component. Hence, in order to enjoy the benefits of enhanced organisational innovation, any totally aligned SFD organisation would still have to intentionally engage with the ostensive component of design thinking to enable and leverage desired outcomes.

The ostensive component of design thinking can be usefully thought of as merely the human-centred focus of any performative activity. That is to say, a design activity which is oriented in a human-centred manner toward creating value for users would make a useful component of a holistic design thinking practice in any operational context. Further, such an activity has the potential to complement other, similar activities which together link to all five themes of design thinking. Considered in this manner, it stands to reason that existing sport management practice which is aligned with all five themes of design thinking can be 'shaped' into a design thinking practice by refocusing those same activities toward human-centred value generation.

That Study One reveals indicators of alignment with design thinking themes are present across the breadth of SFD work aligns with Ratten's (2016) findings that non-profit sport organisations are more capable of fostering innovation than are their for-profit counterparts.

However, recall that a conundrum is present in sport innovation management: that the sport organisations most willing to pursue innovation – generally, non-profit organisations – are also the least capable of doing so, and vice-versa. Caught in the middle of this conundrum are professional sport organisations pursuing hybrid for- and non- profit goals. While they typically enjoy more research and development capabilities – to say nothing of human and financial resources – than do strictly non-profit sport organisations (Winand & Anagnostopoulos, 2017), they are also less flexible and more accountable to ensuring any pursued innovation results in a financial return (Ratten 2016). A middle ground must be found, then, in order to reconcile hybrid goals while also pursuing innovation. Accordingly, the case study at the heart of this doctoral project focused on one such professional sport organisation which pursues hybrid goals: the Sydney Sixers. This case study is presented in the following chapters as Studies Two, Three, and Four.

Study Two extends the work of the scoping study into primary research of the Sydney Sixers and, thus, from SFD into sport development. While the Sixers are ostensibly a commercial sport organisation, preliminary discussions with their general manager revealed that they seek hybrid for-profit/non-profit goals including, among others, working toward inclusion of those in the LGBT+ community. Studies Three and Four then introduce the concept of design thinking into the Sixers' – and thus, sport management – practice.

Study Three is concerned with an intervention. An exploration was undertaken to identify a design activity – ultimately: the Lightning Decision Jam – for implementation into the Sixers practice in a manner that (a) suited their existing way of working and (b) connected their practice to design thinking theory. Finally, Study Four extends this research by exploring the Sixers' subsequent use of the Lightning Decision Jam, which they had by then modified.

Study Two:

“No idea is a bad idea”: Exploring the design thinking alignment of an Australian sport organisation

Abstract

As research into sport innovation management continues to evolve, the innovation efforts of both for-profit and non-profit sport organisations are increasingly revealed to be focused on best serving the sport user. *Design thinking*—a human-centred approach to innovation—may hold promise for sport organisations attempting to identify and deliver on the unmet needs of their users. As such, we undertook a qualitative exploration of the innovation practices of a professional sport organisation attempting to balance hybrid for- and non- profit service goals. Alignment with design thinking themes was discovered in the organisation's practice, as were performative components of design thinking practice. Our findings suggest that design thinking is suitable—and indeed desirable—for adoption into sport management practice, particularly as a means of enhancing innovation efforts, designing holistic sport experiences, and/or overcoming competing institutional demands.

Introduction

As the research of sport innovation management continues to evolve as a coherent body of research (Ratten, 2016), sport practitioners and researchers alike are ever on the lookout for ways of enhancing innovation in the sport context (Funk, 2019). Whether the innovation being pursued is one of service, disruption, or technology (Ratten, 2016), the sport user is typically the target of any such innovation; the intended beneficiary of innovative efforts. Recognising this, tools such as the Sport Experience Design framework, which aims to enhance user engagement and satisfaction with sport experiences, have begun to adopt a 'customer-centred' approach to constructing holistic sport experiences for the current or would-be sport user (Funk, 2017).

However, the role that sport organisations have to play in delivering such sport experiences continues to be underexplored, as does the manner in which such organisations might reconcile the delivery of such experiences with goals – such as financial targets – that are sometimes incompatible with such pursuits (Funk 2017). Indeed, larger, professional (often commercial) sport organisations appear to be more risk averse than are their non-profit or public counterparts (Ratten, 2016), even though the latter tend to lack the resources to foster the innovations they are happier to pursue (Winand, Scheerder, Vos, & Zintz, 2016). Hence, a tension arises in which the sport organisations most willing to pursue innovation are also the least equipped to do so.

As a response to this apparent tension between sport organisations that would innovate and those that can innovate, we propose the use of design thinking within sport organisations. Design thinking is a human-centred means of pursuing innovation which enables non-design practitioners – such as sport managers – to access the thoughts and practices of expert designers (i.e. design researchers and/or practitioners) to achieve such ends (Brown, 2009;

Carlgren, Rauth, & Elmquist, 2016). Initially proposed as a way to achieve innovation in the sport management subfield of sport for development (Schulenkorf, 2017), design thinking is ported from the broader field of management as a derivative concept / theory of promise (Doherty, 2013; Funk, 2019). While tools like the SX framework are not models of design thinking, they do represent a promising shift to a consumer-centric focus in sport management. Further, research has found that indicators of the principles / mindsets, techniques and practices associated with design thinking are evident across the breadth of SFD research (Joachim et al., 2020) and that traits of design thinking are likewise present in innovative SFD organisations (Svensson & Mahoney, 2020). Our study is the first empirical research of design thinking in sport management practice and extends this early work into the subfield of sport development.

Specifically, we have undertaken a case study of the Sydney Sixers, a sport organisation that fields teams in both of Australia's top-flight domestic cricket competitions: the Women's and Men's Big Bash Leagues (WBBL and BBL, respectively). As a professional sport team in an increasingly crowded Australian sport marketplace (Fujak et al., 2018), the Sixers are constantly working to identify the unmet needs of their users in order to retain and grow their supporter base. Considering their user focus, we undertook a qualitative exploration of the Sixers' current innovation practices to address our central research questions: does the existing practice of the Sixers align with any or all themes of design thinking, and what principles and mindsets, practices, and techniques characterise any such alignment? In answering these questions, we seek to investigate how design thinking might be meaningfully employed in the Sixers organisation and, by extension, the potential usefulness of design thinking to sport organisations in general.

Throughout this article we highlight the ways in which the principles / mindsets, techniques and practices associated with design thinking might enable sport organisations to contribute to holistic sport experiences for sport users through tools like the SX framework. Indeed, there have been calls for research into the means by which innovation is achieved in both non-profit (Schulenkorf, 2017; Svensson & Cohen, 2020) and for-profit sport organisations (Smith & Green, 2020). Hence, we discuss how professional sport organisations might use design thinking to be as open to pursuing innovation as are their non-profit counterparts, and how the diversity of perspectives at the heart of design thinking might help innovative organisations integrate external stakeholder perspectives (Svensson & Hambrick, 2018) and overcome challenges of organisational capacity (Svensson & Hambrick, 2016) and competing institutional demands (Svensson, 2017; Svensson & Seifried, 2017).

Literature Review

This study began with a phenomenon of interest: design thinking, a user-centred approach to innovation which makes the thinking and the doing (the theory and the practice) of expert designers accessible to practitioners in non-design fields such as sport management (Brown, 2009; Carlgren et al., 2016). Though design thinking first became popular in the field of management, use of the approach has generated positive results in fields as diverse as education (Leverenz, 2014; Tan & Wong, 2012), health care (Eckman, Gorski, & Mehta, 2016; Patel, Moore, Blayney, & Milstein, 2014; Takaoka & Aoki, 2016), retail (Rodríguez, Paredes, & Gaofeng, 2016) and even food service (Olsen, 2015). Such varied applications suggest design thinking is highly adaptable to other fields and may thus hold promise for sport management.

Early work on design thinking in sport management is promising and has followed from Schulenkorf's (2017) proposal of design thinking as a means of achieving innovation in the

sport management subfield of sport for development (SFD). Heeding this suggestion, Joachim et al. (2020) undertook a scoping study of SFD research and practice to seek indicators of design thinking alignment in extant SFD work. These indicators were present across the SFD literature, suggesting that design thinking might be suitable for adoption into SFD practice. Svensson and Mahoney (2020, p. 229) extended this work and found that "elements of design thinking were a key part of the culture of innovative SDP organisations and appeared to enable them to develop community-driven solutions to better achieve their mission and promote positive social change." Elsewhere, Pierce, Davies, and Kyder (2019) have proposed and outlined design thinking as a framework for better equipping sport management capstone students to approach ill-defined problems in the field.

Considering this nascent but growing interest in the concept, it is timely and imperative to explore design thinking in the broader management context as a means of better understanding its value and potential contribution to the field of sport management. Hence, before introducing the empirical study we undertook to qualitatively explore the alignment between sport management practice and design thinking practice, we first introduce foundational models of design thinking in management before exploring how the concept might enhance sport innovation management.

The evolution of design thinking

The phrase design thinking entered the academic vernacular when Peter Rowe (1987) used it as the title for his book that explored the cognition behind design practice in architecture and urban design (Dorst, 2011). While the origin firmly roots the phrase in the field of design, it has more recently been co-opted by non-design fields including management (Brown, 2008, 2009; Dunne & Martin, 2006; Martin, 2009). In non-design fields, use of the concept typically refers to means of pursuing user-centred design by adopting some of the mental

processes and practices of expert designers (Carlgren et al., 2016). Meanwhile, conceptually, design thinking continues to generally refer to the literal thinking of designers and how it informs their practice in the pursuit of various outcomes (Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013). As a result, a *Harvard Business Review* article by Tim Brown (2008) about how managers can use design thinking to pursue user-centred innovation, and a book by Nigel Cross (2011) about the mindset of experts in various fields of design, can both be justifiably titled "Design Thinking" and yet be about two almost entirely different subjects. As it logically holds the most value for sport organisations (which are not, alas, typically populated with expert designers), our study is concerned with the management concept of design thinking—broadly defined a means of pursuing user-centred innovation that makes the *ostensive* ("the idea") and *performative* ("the enactment") dimensions of expert design accessible to non-designers (Brown, 2009; Carlgren et al., 2016; Martin, 2009).

The value of adopting design practices in management was first proposed and promoted by Roger Martin as a means of enhancing MBA courses by moving away from so-called "traditional" approaches to solving problems—namely, relying on induction and deduction alone, both of which are informed by past results. Martin instead proposed teaching future managers to engage in *abduction*, a means of engaging in leaps of logic to generate wholly original ideas (Dunne & Martin, 2006). Martin (2009) considered abduction to be a dynamic interplay between analytical and intuitive thinking, one in which a design thinking practitioner jumps ahead in their reasoning and testing of hypotheses—a stark contrast from the more conservative practice of analysing past results to inform future strategy. Meanwhile, Brown (2008, 2009) described his similar approach as *integrative thinking*: the ability to be analytical while also seeing all aspects of a problem. In Brown's view, design thinking is a process undertaken by practitioners who possess a unique personality profile. In addition to integrative thinking, a design thinker's personality typically includes the ability to

empathise, a sense of optimism, a spirit of experimentalism, and the desire and ability to collaborate (Brown, 2008).

Innovation in sport management

In proposing a research agenda for sport innovation management, Ratten (2016) outlines three broad types of sport innovation: service, disruptive, and technological. Although these innovation types are drawn from other fields, the unique characteristics of the sport field require them to be assessed anew within the sport context. The need for this distinction is made clear by sport approaches to service innovations, as "when sport is offered as a service it generates a powerful relationship with people, due to its cultural and entertainment value" (Ratten, 2016, p. 244). Disruptive innovations in sport are perhaps best characterised by the action sport industry, where the individuality of athletes and the expression afforded them within their sport represent innovation (Ratten, 2016). Indeed, such direct involvement of users (in this case: the athletes themselves) in the open innovation of niche sports has helped attract new fans (Potts & Ratten, 2016). The subcultures which develop in these environments can also generate technological innovations, often in the form of new equipment (Ratten 2016). Importantly, all three types of innovation are focused on delivering value to users, be they participants or consumers.

Though the focus on the sport user is consistent across all sport innovation types, motivations to innovate varies across sport sectors. Svensson and Cohen (2020) highlight the unique approaches to innovation adopted within SFD practice, and Ratten (2016) notes that public organisations are more likely than professional, typically commercial, organisations to pursue social innovations. While larger organisations tend to possess the resources (primarily: the finances) to develop innovation, it is smaller organisations who tend to have the flexibility (such as consistent government funding) to foster innovation (Ratten, 2016). Notably, where

their staff are open to and supportive of new ideas, non-profit sport federations are not only more innovative, but also develop different types of service innovations (Winand et al., 2016). Further, non-profit sport organisations don't appear to be risk-averse in pursuing such innovations. However, despite their apparent openness to innovation, non-profit sport organisations are still disadvantaged in the pursuit of innovation, owing to the fact that they typically lack the research and development capabilities that professional sport organisations often possess (Winand & Anagnostopoulos, 2017). It is here that a block to innovation in the broader sport management context becomes apparent: the sport organisations most willing to take risks and pursue the most daring innovations—the non-profit and public organisations—lack the resources of the professional sport organisations who are more reticent to take such risks. A need arises, then, for an approach to innovation which can help sport organisations in all sectors to better innovate for their users.

The sport user

The evolution of the sport user is traceable within the sport management literature. At the turn of the century, Stewart and Smith (1999) outlined the unique features of the sport industry. These features included strong team-level (brand) loyalty of sport consumers tied to what they deemed the 'irrational passion' of fans—findings which suggested that such team loyalty largely remained constant even when on-field results did not (Stewart & Smith, 1999). By 2010 the authors had developed a more nuanced view, concluding that sport consumers are not as different to traditional consumers as once believed and, notably, that components of their passion for sport serve as proxies for the fulfilment of inter- and intra-personal needs (Smith & Stewart, 2010). This development over a single decade highlights underlying human needs—be they psychological, social, or cultural—which the sport experience purports to fulfil (Smith & Stewart, 2010).

Nonetheless, the sport user remains elusive in many ways, making it difficult for sport organisations to identify their human needs, let alone deliver on them. Indeed, demand for sport itself is shifting, in some cases seeing Stewart and Smith's (1999) 'irrational passion' dissolve into loyalty spread across multiple teams within the same competition (Fujak et al., 2018), carrying implications for professional sport enterprises who seek to retain fans and members. Meanwhile, the blurring of boundaries between the commercial, non-profit / volunteer, and public sport sectors is imposing change on sport users from the industry side, leaving such users under- or un- served (Misener & Misener, 2017) and further complicating the innovation impasse between organisations in the public and non-profit / volunteer sectors and those in the commercial sector. The human sport user is the common factor in both situations, highlighting a need for sport managers to better understand said users as a way of enhancing the experience(s) sport might offer them.

Recognising these ongoing changes and the challenges they present to sport organisations, Funk (2017) proposes a Sport Experience Design framework that adopts a 'consumer-centred' approach to innovating the sport experience which acknowledges the psychological needs of the sport user. The framework is composed of three interrelated elements of sport experience design which also represent three differing perspectives on sport consumer behaviour: sport context ('user experience'), sport user ('consumer needs') and sport organisation ('business goals'). Only where all three of these elements overlap, he explains, can a holistic sport experience be achieved. Funk (2017) argues that while attention has been paid to researching sport consumers from the perspective of the sport context or the sport user, the third perspective—that of the sport organisation—tends to be overlooked. Our study seeks to address this shortfall.

Theoretical Framework

In the decade since design thinking was applied to management, it has gained popularity despite proffering only anecdotal evidence and lacking a relationship with academic design theory (Johansson-Sköldberg et al., 2013). While more recent work has begun to investigate how—and why—organisations are adopting design thinking (Dunne, 2018), the field of design thinking research remains fragmented, largely due to the ongoing use and study of differing models of the concept without a central and unifying definition (Carlgren et al., 2016). However, design thinking researchers have argued that it is not a central definition that is needed, but rather a standardised framework to provide a common language for use in academic discourse (Carlgren et al., 2016; Johansson-Sköldberg et al., 2013). Carlgren et al. (2016) proposed such a framework, providing five themes of design thinking that were distilled from an analysis of design thinking practice in the field of management. As the only design thinking framework derived directly from practice, Carlgren et al.'s framework serves as useful tool with which to explore design thinking in sport organisations. As such, we adopted it as the theoretical framework for this study.

Carlgren et al. (2016) adopted the perspective of Feldman and Pentland (2003), who argued that management practice must be considered across two dimensions: the ostensive and the performative. Such consideration has the effect of separating practice into both the idea (ostensive) and the execution of the idea by individual actors within specific environments (performative). Put another way, Carlgren et al. separated the thinking and the doing of actors within management practice. They empirically analysed the principles and mindsets, practices, and techniques that characterised the design thinking practice of six companies across three different industries, allowing for the identification of five themes: (a) user focus, (b) problem framing, (c) visualisation, (d) experimentation, and (e) diversity (Carlgren et al.,

2016). These themes can thus be meaningfully employed in exploring the alignment between an organisation's practice and the concept of design thinking (Joachim et al., 2020).

Importantly, other frameworks or models of design thinking have only addressed either the idea or the enactment of design thinking and were developed based on the assumption that practitioners only want a "package" or "toolkit" with which to engage (Johansson-Sköldberg et al., 2013). In contrast, by addressing both the ostensive and performative components of design thinking, the thematic design thinking framework (Carlgren et al., 2016) allows researchers to identify thematic alignment with design thinking, even in instances in which design thinking is not being formally employed in practice (i.e., to explore the performative in isolation from the ostensive). Consequently, we employ the framework in the current study to explore the potential design thinking might hold for a professional sport organisation: the Sydney Sixers, introduced in the next section. Specifically, we sought to answer: does the existing practice of the Sydney Sixers align with any or all themes of design thinking, and what principles and mindsets, practices, and techniques characterise any such alignment? In seeking and attempting to understand these linkages, we look for evidence that the Sixers are, in their current practice, capable of the performative component of design thinking. Where alignment may not exist between their current practice and a given design thinking theme, an opportunity arises to introduce a design thinking activity to establish such a link and enhance their practice at the same time. In either instance, where their practice either currently aligns with all themes or is brought into such alignment, the practice might be suitable for adopting design thinking toward achieving human-centred outcomes.

Method

Guided by the specific purpose of our research, we employed a qualitative case study approach to investigate the nature of design thinking alignment between the practice of a

sport organisation and the themes of design thinking practice. Virtually all extant design thinking research explores case studies (e.g., Brown, 2009; Carlgren et al., 2016; Dorst, 2015) and the approach is likewise popular and well-established in sport research (Hoeber & Shaw, 2017; Shaw & Hoeber, 2016). In the following sections we outline our overall approach by introducing the Sydney Sixers as the subject of our instrumental case study (Stake, 1995), explaining our data collection methods, and discussing how we conducted our data analysis.

Selection and background of case study

T20 is the newest (and shortest) format of cricket, featuring matches that last approximately three hours[3]. The format was designed to generate more risk-taking by players in all facets of the game (bigger hits, more athletic catches) and thus to appeal to potential fans (users) who were not interested in the existing—arguably more conservative forms—of the game (Hyde, 2009). Within Australia, the BBL is the professional domestic T20 competition for both Men and Women. The advent of the BBL in 2011 marked a change from a competition between state teams to one between 'cosmopolitan' clubs. As such, the first BBL match was also the first time since the founding of cricket in the country in the 1850's that high-level cricket had not been played between states or colonies in Australia (English, 2011). Because the format and nature of the competition is newer than and also distinct from the traditional forms of the game, BBL clubs must – in the absence of history and/or precedent – find ways to engage with consumers whose needs are unknown or ill-defined: those who are new to cricket and those who are interested in the unique features of T20. New approaches – such as design thinking – may help navigate such an uncertain environment.

Accordingly, a decision was made to approach and invite a Sydney-based BBL club – the Sydney Sixers – to participate in this study. In addition to the challenges faced by all BBL

[3] For a complete overview of the three main match formats of cricket—test, one day, and T20—see ICC (2019).

clubs, the Sixers are looking to introduce new users to cricket (among others, unengaged members of the LGBT [lesbian, gay, bisexual, and transgender] community) while also finding novel ways of motivating existing cricket fans to embrace T20 and the nature of the BBL. Indeed, in a preliminary meeting, the [now] general manager of the Sixers expressed a desire to not fall into "a trap" of doing things the way they've always been done "just because that's how they've always been done." Consequently, the organisation was very interested in the promise of design thinking and thus agreed to participate.

The Sixers organisation is embedded within Cricket NSW (CNSW), the body that manages cricket activities in the Australian state of New South Wales and which is itself a part of the sport's national body, Cricket Australia (CA). The core Sixers staff consists of eight permanent employees, two of whom split their capacity between the Sixers and the larger CNSW organisation according to peaks and valleys in the activity of either organisation. At the height of activity during the season, this core group is supported by relevant CNSW staff and also interns who assist with match day operations and, in some cases, administrative work in the front office. The staff who work exclusively for the Sixers include the general manager; two team members responsible for membership, ticketing, and hospitality; and one each within fan engagement, digital media, and media partnerships. Two more staff members who split their time between the Sixers and CNSW oversee partnerships and event operations. A large portion of the staff are relatively new to the organisation. Three were navigating their second season during the time of this study, while another three were navigating their first season.

The Sixers represent what Stake (1995) defines as an instrumental case, the study of which is undertaken in order to understand a phenomenon of interest other than the case itself. Indeed, in studying the Sixers as an organisation, we have sought evidence of the principles and

mindsets, practices, and techniques associated with the performative component of design thinking. In doing so we aim to discover the extent to which design thinking might be a good 'fit' for adoption into the Sixers practice specifically and into sport organisations more generally. While the findings particular to a case are not generalisable in the sense that what works for the Sixers may also work for similar organisations (Denzin & Lincoln, 2018), such findings do allow readers of a case study to establish connections between the case and their own experience; to undertake what Stark and Torrance (2004) call "intuitive generalisation". Hence, while the findings from this single case study may not be generalisable to sport management at large, it will still provide the possibility for readers or researchers to make sense of the findings through the lens of their own experience and then adapt those insights for their own use.

Data Collection

In line with our social constructivist approach, data were collected through multiple methods: semi-structured interviews, observation, and shadowing. The gathering of multiple—and complementary—types of data is consistent with other sport management research (Edwards & Skinner, 2009) and with case studies in particular (Creswell, 2018; Flick, 2014). Considering the small size of our unit of analysis, the Sixers organisation, as well as the relative newness of some Sixers staff to the organisation, we sought to be as comprehensive as possible not only in the types of data gathered but also in the methods used to collect said data.

All data were collected at the CNSW offices (within which the Sixers offices are also located), at relevant match venues (the Sydney Cricket Ground, Hurstville Oval, and Drummoyne Oval), or over the phone. Data collection began in the months preceding the

2018–2019 WBBL and [M]BBL[4] season and continued through the season and into the weeks immediately following the conclusion of the season. This approach allowed for the collection of data relevant to the planning and execution stages of the Sixers operation, as well as for staff members' reflections regarding their innovation practices used during the season. Core participants in the study included the eight permanent employees directly involved with the Sixers; additional participants included other relevant stakeholders such as CA and CNSW staff who either liaised with or assisted the Sixers, interns who worked directly with and for a core Sixers staff member, venue managers, and members and/or supporters of the club. These additional participants were selected in order to understand not just how the Sixers operate internally, but also how they fit into their larger organisational context when attempting to innovate. Participation was voluntary, but nobody declined to participate when approached.

First, semi-structured interviews were conducted. This semi-structured approach allowed us to frame the interview around key themes while also providing the opportunity to dig deeper into certain topics (Skinner, Edwards, & Corbett, 2015). A total of 18 such interviews were conducted, including eight with the core Sydney Sixers staff. These core interviews ranged in length from 70 to 110 minutes, while the interview with the general manager (who has the most experience with the organisation) was 150 minutes in length. Interviews with stakeholders ranged from 10 to 30 minutes. The interview guide was framed by our guiding theoretical framework of thematic design thinking (Carlgren et al., 2016). Interview questions were designed to uncover both the practical techniques used by the Sixers to pursue innovation ("How does the organisation visualise a new concept?", "How does the

[4] As the name 'Big Bash League' and acronym 'BBL' refer to both the organisation and the Men's competition therein, confusion can arise with their usage. To avoid this, this article uses 'BBL' to refer to the Big Bash League organisation, '[M]BBL' to refer to the Men's competition, and 'WBBL' to refer to the Women's competition.

organisation create a new product?") as well as individual and organisational attitudes toward such practice ("How important is creativity to the organisation?", "To what extent do you identify as being a creative person?", "Has working here made you feel more creative? Less?"). The lead author conducted all of the interviews and transcribed the audio recordings for analysis. In total 17.50 hours of interview audio recordings were captured.

Second, the lead author engaged in direct observation of nine work-in-progress (WIP) meetings. Direct observation allows the researcher to observe without being involved in what is being observed (Edwards & Skinner, 2009; Flick, 2014). The WIP meetings occurred at roughly biweekly intervals (though this increased to weekly intervals at the height of in-season activity), beginning with the WIP meeting on November 7, 2018, through and including the WIP meeting on February 20, 2019. WIP meetings are regularly occurring planning and strategy sessions for the Sixers and thus always include at least the core Sixers staff, but also other key stakeholders from various CNSW departments who assist the Sixers attend when required. Stake (1995) notes that observation enables a greater understanding of the case, as good records of observation serve to provide "a relatively incontestable description for further analysis" (p. 62). To ensure such good records were kept, observation data was captured through multiple channels: fieldnotes and audio recording. Further, we heeded the advice of Emerson, Fretz and Shaw (2011), who suggest fieldnotes should capture the lead author's initial impressions and personal sense of significance and unexpectedness, while also seeking to uncover if and how observed events were significant to those being observed. In this way, fieldnotes transform witnessed events into words which can be reconsulted and analysed. Seeing as fieldnotes can also be selective (in the sense that the observer decides what is worth recording and what is not), steps were taken to mitigate the risk that something important would be unintentionally missed (Emerson et al., 2011). Specifically, each observed WIP meeting was also audio recorded, allowing for those

recordings to be reviewed by all authors. These audio recordings were transcribed for analysis. In total, nine WIP meetings produced 8.20 hours of observation and recordings.

Third, data were also collected through four shadowing events. The lead author shadowed four Sixers staff members as they went through their match day operational practice. Although shadowing is perhaps best known as a tool for experiential learning (i.e., to learn how to do a job by watching an expert do that same job in practice), it also holds value to qualitative researchers (McDonald, 2005). In contrast to the experiential learner (who is seeking to develop their own perspective and ultimately become a member of the organisation in which they are shadowing), the researcher who employs shadowing is seeking to understand the perspective of the subject being shadowed and to understand the subject's organisational role in context (McDonald, 2005; McDonald & Simpson, 2014). In general, shadowing allows the researcher to makes sense of the observed actor and their path in multiple dimensions (time and space) (McDonald & Simpson, 2014). To ensure the comprehensiveness afforded by shadowing (i.e., unique understanding of the observed subject), only one staff member was shadowed per match. Given the focus of this study, the decision was made to focus on the four staff members whose roles were most closely linked to serving the core user group identified in the interviews: fans. The staff members who were shadowed worked in the areas of membership, ticketing, and hospitality (MT&H); digital content and social media; fan engagement; and event operations. Four shadowing events spanned a total of 26 hours.

Data Analysis

Following data collection, the lead author digitised the collected documents and transcribed all interview transcripts and fieldnotes from observation and shadowing into text form, allowing for the use of NVivo 12 for data analysis. Our theoretical framework was

specifically designed as a tool to "be used to outline and design further empirical research, and for theoretical studies of [design thinking] in relation to other academic discourses" (Carlgren et al., 2016, p. 53). Hence, our coding process utilised *a priori* codes that were derived from the thematic design thinking (Carlgren et al., 2016) and which have already been similarly employed in sport research (Joachim et al., 2020). Creswell and Creswell (2017) suggest the development of a qualitative codebook when existing theory provides predetermined codes. Accordingly, we developed a codebook for all codes (i.e. indicators of alignment with the framework) that included definitions for each code. In total, 47 codes were used, which is within the suggested maximum of 50 that coders can reasonably keep in the front of their mind without needing to constantly refer to a full list (Miles, Huberman, & Saldaña, 2019). In accordance with our instrumental case study approach, this coding process allowed us to tease out both the expected *and* the unexpected relationships in our data (Stake, 1995).

All authors engaged in cross-author checking (Patton, 2015) to ensure accurate and consistent interpretations of text data as indicators of design thinking alignment. Cross-coder reliability was established by having two coding authors (including the lead author) independently code selections of data before all authors reviewed and discussed discrepancies. This process was then repeated in order to bring coding interpretations into line. Our final codebook was thus established and thereafter used by the lead author in completing all additional coding. As all data were collected by the lead author and were subsequently de-identified (using gender-neutral pseudonyms) before being shared with co-authors, the aforementioned cross-author checking also had the effect of removing any potential bias toward individual participants that may have occurred on the part of the lead author.

Table 7: Characteristics of Sydney Sixers Practice as They Fit Into Themes of Design Thinking

Design thinking theme	Principles/mindsets	Sixers practices	Sixers techniques	Illustrative interview quotes
User Focus	Empathetic Curious Non-judgmental	Seek to understand pain points Analysis of user experience survey data	Informal conversations with members/supporters at team events Formal conversations with key members Thematically analysing survey data to identify trends and patterns	"We are not the customer. We're not the core market. No one in this team is in the core market. So, we need to be really careful that when we make decisions. We make them on behalf of the 'why' of our business and not on behalf of ourselves."
Problem Framing	Unconstrained thinking Comfortable with complexity and ambiguity Open to the unexpected	Breaking operational areas down and building them back piece by piece Sourcing ideas from every member of the organisation Scenario planning	Formal planning days (once yearly) with time dedicated to each operational area Rapid brainstorming in WIP meetings Impromptu and informal conversation around open floor plan office space Modelling success in short- and long-term Using organisational values and brand identity for operational decision making	"We sort of try and pull the problem apart rather than just look at it as a whole. So, [we] try and pull the problem apart see if . . . there's any reason why that problem occurred and if there's anything that can be done to fix it."

Visualisation	Thinking through doing Bias toward action	Working backward from a desired outcome in order to reveal the path to that outcome	Seeking physical space that is conducive to creative thought Using external media (videos, photos, etc.) as a visualisation tool Assuming perspective of their users	"We will try and step through it in our own minds to kind of think of what it might come out looking like . . . [because] you can't walk out of the office and [artificially] create a match day environment. It's really difficult."
Experimentation	Curious and creative Playful and humoristic Optimistic and energetic Learning-oriented Eager to share	Pursuit of new ideas as an organisational principle Work from a diverse set of ideas Recognising that intermediate failure is possible in the pursuit of eventual success	Asking questions (internally and externally) Iterative testing of ideas Benchmarking (with or without precedent)	"[We] flat out say, 'I'd rather do something completely different and [mess] it up than always stick to the same script.' I don't think you learn anything when you succeed every time. Failure brings about greater growth in the person and greater growth in your business. I would absolutely rather [we mess] something up and at least have had a crack."
Diversity	Embracing external perspectives Democratic spirit	Include partner groups in strategic planning process Ensure everybody in the organisation is seen and heard Mutually beneficial cooperation with governing body (Cricket Australia)	Engage with external groups to further diversify the organisation's perspective Organising with other clubs to give Cricket Australia the view from the ground	"[The event operations manager] is responsible for delivering match day but that match day came out of this group. Everybody has ownership of it; everybody has the ability to feel like they were part of it."

Note. Adapted from "Framing Design Thinking: The Concept in Idea and Enactment" by L. Carlgren, I. Rauth, & M. Elmquist, *Creativity and Innovation Management*, 2016, pp. 38–57.

Findings and Discussion

Our research sought to identify any existing alignment between themes of design thinking practice and the practice of the Sydney Sixers front office, and to explore the nature of any such alignment. In doing so, we have investigated the manner in which the performative aspects of design thinking practice might already be present within the Sixers' practice. Table 7 provides an overview of our findings, outlining alignment between the five themes of design thinking practice and the principles and mindsets, practices, and techniques manifest within the Sixers' practice.

The following five sections present the findings summarised in Table 7 and are thusly organised along the five themes of the thematic design thinking framework (Carlgren et al., 2016) that served as our guiding theoretical framework. Within each section we define the relevant theme, present representative findings that relate to that theme, and discuss the implications of these findings. As these themes are inherently interrelated, the mindsets and practices discussed below can sometimes be meaningfully linked to more than one theme. We note such instances throughout these sections but in the interest of clarity, we discuss any such idea in detail within the section of only one of the themes to which it relates.

User Focus

The design thinking theme of User Focus relates to how an organisation centres its innovation efforts on human end users through the use of empathy in pursuing deep user understanding, resulting in the discovery of the unmet needs of those users (Carlgren et al., 2016). Two techniques characterise the user focus of the Sixers: the use of direct conversation with existing and potential users, as well the use of fan (user) experience surveys.

The Sixers are aware that they will never be able to capture all user perspectives from within their own team and thus need to seek outside perspectives (see quote in Table 7). Interviews

with the general manager and the MT&H team revealed that when they are seeking to determine what their users want, the Sixers have conversations with a group of key members who have historically been happy to provide feedback when called upon. One of the team members who regularly engages in these conversations explained in an interview that they are personally "pretty big on [building relationships with members]" and that they "believe that's sort of when you get the best feedback out of people because they're being honest. [You] get good [quality] feedback out of them—the good and the bad." Indeed, the lead author shadowed this staff member during the [M]BBL season and captured this familiarity in fieldnotes: "Two members recognised [staff member] and approached the membership desk just to say 'hello'. [Staff member] knew them by name and they all shared a joke about a keychain which had been included in the membership kit." The general manager offered an illustration of how these conversations and relationships help the Sixers empathise with users who have different and perhaps unexpected needs. In an interview they described their efforts to revise the copy on a web page targeted at parents. As they are not a parent themselves, they consulted members who are parents. They explained how this generated a new insight: "I don't have children, so how would I know [to provide information about] things like stroller access? I would not have even thought of that. Handy point."

The Sixers also displayed a curiosity which went beyond the immediate needs of the business. The lead author frequently observed team members engaging members, supporters, and general match attendees in conversation which went beyond any such immediate need, and such conversations were not limited to club members. These encounters primarily occurred at the membership desk outside of the match venue, which was observed to double as an unofficial customer service desk in this way. One staff member noted in an interview that the conversations are undertaken with an intentional aim to learn something about the

person and their needs, even where a sale was not an expected outcome. Shadowing fieldnotes captured one such conversation between that same staff member and a tourist:

> [Staff member] carried out an informal chat with an American woman who wanted to see 'short cricket'. Although this interaction would almost certainly not generate a sale, [staff member] seemed happy to have a chat and did not hurry her along by any means. Later [staff member] told me that [they] viewed [their] part in the conversation as 'contributing to [the woman's] experience' and that [they] consider that to be part of [their] job.

Elsewhere, MT&H interviewees explained the value of fan experience survey data used by staff to identify pain points and to generate solutions. One example was a fan perception that stadium food was a poor value for the money. One interviewee explained that "people often complain about stadium food. [They say] it's too expensive and not very good." MT&H and fan engagement interviewees explained how, to respond to this issue, the Sixers attempted to think outside of the box in a way that would not require them to be reliant on venue food and beverage managers to make progress. In doing so, the team eventually organised food trucks to trade in the Fan Zone before matches. Team members explained that this effort was an experiment to be refined on a match-to-match basis in order to hone in on the cuisine offering and price point that would be most appealing to Sixers users, a process which was further observed in WIP meetings and during match day shadowing events.

Joachim, et al. (2020) discovered novel approaches to achieving user focus within SFD research. These included an attempt to study leadership from the perspective of followers (Wells & Welty Peachey, 2016) and the consideration of perspectives beyond the 'users' at hand, such as the perspectives of influential adults in the lives of a pupil / user (Mandigo, Corlett, & Ticas, 2016). The apparent difference between the approach of these SFD studies

and the professional organisation of the Sixers is anticipated by Funk (2017). In proposing the SX framework, Funk (2017) notes that a non-profit sport organisation (of a type often found in SFD) would perhaps be less concerned with recovering financial costs than might a professional sport organisation. Indeed, while the Sixers do not exclusively pursue profit, as evidenced above, they are still responsible for generating revenue and thus must consider returns on any investments made (be they investments of time or capital). As such, pursuit of design thinking must be squared with these concerns. Engagement with the ostensive component—the idea—of design thinking could potentially enhance these user focus efforts by prompting the Sixers to actively include users in a design thinking process (Brown, 2008, 2009). While the nature of user involvement might vary depending on the specific design thinking model used, in all cases such involvement would go beyond mere conversation and surveys by allowing the involved users to actually participate in, for one example, brainstorming sessions. In addition to enabling a deeper user understanding, such user involvement would also correct an identified weakness of some management design thinking approaches, namely that the designer too often remains the central agent of the design process (Kimbell, 2011).

Problem Framing

The design thinking theme of Problem Framing refers to the ways in which an organisation engages with problems and/or opportunities. Resembling what some design thinking processes call *defining*, problem framing involves using the problem or opportunity at hand only as a starting point from which the problem space itself can be widened in order to deliver more value to the end user than would a solution to any single, narrowly considered problem (Carlgren et al., 2016). The Sixers use several techniques to pursue problem framing. First, they use their annual planning days to pull apart functional areas and reassemble them in ways that better served the identified needs of their users. Second, rapid

brainstorming is used in WIP meetings and more informally around their open floorplan office. Third, given the newness of the two leagues in which they compete, the Sixers often model success in the absence of precedent. Finally, problem framing is achieved during operations by filtering such decision making through their organisational values and brand identity.

Every member of the Sixers core team identified the team's annual planning days as the organisation's primary forum for problem exploration and framing. In this forum, the team approaches problems by first breaking them down into smaller pieces. This process was explained by the general manager in an interview:

> We spend a lot of time in our [planning days] actually pulling everything—the key functional areas—apart. And then, based on the [outcome we are trying to achieve for our users], building the blocks back in. And, sometimes they go back in exactly how you pulled them out, but you might find something that gives you an extra 5%, and that's what we're looking for.

Outside of the annual planning days (which are further detailed in the 'Visualisation' section) observation and interviews revealed that the Sixers use rapid brainstorming—both within WIP meetings and through impromptu conversations around their open floor plan office—to overcome complexity and ambiguity. The process was most explicit within WIP meetings, where team members were often observed seeking feedback on a specific topic in order to make decisions that satisfied the needs of all operational areas of the organisation. One experienced staff member described how convenient it was to hold such conversations: "For me, it's easy. It's like scooting around in my chair and asking a quick question." Stadium reconstruction will soon force the team to relocate their offices to a temporary setting at first,

and then permanently to another location. The general manager explained their desire to maintain—and enhance—these benefits of their open floor plan:

> That's what I'm hoping our new format will be like . . . we'll have open plans with phone rooms. Because that just allows . . . [nobody is] feeling uncomfortable about interrupting me or anything because they know they're not. They can see what I'm doing; they're sitting right there.

In these and other approaches to problem framing, the Sixers are demonstrably open to the unexpected. Indeed, given the nascency of the [M]BBL and WBBL competitions (which were completing their eighth and fourth seasons, respectively, during the time of this study), there was sometimes no precedent that might indicate what outcome to expect, or against which to measure any success (or failure) of new innovations. Interviews and observation revealed that the Sixers overcome this complexity and ambiguity through scenario planning—by constructing short- and long-term models of what success might look like. One such ambiguous situation that required novel problem framing was the fact that the Sixers were one of the first two clubs (the other being their cross-town rivals, the Sydney Thunder) to charge for admission to WBBL matches. Because WBBL matches had been free to attend for the first three seasons of the competition, the only indication of whether or not the new charge would deter fans was survey data indicating that, as a MT&H interviewee explained in an interview, "[fans] thought [the WBBL gameday experience] was originally more valuable than [the new price point]. So, when they found that the tickets were so cheap, they were actually more inclined to go." Building on this understanding, the Sixers developed a (problem) frame within which they could meaningfully measure the success of this initiative in the short and long term. The general manager explained:

> This year, the success [of charging for WBBL admission] was measured on: did thousands of people—or hundreds of people—not turn up because it was charged? We assumed it would be "no" and thankfully we were right. That's a "no." Eventually, what we want it to do is . . . we need to get WBBL to the same point as [M]BBL, where it funds itself. Immediate success is [the WBBL] washing its face, so we're not spending more than we're making. Ultimate success will be meeting [key performance indicators] and creating a commercially viable business out of the WBBL.

Further, the Sixers were quick to recognise emergent opportunities as first-movers in charging for attendance to women's matches. One interviewee explained how charging for admission allowed the Sixers to create a brand presence for the Women's team on Ticketek [the official ticket sales platform of the BBL]: "Fans can see the schedule and we can advertise the women's matches on the men's page, so that's kind of free marketing."

The Sixers also execute problem framing during regular operations. Interviews and shadowing revealed that the Sixers frame problems encountered during regular operations by filtering operational decisions through their organisational values in a way that aligns with their brand identity. Put another way, problems are reframed "on the fly" by considering how solutions align with the team's values and identity. Indeed, one interviewee mentioned that game day operations were "rolling problem-solving opportunities." Interestingly this same staff member noted that the team "doesn't really circle back around to revisit problems encountered [on a match day]" because they "know what [they] need to do, and so the solution found in the moment tends to stick." This decision-making process extends even to external contractors, who are treated as "part of the team." For example, the Sixers' event presentation contractors have, as the general manager explained, "been involved with the Sixers for so long they know and have a really good feel for what we're trying to do." Such an understanding allows for unexpected situations, such as match delays caused by poor

weather, to be framed as opportunities such as impromptu dance parties in the stands. Indeed, successive rain delays during the final (and best-attended) match of the [M]BBL regular season presented one such scenario and was captured by the lead author's shadowing of the event operations manager that day. Because the event presentation company has a firm understanding of the Sixers' brand and user-centric values, they were able to start playing relevant music and encouraging people to dance without any instruction from the Sixers staff. The outcome was an impromptu dance party that the general manager later cited in an interview as one of their favourite memories from the season: "I was watching people almost boo the cricket starting again because they wanted to keep dancing in the stands. That shit doesn't happen. It doesn't happen." Rather than being a source of anxiety, then, the complexity and ambiguity of the situation was instead framed as what general manager later identified as "an absolute cracking opportunity to really show people what [the Sixers] are made of".

The ability of the Sixers to prepare for future scenarios resembles the futuristic thinking that Joachim et al. (2020) found characterised SFD research aligned with design thinking themes. Specifically highlighted is research by Beacom and Golder (2015) which sought to overcome stigmatising attitudes toward disabled athletes by developing critical practitioners through a service learning program. As the above story of the Sixers' event contractors illustrates, the Sixers similarly attempt to positively influence the future through present action. That is, by remaining loyal to event contractors and involving them in relevant decision making, the Sixers created a scenario in which those contractors could behave in step with the mission and vision of the Sixers without the need for instruction in the moment. Funk (2017) notes that the attention of researchers tends to take the Sport Context for granted, or to hold it steady. That the Sixers are demonstrably capable of anticipating changes to the Sport Context—even owing to 'acts of God' such as weather delays—suggests that they are already

capable of meaningfully and productively engaging with the Sport Context in delivering sport user experiences.

Visualisation

The design thinking theme of Visualisation is concerned with how an organisation conceives of their path toward generating value for users. Practical approaches include mind maps or customer journey maps, but at a high level, visualisation is characterised by creative navigation of problem and solution spaces that seek to make the abstract more concrete (Carlgren et al., 2016). The Sixers pursue several approaches to visualisation. First, their bias toward action finds them willing to "get stuck in" and visualise by doing. Second, they typically work backwards from the desired goal in order to identify the starting point and path to followed to achieve the goal. They often rely on visual examples such as videos to imagine such goals. Third, the Sixers engage in a cognitive approach to roleplay that allows them to put themselves in the shoes of the users they are trying to reach. Finally, they seek a physical space that better enables these types of creative pursuits.

The Sixers' overall approach to practice can be conceptualised as thinking through doing, a principle which is strongly interrelated to their bias toward action. Interviewees often spoke of "getting stuck in" and/or "giving things a go" as they described an organisational culture in which they are not afraid to fail intermediately in the pursuit of eventual success. A senior staff member explained in an interview:

> We've all got a pretty big mentality that no idea is a bad idea. So, I think we're pretty open to giving stuff a go . . . even if it's a bit outlandish or, you know, to some might seem like a difficult thing to pull off. We'll still be able to try it at one of the games. . . . We'll put it on the big stage straight away and see how it goes.

The Sixers generally create ideas by visualising their desired outcome—the "why" as it was referred to in interviews—before working backwards to identify the starting point and the road forward. Observation revealed that visualising the desired outcome frequently begins with seeking inspiration from external media such as videos and photos. In both the Sixers planning days and WIP meetings, the lead author observed the team using videos of activities and promotions from other leagues and codes as both a source of inspiration and as a tool for illustrating their own original ideas. Fieldnotes captured one such instance during a WIP meeting in which a team member used their phone to share a video of an activation they'd seen at an NBA game. The visual aid made clear the engagement of the crowd and the Sixers immediately began to adopt and build upon the idea. A similar occurrence unfolded in a WIP meeting after the WBBL04 Big Final, in which the Sixers played. Having been the hosts for the match, the Sixers staff were able to distribute Sixers-branded flags to fans seated on the hill of the oval. The lead author attended this match and noted that the hill turned into a "sea of magenta." Having created such a compelling visual, the Sixers used this subsequent WIP meeting to reverse-engineer it to achieve a similar effect at a future Men's match. The general manager told the team to "be tactical about it" and the team were quickly able to work out the logistical differences that the two match venues present in order to come up with a plan for recreating the effect in a different setting.

Interviews also revealed that when the Sixers have more lead time to generate desired outcomes, they spend time trying to assume and visualise the perspectives of their users. This practice resembles roleplay, though it was explained as a cognitive exercise conducted by individuals rather than as a group activity. Two different team members spoke in interviews about how they tried to put themselves in the shoes of their fans (which also evoked the organisation's user focus). The first explained, "We kind of go through how or if

this will work or not. How will people utilise it?" while the second expanded on that same mental exercise:

> I like to go through and think "What would I think if I was receiving a membership package?" for example or, if it's hospitality, "What would I value if I was coming into a private suite to entertain clients?" So, yeah, I think my visualisation process is more around seeing things from the other side and what would satisfy me if I was the one spending my money on this product. . . . And, what would I say is valuable?

Where possible, the Sixers conduct such creative activity outside of their office in a physical space that they perceive to be more conducive to creative thought, thus allowing for enhanced visualisation. Interviewees revealed that ahead of the 2018–2019 seasons, the team conducted their annual planning days as a retreat in the Hunter Valley wine region outside of Sydney, with one interviewee detailing how it was "good to get away from the office for a few days and sort of let the creativeness flow a little bit." During the period of this study, their (observed) planning days were held in a vacant gallery space in the Sydney suburb of Darlinghurst. In an interview, the general manager explained that this was about getting the team out of their routine and into a comfortable place:

> We don't do our planning [days] on site. Because [the office] is a very formal and structured environment, and that's exactly what [we] don't want when we're talking about creativity, [we] don't expect [anybody] there in work gear. So, [we say,] "Come in t-shirts and shorts. Come in a jumper and jeans. Be comfortable."

While the general manager also flatly acknowledged that the Sixers were "not very good at prototyping or anything like that," the examples of the Sixers approach to visualisation discussed in this section—examples of thinking through doing—do suggest a group cognitive process that resembles prototyping in that it attempts to visualise not just how an idea could

come to fruition, but also how the end user would engage with that idea. Indeed, as the illustrative quote for this theme in Table 7 suggests, practical prototyping is virtually impossible, as it is difficult to artificially recreate the conditions of something like a match day. As a result, the team has to rely on experience and imagination in order to anticipate how proposed innovation would work in practice.

Similar approaches—and a bias toward action in general—were found in SFD research which aligned with design thinking themes (Joachim, et al., 2020). Rather than enduring the delay of prolonged planning, Meir (2017) used pilot programs to make immediate and rapid progress. Meir's (2017) approach resembles the Sixers' willingness to immediately put ideas into practice as a means of generating feedback through the conversations and user experience surveys discussed in the User Focus section. This bias toward action effectively shortens the distance between the Sixers (within the Sport Organisation element of the SX framework) and their users (the Sport User element). In doing so, the need for practical prototypes is potentially eliminated. At the same time, the positive outcomes which might be generated by directly involving users in a design thinking process are further highlighted.

Experimentation

The design thinking theme of Experimentation refers to an organisational willingness to generate and test iterations of ideas. In design thinking practice, this uniquely involves rapid and repeated failure through testing as well as embracing failures as an unavoidable part of the innovation process (Carlgren et al., 2016). The Sixers' practice reflects the characteristics of this theme in several interrelated ways. First, they pursue new ideas as a matter of organisational principle. Second, they work from a diverse set of ideas. Third, there is an organisational recognition that failure was an intermediate possibility in the pursuit of

success. Finally, all of these aspects are supported by their good humour and playfulness as individuals and a team.

The principles and mindsets of being curious and creative, learning-oriented, and eager to share are interrelated—particularly as reflected in the Sixers' practices of pursuing new ideas as an organisational principle. The general manager framed creativity as key to sustainable improvement for the organisation:

> [Creativity is] crucial to us improving year on year. We're not going to get any better if we keep doing the same thing. Sport has a habit of just doing the same thing and expecting to get better results. We need to constantly evolve.

To pursue such fresh ideas, the Sixers employ a learning orientation that reflects their overall curiosity. All interviewees acknowledged a culture of asking questions; one senior team member illustrated the reciprocal nature of this culture of curiosity: "I want to try and feel like I'm someone that can help out [other members of the team] and point people in the right direction." The curiosity of the team even extends to the present research project. One team member used their interview as an opportunity to find out more about the lead author and their ambition for the study, while another team member used downtime during a shadowing event to do the same. The lead author's fieldnotes captured these interactions—e.g., "How's [the project] going? You getting everything you need?"—which illustrate not only the curiosity of the Sixers, but also their eagerness to share.

The Sixers' learning-orientation allows them to generate and then draw upon a diverse set of ideas. For instance, one team member declared in an interview, "Some of the stuff that comes out of [our] mouths is crazy, but that's kind of what I like." Once ideas are refined to the point of being actionable—such as the food truck example discussed in the User Focus section—the Sixers do not hesitate to put them into action. From there, iterative testing is

employed and benchmarks for success are used to determine which ideas to keep, which to refine, and which to let go after an adequate period of testing. Learning continues at this stage of the process. The general manager explained in an interview that the organisation "learn[s] a lot in hindsight as opposed to in the lead up to" but also suggested that this takes some pressure off the team, as even missing the mark was interpreted as a learning opportunity: "Crowd numbers we judge against our [key performance indicators], and we didn't meet that this year. Was it a total disaster? No. We learnt some really good stuff that's going to set us up for long-term success." The framing of missed targets as opportunities for learning suggests that the Sixers recognise and embrace intermediate failure as a possibility in the pursuit of eventual success, a key trait of the experimentation theme (Carlgren et al., 2016).

Joachim et al. (2020) found that SFD research aligned with design thinking themes often used tests to obtain user feedback. This echoes Ratten's (2016) claim that public or nonprofit sport organisations tend to be less risk-averse in pursuing innovation. Naturally, this pursuit overlaps with themes of User Focus and Visualisation, but specifically relates to experimentation as such testing is inherently iterative. Such testing is not without risk in SFD, as any potential failure can be costly for a program with limited funding, and more costly still for participants who might be at risk (Joachim, et al., 2020). As illustrated above, the Sixers have more financial flexibility than most public or non-profit sport organisations and are thusly better equipped to navigate intermediate failures, especially where such intermediate setbacks might eventually generate even larger returns. The format of T20 is itself relatively new within cricket, and thus the Sport Context element of the SX framework with which the Sixers must engage is far from fixed. While they are managing to navigate this uncertain landscape capably, adoption of design thinking might enable them to do so more effectively.

Diversity

The design thinking theme of Diversity relates to the diversity of perspectives present in the design team, as well as the team's attitude toward such diversity of thought. In design thinking practice, this diversity extends beyond the team itself and includes the consideration of outside perspectives (Carlgren et al., 2016). Such diversity is reflected in the Sixers' practice in three ways. First, the Sixers make efforts to include perspectives—especially those of users—which are missing from their own internal team. Second, the Sixers enjoy and perpetuate a democratic spirit with these external parties and within their own organisation. Third, the Sixers seek to capitalise on being embedded within larger organisations to generate still greater diversity.

As discussed in the User Focus section, the Sixers are aware that the perspectives of their user base are not always present within their own team. The general manager explained the nature of this problem in discussing the team's ongoing efforts to create an inclusive environment for LGBT fans:

> [We] can't have a group of heterosexual people sit in a room and make decisions on what the LGBT community need to see and need to feel in order to engage in sport. So, we need to find experts who can help us in the why and delivering the why. Because we know what we want our why to be, but we're not always going to have the answers.

To remedy this situation, the Sixers achieve a rich diversity of perspectives by including external parties in their strategic planning. Interviewees across all departments spoke of engaging external partners—including ambassadors from diverse groups (such as those within the LGBT community)—as well as organisations with operational expertise, such as event presentation contractors.

The inclusion of these external perspectives represents a democratic spirit that extends to the core Sixers organisation. Interviews and observation revealed that each staff member makes an effort to ensure that as many people as possible can be seen and heard. The general manager noted in an interview that, shortly after they were promoted, they spoke to stakeholders across the business—including coaches and players—about "what values they wanted the organisation to be held accountable to" because they believe "managers shouldn't dictate values." Similarly, observations of WIP meetings revealed that the Sixers involve team members at every level—including interns—and from every department in relevant operational discussions. CNSW staff members from different functional areas attend Sixers WIP meetings when required and interns were present in every observed WIP meeting. One team member with multiple years of experience working with interns explained the value of the intern perspective: "Because they're new to [sports], [interns will] pick up on little things that you think [customers] should [automatically] know. You might think [a marketing message] is clear, but they'll say, 'No, it's not straightforward to me.'" Such a democratic spirit also had the effect of creating a shared sense of ownership for success (and failure).

The diversity of perspectives enjoyed by the Sixers is further enhanced by their being embedded in the larger organisations of CNSW and CA. As previously mentioned, the Sixers share human and other resources with CNSW when needed, but they also enjoy a fruitful partnership with their parent organisation, CA, which in turn manages the larger BBL organisation. However, interviews highlighted that this partnership is not without its challenges. The hierarchical structure has a significant effect on the Sixers' ability to strategise as a club. One example of this is a mobile app the Sixers were developing independent of CA. A Sixers team member who had been involved in every step of the process explained the situation:

> We were three quarters of the way down the path [of] developing our own app, and then CA made us go into their app. And now they're unsure whether they want to continue the development of that app. That's a key frustration that really held up all of our chatbot and [augmented reality] work this year.

While the organisational support of CA was universally and positively recognised by all interviewees (in particular, training opportunities in which CA brings operational counterparts from all of the different clubs together were praised by all staff who had participated in such training), examples such as that of the abandoned mobile app represented frustration for several members of the team. The general manager spoke about efforts to coordinate with the general managers at other clubs in order to give CA "the view from the coalface" and expressed a feeling that this would improve matters for all involved parties.

Where competing institutional logics intersect but do not merge in sport organisations, hybrid organisation types emerge and can sometimes result in organisational dysfunction (Svensson, 2017). While the relationship between the Sixers and CA is not dysfunctional, the dynamic could be improved, as noted above by the general manager. Tension between the two organisations plays out within the Sport Organisation element of the SX framework, possibly making it more difficult still for the Sixers to contribute to a holistic sport user experience. However, much as design thinking encourages the involvement of users in the design process, so too does it encourage involvement of other stakeholder groups. As noted, the Sixers have established and maintain strong and flexible relationships with external partners who become actively involved. Involving CA in a design thinking process could potentially help both organisations reconcile any competing institutional logics to not only their own mutual benefit, but also to the benefit of the sport users they serve.

Implications, Contributions and Conclusion

The purpose of this study was to discover if the current practice of the Sydney Sixers aligns with any or all themes of design thinking, and to explore the nature of any such alignment. The thematic design thinking framework of Carlgren et al. (2016) served as the theoretical framework for this exploration. Through this lens, we identified principles and mindsets, practices, and techniques used by the Sixers which align with all five themes of design thinking. While a recent scoping study found alignment with all five themes in fourteen SFD research studies (Joachim et al., 2020), our study extends that work into sport development and represents the first exploration of design thinking alignment in the practice of a sport organisation. Further, our study answers calls for research into the means by which innovation is achieved in both non-profit (Schulenkorf, 2017; Svensson & Cohen, 2020) and for-profit sport organisations (Smith & Green, 2020). This section explicates the implications of these findings and highlights opportunities for future work.

First, where the practice of a sport organisation aligns with all five themes of design thinking, as the Sixers practice does, the organisation is potentially capable of the performative component of design thinking. That is to say: they are capable of the enactment of design thinking (Carlgren et al., 2016). As a complete design thinking practice consists of both the performative and the ostensive ('the idea') components (Carlgren et al., 2016), sport organisations which align with all five themes of design thinking may be well-suited to adopting design thinking models or processes into their practice as a human-centred means of creating value for their users. While many models of design thinking have been put forward and tested, the five step process propagated by the Stanford d.school—empathise, define, ideate, prototype, test—has proven popular and durable in the broader field of management (Carlgren et al., 2016) and thus might be a model sport managers could usefully adopt into their practice.

Second, the Sixers' alignment with the themes of user focus, problem framing, and visualisation link to components of the SX framework, an approach to designing holistic sport experiences that is 'consumer-centred' just as design thinking is user-centred. Recall that the sport user is something of a moving target for sport practitioners and researchers, as their preferences are constantly evolving. This evolution makes the unmet needs of the sport user difficult to identify and deliver upon. However, our findings reveal that the Sixers have put the user at the centre of their strategic planning, which suggests that are fully engaged with the Sport User component of the SX framework. Meanwhile, the problem framing and visualisation capabilities of the Sixers suggest engagement with the Sport Context component of the SX Framework. Funk (2017) notes that the Sport Organisation component of the SX framework is under-researched and that commercial sport organisations in particular have a hard time reconciling sacrificing maximum financial return in order to deliver their part of an experience design. The Sixers, meanwhile, provide a potential avenue by which such concerns might be balanced. Namely, their ability (and willingness) to filter their strategic decisions through their organisational values indicates that maximum financial returns are not always the sole goal. Perhaps other sport organisations can achieve similar balance by adopting the user focus, problem framing, and visualisation approaches which the Sixers display. This might be achieved through engagement with a model of design thinking and/or the SX framework.

Third, and further to the previous contribution, the willingness of the Sixers to experiment indicates that they are potentially as happy to innovate as are nonprofit sport organisations. Recall that nonprofit sport organisations are thought to be less risk-averse than larger sport organisations owing to the fact that they often enjoy steady funding regardless of financial return (Ratten, 2016). The Sixers rely on revenue generation for their financial sustainability, and yet they are demonstrably willing to experiment. Further, they embrace intermediate

failure that might be encountered on the path to success. This challenges assumptions about the risk-aversion of sport organisations in different sectors, and represents a promising avenue for future research.

Finally, the Sixers alignment with the design thinking theme of diversity demonstrates that external stakeholders can contribute positively to innovation, and that the conflict of competing institutional demands (in this case, the sometimes incompatible expectations of the Sixers' parent organisations) might be solved by adopting similar approaches. Indeed, the practice of the Sixers discussed in our findings reinforces Svensson and Hambrick's (2018) findings that external stakeholders can and do positively contribute to organisational innovation. Indeed, the examples we discuss can be adopted by other professional sport organisations toward improving their organisational innovation efforts. Likewise, that design thinking embraces a diversity of perspectives suggests that it might also be a way by which the challenge of competing institutional demands might be effectively managed to avoid organisational dysfunction (Svensson, 2017). While the positive effects of pursuing a diversity of perspectives within sport organisations can be enjoyed even without engaging with design thinking, the use of design thinking (or even discrete design thinking activities) is a straightforward way to incorporate diverse perspectives into practices where such diversity is absent (Carlgren et al., 2016).

Future work can extend the present study, possibly toward a sport management model of design thinking. While this study found the Sixers to be already aligned with all five themes of design thinking, any similar exploration of sport management practice which finds alignment with only four (or fewer) themes of design thinking can undertake an intervention to bring the practice of the organisation into alignment with all five themes. Once alignment with all five themes is established, the organisation is well-positioned to engaged with the

ostensive component of design thinking. The study of sport organisations using design thinking models, processes, and/or activities in practice is another promising avenue for future work.

The pursuit of human-centred value creation in sport management echoes the customer-centred SX framework proposed by Funk (2017). Where three interrelated elements—Sport User, Sport Context, and Sport Organisation—converge, a holistic sport experience is created. Funk (2017) notes that the Sport Organisation element tends to be overlooked in sport consumer behaviour research. Our study has focused almost exclusively on the Sport Organisation context, and specifically on the efforts of that organisation to discover and fulfill the unmet needs of their users. Accordingly, the potential of design thinking to enable sport organisations to achieve holistic sport experiences is foregrounded. As noted above, future work might meaningfully explore how the use of design thinking enables the creation of such experiences through the SX framework, particularly as it calls for the involvement of users in the design thinking process.

The field of sport management continues to evolve, requiring in-kind evolution of management approaches in sport organisations. As the boundaries among traditional sectors of sport management continue to blur, and the behaviour of sport consumers continues to change, approaches to innovation, in particular, must evolve to suit new operational contexts for sport organisations and the new targets (i.e., users) within those contexts. Design thinking offers such a human-centric approach to innovation. Our exploration revealed alignment between all five themes of design thinking practice (Carlgren et al., 2016) and the practice of the Sydney Sixers, a professional sport organisation that also serves users who have traditionally been served by nonprofit or volunteer organisations. This alignment suggests that design thinking can be usefully adopted by sport organisations to more meaningfully

navigate the competing institutional demands that are arising as sector boundaries blur. Indeed, as alignment between SFD research and design thinking themes has previously been established (Joachim et al., 2020), design thinking appears to present promise to sport organisations in different sectors of sport management. Further, as our exploration revealed that the Sixers developed design competency in their execution of the performative components of design thinking, an opportunity exists to meaningfully link the fields of sport management and design through an intervention that introduces the ostensive component of design thinking into sport management practice.

Study Three:

“This is how I want us to think”: Introducing a design thinking activity into the practice of a sport organisation

Abstract

As sport users continue to evolve, so must the approaches sport organisations take to optimally serve them. From the field of management, design thinking arises as a promising means of pursuing the human-centred generation of value for users. To establish the suitability of design thinking activities for use in sport management practice, we undertook a qualitative case study intervention within a commercial sport organisation. An activity derived from design practice, known as the Lightning Decision Jam (LDJ), met emergent criteria of suitability for adoption in practice. Further, engagement with the activity linked to themes of design thinking in a manner consistent with previous explorations of design thinking in sport management research and practice. As such, this study builds on nascent but evolving work on design thinking in sport management and carries implications for both fields.

Introduction

Sport researchers have begun to investigate the possibilities that design thinking might hold for sport management practice (e.g., Joachim et al., 2020; Joachim et al., 2021; Svensson & Mahoney, 2020). In broad terms, design thinking is a human-centred approach to innovation that makes accessible the *thinking* and the *doing* of expert designers to non-design practitioners, such as sport managers (Carlgren, Rauth & Elmquist, 2016; Johansson-Sköldberg, Woodilla & Çetinkaya, 2013). For sport managers, this approach might represent a way by which holistic sport experiences can be designed for sport users (Funk, 2017). Further, the use of design activities in sport management might help organisations pursuing hybrid profit/non-profit goals to better reconcile such pursuits by restoring reflection (and, thus, knowledge creation) to sport practice (Edwards, Skinner & Gilbert, 2002; Ratten, 2016). In general, traditional approaches to innovation in sport management may or may not yield the best outcomes and thus new approaches (such as design thinking) are needed. Indeed, design researchers have argued that practitioners in non-design fields would benefit from adopting the approaches of expert designers (Dorst, 2011), which is exactly what design thinking offers non-design practitioners.

The distinction between expert designers and non-designers is apparent in the two academic discourses of designerly thinking and design thinking. Johansson-Sköldberg et al. (2013) explain that the designerly thinking discourse is interested in how professionals in design and related fields (such as architecture and art) carry out and engage with their practice as a means of creating artefacts, reflecting upon practice, solving problems, making sense of things, or creating meaning. The design thinking discourse, meanwhile, is interested in how the practices and competencies of expert designers might be adopted into management practice and/or theory (Johansson-Sköldberg et al., 2013). While these two discourses highlight design thinking's roots in the academic field of design, the concept has more

recently matured into a theory of management practice in which the principles/mindsets, practices, and techniques used by design thinking practitioners can be usefully identified and classified into themes within a managerial framework rather than a design framework (Carlgren et al., 2016).

That design thinking has its roots in the academic field of design carries an important implication for sport managers who would pursue design thinking: a very broad definition of the end user could include the practitioners (i.e. sport managers) themselves (especially within the concept of design as a way of making sense of things) or, indeed, any other stakeholder that could be meaningfully served by the organisation. While research on design thinking in sport management is still in its infancy, a number of recent studies suggest that the concept holds promise for both for-profit and non-profit sport organisations. Specifically, a recent scoping study discovered alignment with themes of design thinking practice in sport for development research (Joachim et al., 2020), while elsewhere design thinking traits were found to characterise the culture of highly innovative sport for development organisations (Svensson & Mahoney, 2020). Meanwhile, exploration of the innovation practices of a professional sport organisation found alignment between that practice and all five themes of design thinking (Carlgren et al., 2016), indicating that the organisation is capable of the performative component of design thinking and needs only to engage with the idea itself to potentially enjoy the user-centred outcomes that the process can offer (Joachim et al., 2021). The purpose of the present study, then, is to extend this prior work by exploring the use of a design thinking activity within the practice of a commercial sport organisation—the Sydney Sixers of the Big Bash League (BBL), Australia's professional Women's and Men's Twenty20 (T20) cricket competition. We first review the need for new approaches to innovation in sport before introducing the concept of design thinking. We then present the context of T20 cricket, the BBL, and the Sixers before outlining a three-phase method of

problem and context exploration, intervention, and evaluation. The results are then presented in accordance with these three phases. Finally, we discuss the implications of our findings and highlight the contributions this study makes to both the sport management and design thinking fields.

Literature Review

The need for new approaches to innovation in sport

As sport organisations began to shift from amateur models of management to more professionalised and sophisticated models, the concept of innovation—simply: the pursuit of new ideas—assumed new importance to sport managers and has thus generated increasing interest among sport researchers (Potts & Ratten, 2016). Indeed, innovation continues to be researched in every corner of the sport management field—even the development of innovative ideas and theories within sport management research itself has been explored (Funk, 2019). While innovation continues to be researched in all sectors of the sport industry, it has most recently enjoyed increasing attention in the non-profit/volunteer and public sectors. Such work has explored—among other topics—innovation in community sport organisations (Hoeber, Doherty, Hoeber & Wolfe, 2015), the role of innovation in sport for development training programs (Pate et al., 2020), innovation as a facilitator of understanding between sport for development programs and their local communities (Brake and Misener, 2020), and the impact of external stakeholders on social innovation in sport for development organisations (Svensson & Hambrick, 2019).

Overall, Ratten (2016) identified research of sport innovation management as a means of advancing the broader academic field of sport management. She noted that innovation within the sport context differs to that of traditional businesses, as sport organisations enjoy more intimate connections with their consumers and are more likely to pursue both for-profit and

non-profit (i.e., hybrid) goals (Ratten, 2016). The potential complications of attempting to reconcile these hybrid goals are made clear by the ways in which motivations to innovate differ within organisations dedicated to profit (typically found in the commercial sector) or non-profit (typically found in the volunteer/non-profit and public sectors) goals exclusively. Non-profit sport organisations do not appear to be risk averse in their pursuit of social innovations (Winand, Scheerder, Vos & Zintz, 2016), possibly owing to the fact that their funding sources (primarily grants and/or donations) are not dependent upon implemented innovations generating a financial return (Ratten, 2016). Meanwhile, despite the fact that they typically enjoy more research and development capabilities (to say nothing of human and financial resources) than non-profit sport organisations (Winand & Anagnostopoulos, 2017), commercial sport organisations tend not to be flexible enough to foster innovation in the manner that their non-profit counterparts can and do (Ratten, 2016). Hence, a conundrum arises: sport organisations that tend to be the most willing to pursue innovation also tend to be the least capable of doing so, and vice versa. Thus, to enjoy the best of both worlds requires new approaches to innovation in sport.

The broad differences between for-profit and non-profit sport organisations in regard to motivation and capacity to pursue innovation highlight that attempting to balance hybrid profit/non-profit goals within a single sport organisation presents a unique and complex challenge for sport managers. Even the language used by non-profit sport practitioners to describe their innovation efforts differs from that of profit-oriented organisations, underscoring that porting the frameworks used in for-profit contexts into non-profit contexts is an imperfect approach that could prove futile, if not harmful (Svensson, Mahoney & Hambrick, 2020). Indeed, Ratten (2016) noted that the explicit and tacit knowledge of a sport organisation (and its members) must be incorporated into adopted innovation techniques, which highlights such organisational knowledge as a potential focal point for identifying and

modifying adopted innovation approaches for use in different contexts. However, Edwards et al. (2002) outlined that energy and time for reflection are often absent within the practice of commercial sport organisations. Given the unpredictable nature of the sport environment, this lack of reflection has the potential to limit the ability of sport practitioners to convert their lived experiences into individual and, by extension, organisational knowledge (Edwards et al., 2002). Hence, innovation activities which facilitate reflection might be more readily adaptable to both the for-profit and non-profit contexts than would any activity merely ported from one context to the other without modification.

What for-profit and non-profit sport organisations have in common is a focus on the sport user. Indeed, the sport user is a focal point around which for-profit and non-profit goals might be meaningfully reconciled within sport organisations attempting to pursue hybrid goals. However, these users are something of a moving target, as their preferences and needs are in constant flux. Where once sport consumers were thought to possess—among other supposedly unique traits—inalienable loyalty to their team (Stewart & Smith, 1999), recent research has shown that team-level loyalty is actually shared by multiple teams (Fujak, Frawley, McDonald & Bush, 2018). This has major implications for commercial sport organisations, which suddenly find themselves competing for a smaller share of the constantly shifting attention of consumers. Attempts to understand their preferences and needs have resulted in the creation of tools such as the Psychological Continuum Model, which offers insight on how loyalty to a team or sport is developed within sport consumers (Funk & James, 2001). While such tools are undoubtedly useful for understanding how existing users engage with sport, only recently have similar tools been constructed with the goal of identifying and fulfilling unmet needs of both existing and would-be consumers. One such example is the Sport Experience (SX) design framework, a consumer-centred approach to understanding the needs of consumers and a sport organisation's role in fulfilling those

needs (Funk, 2017). The framework highlights the interrelated nature of (1) the needs of the sport user, (2) the experience a user has while attempting to fill those needs through sport, and (3) the role of sport organisations in facilitating the desired experience while still achieving the organisation's financial goals. Holistic sport experiences are created when the needs of all three components are balanced, including the achievement of different organisational goals (i.e., profit or non-profit). Though the SX framework provides a promising avenue by which hybrid goals of sport organisations might be pursued and achieved, the sport organisation context outlined in the framework remains underexplored (Funk, 2017). Hence, the present search for a new approach to innovation in sport seeks to address this shortfall.

Funk (2019) highlighted two ways of developing new approaches in sport management: look to other fields for theories or concepts that might be meaningfully and usefully applied in sport, or generate new ideas from the ground up within sport. In line with calls for sport researchers to look beyond the domain for inspiration (Shaw & Hoeber, 2016; Singer et al., 2019), this study takes the first of Funk's suggested approaches and looks to other fields to identify user-centred means of generating innovation. Within the broader field of management, design thinking emerges as just such a concept of promise. Indeed, the concept has been identified and recommended as a critical area of future study in sport for development (Schulenkorf, 2017). Further, alignment with themes of design thinking practice has been discovered in sport for development research (Joachim et al., 2020) and the practice of a commercial sport organisation (Joachim et al., 2021), suggesting it might be capable of bridging the gap between for-profit and non-profit sport organisations. As the concept of design thinking is still relatively new in the sport management context, we now briefly review its foundational studies, themes, and models.

Design thinking

Roger Martin laid the groundwork for what we now know as design thinking (Dunne & Martin, 2006). In evaluating how to add value to MBA programs, Martin identified a need to move from the traditional problem-solving methods used by managers to those used by expert designers. The difference between the two approaches, he argued, comes back to the fundamental logic each employs. The traditional approach to solving management problems relies on deductive and inductive logic: a manager defines the problem at hand and goes about solving it based on available knowledge, established protocols and their own experience. Meanwhile, a designer uses abductive logic—which Dunne and Martin (2006) defined as 'the logic of what might be' (p. 513)—to envision outside-of-the-box possibilities and, thereby, develop novel solutions. This was supposedly achieved by not only considering the needs of end users, but also by interfacing with them to better understand those needs. This collaboration—both with the users and with one's peers—is necessary when considering how the design will fit into larger 'systems', including the whole of society (Dunne & Martin, 2006).

During the time Martin was developing and promoting his idea of design thinking, Tim Brown, CEO of design firm IDEO, was promoting his own concept of the same. Based largely on his experiences working with clients, he conceived design thinking as a methodology for innovation that is human-centric and is focused on the needs and wants (simply, the desires) of end users. Through observing the design practice of firms that had hired IDEO to help them spur innovation, Brown (2008, 2009) identified five personality traits common to a design thinker: empathy, integrative thinking, optimism, experimentalism and collaboration. From here he developed the outline of a process for undertaking design thinking that involved three repeating steps of inspiration (identifying a problem and/or opportunity worth exploring), ideation (generating and testing designs to solve the problem

and/or exploit the opportunity) and implementation (making the design a reality for users).

Despite the promise of Martin and Brown's foundational models of design thinking, it is the design thinking model developed at the Hasso Plattner Institute of Design at Stanford University (a.k.a. the d.school) which has enjoyed sustained popularity and durability among design thinking practitioners and educators (Carlgren et al., 2016; Johansson-Sköldberg et al., 2013). The Stanford d.school (2010) model of design thinking unfolds in five steps of empathising with end users (through ethnographic research or similar techniques), defining the problem (using techniques such as 'how might we' questions), ideating solutions (through any number of creativity exercises—ideally with the involvement of end users), prototyping (rapidly developing viable versions of ideas with which users can be observed engaging), and testing of prototypes with end users. Not only is the d.school model used to structure design thinking subjects taught by the lead author at the University of Technology Sydney (UTS), but it has likewise been proposed for use in sport management pedagogy specifically. Pierce, Davies and Kryder (2019) outline how the d.school model might be usefully employed in a sport management capstone course, including recommendations for specific activities students might undertake within each step of design thinking. The authors suggest how the process might be used to approach ill-defined problems in the field including (but not limited to) redesigning the youth sport travel experience, encouraging free play among children, and redesigning the experience of purchasing event tickets (Pierce et al., 2019).

Adopting design thinking to sport management

Since the introduction of these foundational models, the concept of design thinking has continued to evolve. By 2016, the management concept of design thinking had matured as such that it could be studied in practice as a phenomenon shaped as much by the idea of design thinking as by the environment in which it was employed. That is to say, design

thinking could be studied as it had been adopted into and used in practice. Accordingly, Carlgren et al. (2016) developed a scholarly frame for studies of design thinking in theory and practice. Their findings revealed that although businesses implement various design thinking activities, all of those activities could be categorised under at least one of five themes: user focus (maintaining the unmet needs of the user as the focus of design efforts), problem framing (engaging with and interpreting the problem and/or opportunity at hand), visualisation (the manner in which design thinking practitioners conceive of their path toward meeting unmet user needs), experimentation (iterative testing of solutions and/or ideas), and diversity (seeking and drawing upon differing perspectives within the team). As it provides a means by which to conceptualise the ostensive ('the idea') and the performative ('the enactment') components of design thinking practice, this thematic design thinking framework underpins our study.

In suggesting the adoption of derivative theories such as design thinking in sport management studies, Funk (2019) noted that scant attention has been paid to the potential effect that such adoptions might have back to the parent field. Thus, in addition to exploring the potential of design thinking to help sport organisations better innovate, this study also seeks to contribute to the parent field of design thinking. The overall aim of this exploration, then, was twofold. Through an intervention with a professional sport organisation we sought to (1) identify a design thinking activity (derived from the field of design) which is suited to the existing practice of a professional sport organisation and (2) which might establish or enhance existing links between the practice of that organisation and various themes of design thinking. Such an investigation is critical to uncover the usefulness of adopting this theory into the sport management field to help sport organisations overcome the human-centred challenges they currently face.

Method

Choice of context and participants

Within the commercial Australian sport marketplace, the BBL —the country's professional Women's and Men's T20 cricket competition—presented an interesting and timely opportunity for studying the use of design activities in sport management innovation practice. As the newest of the three main formats of cricket, T20 relies on modified rules to generate a more exciting on-field product than other formats (i.e., one day and test cricket) are thought to offer younger or more casual cricket fans (Hyde & Pritchard, 2009). To capitalise on this heightened excitement, BBL matches are presented in a dynamic manner built around bright team colours (including magenta and 'electric green', among others), pyrotechnics ignited to celebrate big plays, the playing of popular music in venues during match downtime, and broadcast innovations such as microphoning and interviewing players during play (Sturm, 2015). As the product differs substantially from more traditional cricket formats (where the cricket itself tends to be the main draw and other forms of entertainment are rare or absent), BBL clubs must constantly work to not only understand what ideas are or are not working, but also uncover deeper insights (including the unmet needs and desires of their users). However, the eight BBL clubs do not always have the luxury of analysing past performance to inform future practice, as the league is among the newest of the major sporting competitions in Australia (the first Men's season took place in 2011/12, and the first Women's season in 2015/16). The operational environment of the BBL, then, is one of uncertainty—where traditional approaches to innovation may or may not yield the best outcomes and, thus, new approaches (such as design thinking) are needed.

Accordingly, a decision was made to approach the two Sydney-based BBL clubs—the Sydney Sixers and the Sydney Thunder—to see if they would be both receptive to the

concept of design thinking and willing to participate in this study. The lead author secured a preliminary meeting with the present general manager of the Sydney Sixers (who was the marketing and media manager at that time) through their personal network and thus the Sixers were opportunistically pursued first. In this initial meeting, the (now) general manager of the Sixers expressed a desire to not continue doing things the way they have always been done, 'just because that's how they've always been done'. The organisation was ultimately interested in the promise of design thinking and agreed to participate in this study. While the Sydney Thunder were consequently not approached as a result of the Sixers' receptiveness to design thinking and willingness to participate, the Thunder might represent a worthy case study for future research.

At the time of study, the Sixers' organisation consisted of six permanent staff supported by employees from other related organisations, interns, and volunteers. The organisation itself is embedded within the larger Cricket New South Wales (CNSW) organisation, the state body responsible for delivering and promoting cricket. In turn, CNSW is embedded within Cricket Australia (CA), the sport's national body. In addition to these internal resources, the Sixers are further supported by partnerships with external stakeholders, including media organisations and broadcasting companies (which are involved at a national level), but also event presentation contractors, venue managers and community ambassadors (who engage directly with the Sixers). The six permanent staff members represent the Sixers' central planning unit and the structure of the organisation is accordingly flat, with all staff (membership, ticketing and hospitality [x2]; digital media; media partnerships; and event operations) reporting directly to the general manager. This central unit develops, executes and reflects on strategy in annual cycles in line with each season of the Women's and Men's Big Bash League (WBBL and [M]BBL, respectively). The primary strategy-planning event in this cycle is the Sixers' annual planning days, which take place offsite after the conclusion of

each season. These sessions see the Sixers staff analyse the previous season to make improvements and to generate new ideas for the upcoming season. The months in between these planning days and the season are spent developing these ideas into practice. The developed ideas are then implemented and monitored during the season before being properly assessed during formal 'debrief' sessions after the season has concluded, at which point the cycle begins anew.

In step with this cycle, data collection began in November 2018 as the Sixers were preparing for the start of the 2018/19 WBBL and [M]BBL seasons and continued through April 2019 as they began to look ahead. The lead author was introduced to the team at a work-in-progress (WIP) meeting on 7 November 2018, during which they outlined the aim of the study and provided consent forms and general information. All data were collected at the CNSW offices (within which the Sixers were housed at the time), at the Sydney Cricket Ground (the Sixers' primary venue used for standalone Men's matches and—during the time of data collection—Women's/Men's doubleheaders), or at Hurstville Oval or Drummoyne Oval (suburban venues used for standalone Women's matches).

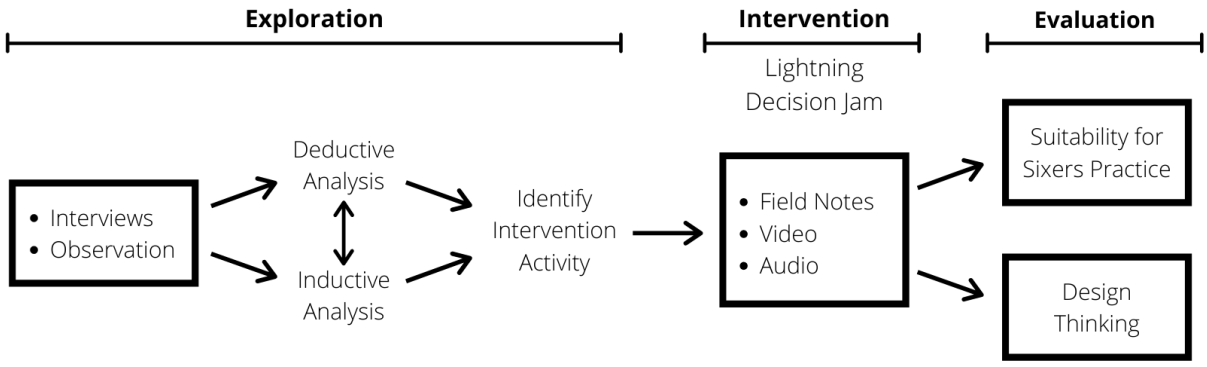
Research approach and design

As the present review of the design thinking literature highlighted, the concept is a social process that makes use of the diverse perspectives of individuals who undertake it (Brown, 2008, 2009; Carlgren et al., 2016). Accordingly, our attempt to explore the use of design thinking in sport management practice assumed a social constructivist perspective. This paradigm subsequently informed a qualitative approach in which the Sixers served as an instrumental case study (Stake, 1995). As noted in the previous section, the team's participation in this study was based on a mutually beneficial arrangement between practitioners and researchers. Specifically, the proposed intervention represented a free

design thinking consultation for the Sixers and open access to the organisation's practice for the authors as researchers.

Accordingly, and consistent with recent calls for researchers to work more closely with practitioners (Singer et al., 2019), this intervention was designed to suit both parties. That is, we sought to identify and introduce a design thinking activity that suited the way the Sixers like to work, rather than attempting to adjust their practice to a predetermined activity. This process unfolded in three phases, as illustrated in Figure 4 and described in the next section.

Figure 4: Outline of the three-phase intervention design



Data collection and analysis

First, the exploration phase involved issue identification and context analysis. This aimed to understand how the Sixers were currently pursuing innovation in their practice to identify where a design thinking activity might meaningfully enhance that practice. Two techniques were used to gather data in this phase: semi-structured interviews and observation of WIP meetings. The semi-structured approach to interviews allowed the research team to frame discussions around key themes while also enabling a deeper dive into certain topics (Skinner, Edwards & Corbett, 2015). The interview guide drew on the thematic design thinking framework (Carlgren et al., 2016) to tease out the mindsets, principles, and techniques the Sixers employ in pursuit of innovation. Interview questions were designed to uncover both

the practical techniques used ('How does the organisation visualise a new concept?', 'How does the organisation create a new product?'), their individual and organisational attitudes towards such practices ('How important is creativity to the organisation?', 'To what extent do you identify as a creative person?', 'Has working here made you feel more [or less] creative?'), and the practical manner in which they work (How are operational decisions made? Who is involved?', 'Does the boss dictate tasks?'). The lead author interviewed each of the six core Sixers' staff once and transcribed the discussions for analysis. While most of these discussions ranged in length from 70 to 110 minutes, the interview with the general manager was 150 minutes in total. The lead author also observed nine WIP meetings (the Sixers' primary, ongoing forum for strategy and innovation), which afforded opportunities to witness how elements of the organisation's practice unfold in situ. These data were captured in field notes that the lead author later converted to digital text for analysis.

All data were subsequently coded through NVivo 12 using a hybrid inductive/deductive approach (see Fereday & Muir-Cochrane, 2006). Specifically, alignment with design thinking themes was analysed deductively, with 44 indicators of alignment to the five themes of our theoretical framework (derived from Joachim et al., 2020) serving as *a priori* codes for analysis (Miles, Huberman & Saldaña, 2019). Where existing theory provides predetermined codes in this manner, Creswell (2009) suggested the development of a qualitative codebook; our codebook included all 44 codes and definitions for each code. In step with our hybrid approach, data were also coded inductively (i.e., in rounds) to establish emergent criteria of suitability for the Sixers' practice, which a design activity would ideally meet. This hybrid approach to coding further emphasised both expected and unexpected relationships in the collected data (Stake, 1995). First-level coding was initially used to generate broad themes that characterised the team's practice. These broad themes were then combined (where thematically appropriate) through subsequent and repeated pattern coding until they could no

longer be usefully combined without changing their meaning, eventually producing specific emergent criteria. For example, first-level coding generated two separate codes related broadly to ‘accountability’ and ‘record-keeping’. Through repeated rounds of pattern coding these codes were refined into ‘perceived lack of accountability’ and ‘decentralised records’ before eventually being combined into a single criterion— ‘generates actionable items’— which would address both codes by providing accountability through a centralised record of which team member(s) are responsible for what specific action item(s). This coding technique had the effect of ensuring the meaning of every first-level code was accounted for in the emergent criteria established, even if the specific phrasing of the first-level code was not maintained through the subsequent rounds of coding. In the example above, the wording ‘accountability’ and ‘record-keeping’ is not present in the articulation of the criterion that those codes helped to inform, but their underlying meanings were carried through.

Thus, seven emergent criteria were identified for a design activity that would be suitable for adoption into the Sixers’ practice. Any activity that met most or all of these criteria would suit our first goal of identifying an activity that would best serve the Sixers’ preferred method of team-based work. The selection process focused on a list of potential design activities compiled by the lead author while conducting a review of the design thinking literature. This list was supplemented by the lead author’s extensive practical experience with design thinking, including teaching design thinking subjects across two faculties at UTS. The potential activities were charted against the seven emergent criteria of suitability for the Sixers’ practice to identify activities that met most or all of the criteria. Ultimately, only one activity was discovered that addressed all seven principles (as outlined in Table 2): the Lightning Decision Jam (LDJ). This activity originated within the German digital product design agency AJ&Smart (2018) and was later formalised and promoted worldwide (Courtney, 2018). The LDJ is a structured brainstorming activity which unfolds in five

general phases that feature timed periods of individual and group reflection: (1) selection of a topic to brainstorm, (2) problem exploration, (3) articulation of 'how might we' (HMW) questions, (4) ideation of answers to those HMW questions, and (5) prioritisation of the answers using a value matrix with axes of impact v. effort (Courtney, 2018). As a technique with practical roots in professional design but with clear management applications, the LDJ is a quintessential design thinking activity. In addition to meeting the seven emergent criteria of suitability for the Sixers, the LDJ had also been used by the lead author in classroom settings where they found it was a useful means of pursuing structured brainstorming. As the LDJ was developed in the broader field of design and had been meaningfully employed in design thinking practice, it was expected that the strategy would at least suit—if not enhance—the Sixers' practice, while also maintaining and/or enhancing their organisational alignment with the design thinking themes established by Joachim et al. (2020).

Next, the intervention phase was concerned with a one-off workshop in which the LDJ was introduced by the lead author and undertaken by the Sixers. As agreed in preliminary meetings, the team dedicated a two-hour block of time solely to engage with this activity. The workshop was scheduled in line with their annual planning cycle, taking place after the Sixers had reflected on the 2018/19 Women's and Men's seasons but before they formally began planning for the 2019 WBBL and 2019/20 [M]BBL seasons. As the lead author delivered this workshop, observations were made in the form of field notes. To ensure comprehensive data were collected, the workshop was also recorded in both audio and video formats. These recordings offered richer insight that might have escaped the researcher's attention in the moment—such as tone of voice (Morgan & Guevara, 2008) or non-verbal cues (Shrum & Duque, 2008)—and made it possible for all authors to participate in subsequent appraisal of the workshop. Field notes, further observations gathered from reviews of audio–video recordings, and transcripts of key exchanges and passages from the workshop were converted

to digital text for subsequent analysis in the evaluation phase.

Indeed, the evaluation phase assessed the Sixers' use of LDJ against the intervention goals. Two instances of deductive coding were used to uncover the outcomes of employing the LDJ in practice. Specifically, we sought to (1) evaluate if the LDJ met the criteria of suitability for the Sixers' practice and (2) if the Sixers' use of the LDJ linked to themes of design thinking. In both cases, codes were provided *a priori* by (1) the emergent criteria for suitability established in the exploration phase of the intervention and (2) indicators of alignment with design thinking themes derived from descriptions of those themes in Carlgren et al. (2016). As in Phase One, we heeded Creswell's (2009) suggestion to develop a qualitative codebook in which codes are predetermined. Again, our codebook included all parent and child codes, along with definitions for each. To ensure accurate and consistent coding in both this and the first phase of the intervention, all authors participated in cross-author checking (Patton, 2015).

Our overall approach is not without limitations, for which measures were taken to mitigate their potential impact. First, our intervention relied on the design thinking experience of the lead author, as well as their involvement in delivering the intervention activity/workshop. While this had the potential to introduce bias into analysis, steps were taken (as outlined above) to allow the other authors to review and analyse the collected data. Indeed, the observations presented in the next section were reinforced by cross-author checking (Patton, 2015) made possible by video and audio recordings and/or the use of multiple data types to support the given claim. Second, the lead author's involvement as facilitator of the intervention might be considered a limitation. That said, the lead author was only involved in order to teach the LDJ to the Sixers and observe their use of the activity in a natural setting.

Field notes from this workshop were reinforced by video and audio recording of the session, allowing for all authors to review and reach consensus on the findings.

Findings

This section presents the findings in line with the three intervention phases (as outlined in the previous section). The first subsection details the exploration phase and defines the nature of the Sixers' practice prior to our intervention and, specifically, the ways in which the organisation works. The second subsection is concerned with the intervention phase and describes how the LDJ was undertaken in practice. The final subsection focuses on the evaluation phase and outlines how the LDJ met the emergent criteria of suitability for the Sixers' practice while maintaining their organisational alignment with all five design thinking themes.

Exploration phase

The first phase of the intervention focused on exploring the context of the case study, the Sydney Sixers, to determine how they like to work. The aim was to uncover criteria that would guide the selection of an intervention activity and, thus, ensure it would suit their method of operation. Ultimately, seven such criteria were established, as outlined and described in Table 8 alongside illustrative quotations from interviews with Sixers' staff members to characterise each criterion. Following the establishment of these principles, an activity that met all seven criteria was identified and selected for the intervention.

Both interviews and observation revealed that the Sixers' strategic and innovation practice focused on what they call the 'why' of business (see Table 8). This was a common refrain in interviews, particularly when team members answered questions about the way operational decisions are made. In service of this 'why', the Sixers pursue innovation through interrelated and often simultaneous acts of inspiration and research. When time allows (typically during

their annual planning days, as later noted), the Sixers employ a very specific practice that all staff members discussed in interviews: the breaking down of operational areas—or, elsewhere, problems or opportunities—into small pieces and putting them back together in search of marginal enhancements. One staff member compared this practice to the way auto racing mechanics disassemble and reassemble engines in search of marginal gains in efficiency. Both the concern for the 'why' of their business and an organisational preference for drilling deeply into single topics suggest that a design activity must be *able to be focused* to suit the Sixers' way of working.

Table 8: Emergent criteria for suitability of a design activity for the Sydney Sixers' practice

Criteria	Description	Illustrative quotation
Able to be focused	The Sixers are guided by a central cause (the 'why?' of their business) and prefer to drill down deeply when analysing issues.	'We spend a lot of time asking "why?" Why do we want to do certain things? What benefit is it going to have for people?'
Driven by imagery/visuals	Imagery is an important spark to creative pursuits (including photos and video).	'What we want to actually be doing is looking more at what visual cues we can use to start conversations.'
Harness individual experience	Personal and individual experience are used to start conversations around innovation; diversity of background is intentionally sought after.	'This group comes from a pretty diverse background with a pretty broad range of interests. I wouldn't say we have a whole heap of people who like doing exactly the same thing.'
Collaborative	Collaboration is apparent in practice and is universally acknowledged as being crucial to success.	'The nine people sitting around a table are going to deliver a better solution than one person is.'
Encourages sharing by all	While all staff members feel seen and heard, there is a perception that factors such as personality might limit input from some people.	'In a meeting you have the opportunity to speak up … and your opinion will be listened to.'
Generates actionable items	Accountability and execution were acknowledged as lacking at times; thus, next steps need to be clearly articulated.	'We want to make sure execution is up there [as a priority]. Sometimes things get left behind.'
Structured and repeatable	At present, creativity is primarily pursued in the off-season period. Even then, there is lacking clarity around how to pursue creativity and for how long.	'More structure [would help us pursue creativity]. If I have a structure and I know I have time to pursue these things, that's better.'

The second criterion relates to the Sixers' creative approach to delivering on the 'why' primarily through *imagery and visuals*. In WIP meetings, staff were observed sharing videos

of activations or activities used by teams in other domestic and international leagues. Field notes captured one such instance in which the entire Sixers' staff stood during a WIP meeting and gathered around a staff member's phone to watch a video of an activation used in a National Basketball Association (NBA) game. The team commented on what was happening—'that's cool' and 'we could do that'—even as the video played. In particular, imagery often plays a key role in the Sixers' planning. When the distribution of Sixers flags at the WBBL Big Final in January 2019 provided a compelling still and broadcast image—with one staff member noting in an interview that the scene gave them 'a tremendous sense of achievement'—the next WIP meeting featured a conversation about how to 'recapture' that image in the upcoming final and best-attended match of the [M]BBL regular season.

The example of the shared video also highlights the Sixers' attempt to *harness individual experience* in their strategic efforts. Indeed, the NBA activation captured in the video was only known to the staff member sharing it because they had previously attended a match in which the same activation had occurred (a fact which they noted to the team as they were loading the video on their phone). The diversity of professional backgrounds that characterise the Sixers' staff—including marketing, music festival operations, sales, consulting, and exercise science, among others—underscores the range of personal interests mentioned in the illustrative quotations of this criterion in Table 1, and further suggests that the team is able to draw from an accordingly wide range of personal experiences.

The Sixers make the most of their varied individual experiences by drawing on them within highly *collaborative* practices. Not only are all staff members involved in the Sixers' annual planning days and each WIP meeting, but a key element of their practice is their democratic and egalitarian organisational culture. Every staff member indicated in interviews that they feel 'seen and heard' within the organisation (see Table 8), even as a lack of certainty was

apparent when individuals were asked if this feeling was universal. Indeed, when asked if they felt that all staff were equally acknowledged, one stated flatly, 'probably not'. However, all respondents outlined techniques they personally employ to ensure all voices are heard, such as directly asking for an opinion from somebody who has not spoken in a meeting. This tactic aligns with a sentiment shared in interviews that a lack of sharing might be attributable to the personality differences among staff. One interviewee declared 'as in life, some people are more confident and are more likely to speak up'. Indeed, the general manager cited management of different personalities as an area for necessary improvement:

> [We] need to get used to dealing with different personalities. You can't have a whole team of extroverts because there's no diversity in that—there's no diversity of thought in that. I want [all members of the team] emotionally invested in what we're doing, and the best way of doing that is making sure everyone is involved in the process.

Evidently, these findings suggest that a design activity selected for the Sixers needed to encourage *sharing by all* as a means of maximising the collaborative nature of their practice.

Beyond their potential to limit sharing, personality differences among Sixers' staff also affect their ability to act on their plans. One staff member explained that 'people need to take ownership, otherwise certain people take too much burden on', suggesting that the more outgoing and/or extroverted team members end up with more to deliver than their quieter and/or introverted co-workers. Speaking on strategy execution in general, another respondent shared a similar concern, stating 'we need more accountability' and 'we need to be better about executing to a higher standard'. This suggests that any increased burden placed on the more outgoing staff members has perhaps resulted in objectives not being fully realised. Overall, this insight aligns with observations from WIP meetings that 'action items' formally discussed are only recorded by individual team members (that is to say, meeting minutes are

not taken or distributed to the whole team) and are revisited in one-on-one forums (such as individual WIP meetings with the general manager) rather than as a team. That these one-on-one conversations are typically carried out privately might explain why some team members perceive accountability to be lacking. Hence, a design activity would ideally *generate actionable items* so that 'next steps' are clearly articulated and the responsibility for delivering on them can be equitably distributed among the team.

Along that same line of reasoning, a new activity must also be *structured and repeatable*, allowing for review and refinement of action items in an iterative manner. Indeed, another area for improvement highlighted by the Sixers centred on a lack of clarity regarding the allocation of time and resources for creative pursuits. All team members identified as creative individuals to different extents. In interviews, one staff member claimed, 'I think I'm the most creative, working here, as I've ever been', while another praised the Sixers' working environment for helping them develop their creativity: '[being a creative person] is something I've had to work on, but working here has helped.' However, when asked how much time is spent 'thinking outside of the box', some respondents pointed out that time is available only in specific stages of the annual planning cycle. One respondent noted 'there's loads of time in the off season', which echoed similar comments made by all staff and corroborated observation of WIP meetings, in which the time spent strategising depends on the time of year in relation to the playing seasons. To wit, these meetings were highly focused on operations during the season but featured more open discussion and brainstorming before and after the season. While one staff member felt that outside-of-the-box thinking is 'not prioritised', another more senior staff member considered the pursuit of creativity as having merely been operationalised within the Sixers' practical reality:

> It's kind of, as things come up, I think, 'can this be done better?' or 'this is … not that great. Is there another way I could try something?' It's not really 'up in the clouds' trying to get new things constantly, it's more like 'what are we currently doing?' … and 'what can we build on' to improve?

While these divergent opinions highlight that perceptions among staff differed relative to how much time is allocated to creativity, the importance of *pursuing* creativity was universally acknowledged. One staff member explained that 'creativity is really important … and it should be'. The general manager expressed a desire for the team to be using the less active months of the calendar to seek inspiration—preferring them to 'trawl the internet looking through examples and ideas and those sorts of things'—but also acknowledged that motivation and energy levels have the potential to 'fall off a cliff' following the demanding in-season period. One senior staff member similarly explained how a long off season 'sees people get lethargic' and that more structure would be needed (including knowing how much time could be spent on creative pursuits) for creativity and innovation to be maximised within the organisation.

Table 9: How the LDJ met the emergent criteria of suitability for the Sydney Sixers' practice.

Criteria	Description
Able to be focused	The entirety of the LDJ process is focused on a single issue nominated by the team. Approaching new issues requires the team to begin the LDJ anew.
Captures individual experience	The LDJ has designated periods of individual work and individual presentation of ideas, preserving the possibility for personal experience to inform innovation.
Driven by imagery/visuals	In addition to the visual metaphor of the sailboat, the value matrix provides a visual manner of prioritising next actions.
Collaborative	The LDJ requires a team of two or more and is driven in different stages by democratic voting and group consensus.
Encourages sharing by all	All members of the team participate and are given dedicated time in which to share their ideas.
Generates actionable items	The final ideas/solutions are prioritised by effort and impact, thus, highlighting which ideas to pursue first.
Structured and repeatable	The LDJ can be executed in as little as 30 to 45 minutes (Courtney, 2018) and can be conducted in cycles should teams wish to drill down.

LDJ: Lightning Decision Jam

Overall, seven emergent criteria were identified for a design activity that would be suitable for adoption into the Sixers' practice. As detailed in the method section, one activity was discovered that addressed all seven criteria: the LDJ. Table 9 summarises the seven criteria and the manner in which the LDJ satisfies each one.

Intervention phase

The next phase of intervention involved delivery of the LDJ as a means of introducing the activity into the Sixers' practice. Our intervention activity—the LDJ, a brainstorming process characterised by alternating periods of individual and group work—was delivered in a dedicated two-hour workshop that took place on 11 April 2019 in the CNSW boardroom. Within the Sixers' annual planning cycle, this date was after formal debriefing on the previous season had occurred but before their annual planning days for the next season(s).

As previously noted, the LDJ unfolds in five general phases involving (1) the selection of a topic to brainstorm, (2) problem exploration, (3) articulation of 'how might we' (HMW) questions, (4) ideation of answers to those questions, and (5) prioritisation of the answers using a value matrix with axes of impact v. effort (Courtney, 2018). The process is driven by a single facilitator. Typically, that person would participate in the LDJ but, as the lead author was delivering the intervention, they drove the process without directly participating in the brainstorming itself. Hence, the lead author is referred to as the 'facilitator' when describing the LDJ process.

The LDJ first requires (1) the selection of a target or topic around which to brainstorm. Before the workshop commenced, the Sixers had already decided to concentrate their designing efforts on their own practice—how they work internally (processes and communication within the organisation) and with others (CNSW, CA and external partners). As the LDJ began, field notes mention that the Sixers' staff were in 'good humour' and 'high

spirits'. Their mood lifted further when the facilitator mentioned that music could be played during individual brainstorming sessions, and the general manager quickly volunteered to control the playlist.

As the focus of the session had already been selected, the facilitator moved the Sixers on to (2) problem exploration. Here, the team was prompted to work individually to brainstorm everything that was going well within their practice—that is, the positives that push the team forward. These were written on Post-it notes, with one idea given for each note. Afterwards, each team member was directed to stand individually and read their notes aloud before sticking them on a wall with the other Post-its. After every staff member had shared their positives, the process was repeated to brainstorm things that were holding the team back—that is, the negatives of their operation that were slowing or preventing progress toward their goals. The facilitator conceptualised these two clouds of notes using the visual of a sailboat: the positives were described as wind in the sails, while the negatives were likened to anchors holding the boat back. The positive effects of the wind would be arrested to some extent by the anchors; hence, the focus of the LDJ was to be on overcoming the identified problems (the anchors). The team voted (individually and silently) for the problems that they perceived to be the biggest challenges facing their team. Each team member was given three sticky dots to place (as a form of vote) on the Post-it of a specific challenge. While some staff members were more strategic than others (with one later explaining that they were influenced by how others were voting—that they didn't want to 'waste' their vote on an idea with no other votes), all completed their voting within the allocated three minutes. At this stage, the facilitator sorted into descending order the challenges that received votes. The challenge of 'resourcing issues' received the most votes and, thus, the remainder of the LDJ was dedicated to overcoming these issues.

Typically, the facilitator would execute the next step themselves—(3) articulating a HMW question that aims to overcome the identified problem—but this phase was modified in the workshop to allow the Sixers to learn the strategy for independent application in future meetings. After the facilitator explained HMW questions as being positively phrased means of overcoming an identified issue, the team individually brainstormed their own in a timed segment and then presented and voted on questions as they had with the problems. The question that received the most votes (indeed, a vote from each staff member) was 'how might we redistribute workloads?' This HMW prompt echoes concerns regarding this topic (raised in interviews and observed in WIP meetings) that were discussed in the previous section. It was at this point in the process that field notes captured the team 'latching onto HMW questions; [they] really "get it".'

The next step of the LDJ was (4) the ideation of answers to the selected HMW question, which took the form of another individual brainstorming session. Ideas were again presented individually, and team members were now observed jotting new notes even as others offered their ideas, possibly inspired by the ones being presented. This resulted in a second, rapid round of presenting these supplementary ideas. Voting again took place at this stage, with the notes sorted into descending order of votes received. A natural cut-off was found at three or more votes; thus, three ideas with one or two votes were not advanced to the next step of the LDJ. Ideas that were above the cut-off are outlined in Table 10, along with the number of votes they received.

Table 10: Responses to HMW questions, listed in descending order of votes received.

Response/idea	Votes
Prioritise work based on impact	6
Automation (‘set and forget’)	5
Thorough planning processes (including implementation)	4
Diary management	4
Regular brainstorms	3
Identify low pay-off but high-energy tasks	3
Improve skill sets through education	3
Ask for help in other departments (outside Sixers)	3

HMW: how might we

In the final stage, (5) these ‘winning’ ideas were then plotted on a value matrix of effort (high–low) v. potential impact (high–low). At the facilitator’s prompting, the general manager took responsibility for plotting each idea onto the value matrix, which had been laid out on the wall of the conference room. The general manager was coached to hold the note in the centre of the matrix (the intersection of the axes) and to move it up or down the vertical (impact) axis based on feedback from the team. Once a consensus was reached about potential impact (higher or lower), the process was repeated left to right on the horizontal (effort) axis and the note was placed where consensus dictated. This process was repeated for each note until all were plotted on the value matrix. This stage of the LDJ prompted the most interaction among the team, with the field notes recording ‘lots of discussion around effort/impact plot’. Three ideas were located in what the facilitator described to the Sixers as being the ‘money quadrant’—the (upper-left) portion of the matrix that indicated ideas with the highest potential impact but require the least perceived effort to pursue and/or implement. The final placement of ideas on the value matrix is illustrated in Figure 5 and outlined in Table 11. The three ideas in the money quadrant—‘prioritise work based on impact’, ‘regular brainstorms’ and ‘diary [calendar] management’—were highlighted as the first ideas the Sixers should tackle after the LDJ.

Figure 5: Value matrix plot of solutions generated by Sixers through the LDJ

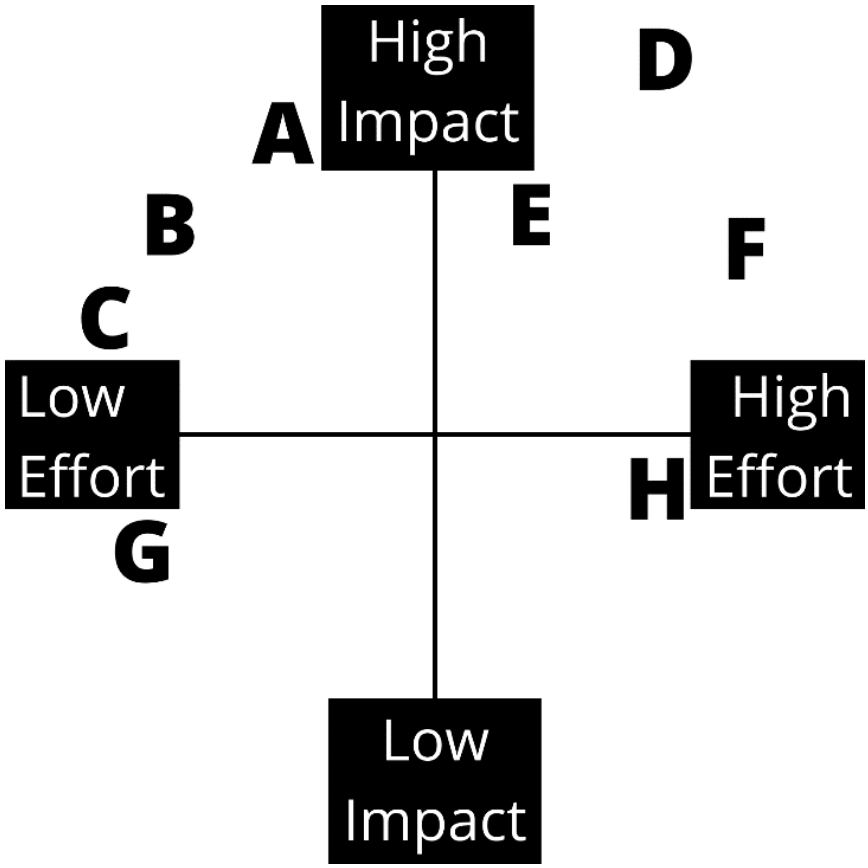


Table 11: Plotted value matrix position of responses to chosen HMW question.

Response/idea	Position	Matrix
Prioritise work based on impact	High impact/low effort	A
Regular brainstorms	High impact/low effort	B
Diary management	High impact/low effort	C
Automation (‘set and forget’)	High impact/high effort	D
Thorough planning processes (including implementation)	High impact/high effort	E
Ask for help in other departments (outside Sixers)	High impact/high effort	F
Identify low pay-off but high-energy tasks	Low impact/low effort	G
Improve skill sets through education	Low impact/high effort	H

Evaluation phase

The final phase focused on evaluating the intervention activity against our goals for its use. As the LDJ unfolded in practice, it satisfied all of the emergent criteria for our first goal: identify a design (thinking) activity that would best serve the Sixers by suiting their preferred method of team-based operation. The manner in which the LDJ addressed the emergent criteria for suitability as described in the previous section is reaffirmed and summarised in Table 12. Aside from meeting these seven targeted criteria, the suitability of the LDJ for the Sixers' practice was expressed by the team themselves at the conclusion of the workshop. One staff member stated, 'I think this was a good process', and two others immediately chimed in with 'yes, [it was] very good' and 'yeah, [I'm a] big fan'. The general manager spoke last, believing it 'was an excellent process. Even just what we've managed to solve here is super important.'

Table 12: How the Sydney Sixers' use of the LDJ addressed the emergent criteria of suitability for their practice.

Criteria for activity	In practice
Able to be focused	The Sixers focused solely on one operational topic—how to improve their own internal processes to do better work more effectively.
Captures individual experience	Each staff member presented their ideas individually. Some were observed jotting new ideas as others presented, suggesting personal inspiration was sparked.
Driven by imagery/visuals	The aforementioned visual metaphor of the sailboat (see Table 2 and Section 4.2), as well as the value matrix. Some staff members shared photos and/or videos when presenting their ideas.
Collaborative	Quick discussions (1–2 minutes) sometimes emerged around particular ideas. The team was highly collaborative when it came to plotting ideas on the value matrix.
Encourages sharing by all	All team members participated and were given dedicated time in which to share their ideas. Some staff presented twice if new ideas were sparked during presentations.
Generates actionable items	The team recorded the final value matrix plot with notes and photographs.
Structured and repeatable	The LDJ was executed in 105 minutes. The general manager mentioned they would be using the format in their upcoming planning days and possibly in future WIP meetings.

As the Sixers began to move back to their offices at the conclusion of the LDJ workshop, one staff member reflected on the activity to the lead author: 'I noticed the more we went on, more Post-its went up. The juices were flowing.' Perhaps the best evidence of suitability was that although the Sixers had only committed to using the LDJ in this single workshop as a part of the present study, they went on to employ a modified version of the exercise during their annual planning days the next week. The general manager commented to the team, 'this is how I want us to think', and suggested that their future WIP meetings might also borrow from the structure of the LDJ.

In regard to our second research aim—to maintain, if not enhance, the Sixers' organisational alignment with design thinking themes—the team's use of the LDJ was found to link to the design thinking themes of *problem framing* and *diversity*. Indicators of problem framing such as 'unconstrained view of the problem', 'problem focus' and 'creating many alternatives' are built into the LDJ itself and were reflected in the Sixers' engagement with it. In particular, an early step in the LDJ process prompted the team to consider 'anchors' that are holding back and/or slowing forward progress. The Sixers elected to undertake the LDJ towards improving their own internal work processes, which provided a 'high level' of focus for all subsequent efforts. The general manager would sometimes step in to keep the focus on this single topic (moving past unrelated ideas by saying things such as 'we'll talk about that next week [during the planning days]', as merely one example from field notes), but otherwise the LDJ process itself consolidated team thoughts.

Also at the heart of the LDJ is diversity which, in design thinking parlance, refers to a diversity of perspectives. Indicators of alignment with this theme such as 'collaboration', 'systemic perspective' and 'democratic spirit' all manifested during the LDJ. Collaboration is required for the process to be successful (in fact, a minimum of three participants is

suggested) and was apparent in the way that departmental 'silos' fell to the wayside during the activity. The general manager encouraged all staff to free their minds and engage in what they called 'blue sky thinking', effectively lifting any kind of boundaries between departments. A systemic perspective was also observed, as some identified obstacles (anchors) related to the Sixers being embedded within other organisations or the need to work with other, complementary organisations. Accordingly, some solutions ideated in the LDJ assumed a systemic perspective in at least these instances. In regard to the relationship between the Sixers and external organisations with which they frequently partner, one staff member pointed out that some ideas generated in the LDJ 'tick a lot of boxes' for both groups. Further, the activity prompts silent voting at different stages of the process. This method of voting inherently involves a 'democratic spirit' and allowed the best ideas to advance through the process, independent of who had suggested them.

Discussion and implications

The literature review highlighted the need for new approaches to innovation that suit the practice into which they are adopted, restore reflection to sport management practice, and simultaneously focus on sport users. Design thinking is exactly that—a human-centred process that ostensibly makes the 'thinking' (the ostensive component) and the 'doing' (the performative component) of expert designers accessible to non-design practitioners as a means of generating value for users (Carlgren et al., 2016; Johansson-Sköldberg et al., 2013). Through an intervention with a professional sport organisation, the Sydney Sixers, this study sought to (1) identify a design thinking activity (derived from the field of design) that is suited to their existing practice and (2) that might establish or enhance the existing links between that and the themes of design thinking. This exploration is critical to uncover the usefulness of adopting design thinking theory into the sport management field in such a way

that helps sport organisations restore reflection to their practice, while overcoming the human-centred challenges they face.

Ratten (2016) noted that the explicit and tacit knowledge of a sport organisation (and its members) must be incorporated into adopted innovation techniques. Accordingly, our intervention established two goals for identifying a design activity to introduce to the Sixers' practice: these were suitability of a chosen design activity (established using seven emergent criteria for suitability) and the maintenance, if not the enhancement, of their existing links to design thinking themes. As highlighted in Section 4, the LDJ met both criteria. Consequently, our intervention demonstrates that design thinking can be useful as a derivative theory in sport practice. That is to say, it illustrates how design thinking activities can be usefully introduced into sport management practice. One criticism of design thinking in the literature is that it is often misinterpreted as a toolbox to be used situationally, rather than as an approach to practice (Johansson-Sköldberg et al., 2013). Our intervention overcomes this concern by seeking a design thinking activity that suits the Sixers' practice, rather than attempting to shape their practice to suit an existing and prescriptive model of design thinking. A further criticism of design thinking is that it discounts the reflection of expert designers (Kimbell, 2011). Edwards et al. (2002) shared a similar concern that reflection is likewise missing in the practice of commercial sport organisations. The LDJ addresses both concerns, as it prompts practitioners at key stages of the process to reflect individually and, at different times, as a group. While sport researchers might adopt our approach to identify and integrate design thinking activities into the practice of other sport organisations in all sectors, we recognise that the intervention design used in this study might be too complex for practitioners to undertake on their own. However, practitioners might usefully engage in *intuitive generalisation* as a means of interpreting the approach taken here and drawing on their personal experience to see how they might likewise adopt design thinking activities to

achieve human-centred value generation in their own practice (Stark & Torrance, 2004). The design thinking activities suggested by Pierce et al. (2019) represent a promising starting point, as these activities have been vetted for sport management education and thus, by extension, should be applicable in sport management practice. Sport managers interested in employing design thinking can also make use of numerous free (and frequently updated) workshops available online (see: Stanford d.school, 2020). Further, the creators of the LDJ, AJ&Smart, have created useful tutorial videos on various brainstorming and problem-solving activities which are available for free on YouTube (see: AJ&Smart, 2018).

The use of design thinking activities such as the LDJ might also assist organisations like the Sixers in better serving sport users. In outlining his SX framework, Funk (2017) noted that sport organisations with hybrid goals sometimes struggle to reconcile them in service of the sport context as well as the sport users. Indeed, the Sixers face a number of such challenges, including the need to dedicate resources to non-revenue generating activities such as community cricket. Such conflict represents divergent institutional demands: within the larger CNSW organisation, the Sixers must find a way to integrate the needs of community cricket and reconcile them with their own business goals—and they must do so without direct operational control of community cricket. Svensson (2017) illustrated organisational responses to such divergent institutional demands, noting that they sometimes result in organisational dysfunction. The difficulty that the Sixers face in managing these competing concerns arose in their undertaking of the LDJ. The ideated solution to 'ask for help in other departments (beyond the Sixers' team)' related to their need to collaborate with those CNSW staff who work exclusively within community cricket. Tellingly, the Sixers rated the pursuit of this solution as carrying high potential reward, but also requiring high effort. Still, that they recognised the need to integrate the perspectives of community cricket into their own organisational efforts—to 'ask for help in other departments'—suggests the LDJ might help

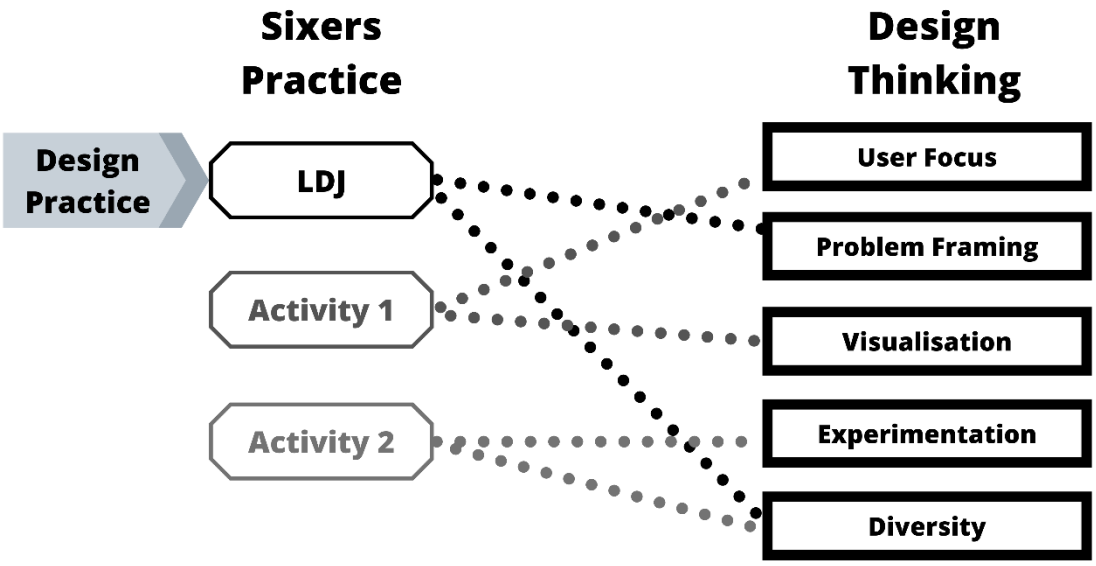
them avoid dysfunction in at least this instance. Indeed, separation of the two operational units resembles a 'differentiated hybrid' in which their respective leaders must coordinate their actions to achieve success (Svensson, 2017). Considering how the LDJ was shown to suit the Sixers' capacity for collaboration, including the community cricket team in future iterations of the process might assist in achieving such collaborative efforts between the two units. Further, such coordination may enable the design of holistic sport experiences for Sixers users through tools such as the SX framework (Funk, 2017). Clearly there is potential for design thinking to enhance outcomes for sport users, where such activities are thoughtfully identified and integrated into sport management practice.

Our intervention also contributes outside the scope of design thinking itself. Specifically, the LDJ is shown to be a useful activity for sport management practice with or without the broader design thinking considerations. Recall that the Sixers noted concerns with accountability and execution. The LDJ has been shown to address these areas, as it generates actionable items that are sorted by priority based on perceived effort v. potential impact (as plotted by the team on the value matrix). Any sport organisation with similar issues of accountability and/or execution could usefully adopt the LDJ into their practice towards achieving the same outcomes. Further, despite enjoying more research and development capabilities than their non-profit counterparts (Winand & Anagnostopoulos, 2017), commercial sport organisations tend to lack the former's level of flexibility to foster innovation, possibly owing to the need for such development to produce a financial return meeting or exceeding any financial outlay to fund change (Ratten, 2016). Here, again, the value matrix exercise that concludes the LDJ might help commercial sport organisations. Specifically, by prompting practitioners to prioritise ideas that are simultaneously easiest to pursue and are expected to generate the biggest impact, the LDJ removes at least some of the

risk inherent in realising innovative ideas. This might allow commercial organisations to better foster innovation within their practice.

This study also satisfied the aim of intentionally addressing Funk's (2019) concern that derivative models and/or theories in sport management are not always reviewed for potential contributions back to the parent field. As noted, selection of the LDJ for integration into the Sixers' practice specifically addressed Kimbell's (2011) concern that design thinking neglects the reflection of expert designers. Hence, the LDJ is highlighted as a useful activity for enhancing design thinking practice in any field. Further, because the activity was developed within expert design practice, the Sixers' use of the activity links to design theory in at least a nominal way. This is illustrated in Figure 6, in which the LDJ is shown to have been imported from design practice into the Sixers' practice, where its use connected to the design thinking themes of *problem framing* and *diversity*. Activities 1 and 2 are indicative only, illustrating that a practice can be linked to all themes of design thinking practice and yet not in all cases linked to design.

Figure 6: Hypothetical array of design thinking activities—including the LDJ—linked to design practice and theory through sport management practice.



This link between the field of design and the theory of design thinking carries important implications for both fields. Indeed, such a connection—especially if formalised and empirically studied in future work—has the potential to correct a lingering disconnect between the two fields (Kimbell, 2011) and to enhance them both (Dorst, 2011; Johansson-Sköldberg et al., 2013; Kimbell, 2012).

Conclusion

This study illustrates an intervention constructed to identify a design thinking activity suitable for practical adoption by the Sydney Sixers, a sport organisation pursuing hybrid goals while also navigating divergent institutional demands in an evolving operational landscape of blurring sector boundaries and shifting user needs. This successful intervention represents evidence that design thinking activities can be identified that suit the unique needs of sport management practitioners—rather than attempting to reshape sport management practice to engage with a prefabricated model of the process. Further, use of the LDJ enables reflection in design thinking and sport management practice, and enables commercial sport organisations to reconcile hybrid goals to better serve sport users. Researchers and practitioners alike might follow our approach either directly or through intuitive generalisation as a means of likewise adopting design thinking activities into sport management practice. In addition, future research might reconnect the fields of design and design thinking through such sport management design thinking practice, potentially enhancing all three fields.

Study Four:

“It’s given us a much wider perspective”: Exploring the adoption of a design thinking activity into sport management practice

Abstract

The perpetual evolution of sport users highlights human-centred challenges for sport organisations who aim to serve their users optimally. This study looks to the broader field of management to identify design thinking—a human-centred means of generating value for users—as a concept that might enable sport organisations to identify and fulfil the unmet needs of their users. A qualitative case study approach was used to explore how a professional sport organisation pursuing hybrid profit and non-profit goals incorporated a design thinking activity—the Lightning Decision Jam (LDJ)—into its practice. The organisation was found to have intuitively modified the LDJ to meet its needs. Adopting the LDJ was also found to have improved the organisation's practice in several ways, including the structured implementation of reflection and, thus, the enhanced generation of organisational knowledge.

Introduction

Sport users are continually evolving. This evolution can be traced in the sport literature, but it often outpaces researchers' ability to study it, forcing practitioners to close the gap without theory to guide them. Further, demand for sport is shifting: sport consumers were once considered inalienably loyal to their team owing to 'irrational passion' (Stewart & Smith, 1999), but now more closely resemble general consumers (Smith & Stewart, 2010). Indeed, loyalty is increasingly spread across multiple teams, even within the same league or competition (Fujak, Frawley, McDonald & Bush, 2018). Concurrently, industry developments—such as the ongoing blurring of traditional sector boundaries (Misener & Misener, 2017) and the need to balance hybrid profit and non-profit goals (Ratten, 2016)—make it challenging for organisations to design holistic sport experiences for users. Increasingly, sport organisations need ways to reconcile hybrid profit and non-profit goals to serve users better.

In step with these trends, there have been calls for research into how innovation is achieved in both non-profit (Schulenkorf, 2017; Svensson & Cohen, 2020) and for-profit sport organisations (Smith & Green, 2020). Accordingly, recent research has focused on how to centre sport users in sport experience design in order to reconcile their goals and needs with those of the sport context and the sport organisation (Funk, 2017). While Funk (2017) identified studies that consider the goals and needs of sport users and the sport context in designing sport experiences, he noted that little work has acknowledged the goals and needs of sport organisations. To address this shortfall, the present study examined other fields to identify how sport organisations might engage in user-centred design (Funk, 2019). Within the broader field of management, *design thinking* emerged as a promising human-centred approach to generating value for users that makes expert designers' thoughts and actions

accessible to practitioners in non-design fields such as sport management (Brown, 2009; Carlgren, Rauth & Elmquist, 2016).

Though it initially became popular in management, design thinking has also been successfully employed in fields as diverse as education (Leverenz, 2014; Tan & Wong, 2012), health care (Eckman, Gorski & Mehta, 2016; Patel, Moore, Blayney & Milstein, 2014; Takaoka & Aoki, 2016), retail (Rodríguez, Paredes & Gaofeng, 2016) and food service (Olsen, 2015), suggesting it is highly adaptable to other fields and may thus hold promise for sport management. Indeed, the concept has begun to receive attention in sport research, particularly in the sport subfield of sport for development (SFD) (see, e.g., Joachim et al., 2020; Svensson & Mahoney, 2020). This study formed part of the first empirical project to explore the use of design thinking in the practice of a sport organisation. This organisation—the Sydney Sixers, one of eight clubs in the Big Bash League (BBL), Australia's professional Women's and Men's Twenty20 (T20) cricket competition—pursues hybrid goals, making it an ideal case. Links between the Sixers's practice and themes of design thinking have been established, suggesting the concept was appropriate for adoption (Joachim et al., 2021). Subsequently, an intervention with the Sixers enabled a design thinking activity known as the Lightning Decision Jam (LDJ) to be introduced into their practice (Study Three). The present study extended this work to explore how the Sixers incorporated the LDJ—a structured brainstorming activity further explained in the Methodology section—into their strategic planning cycle. Specifically, the researchers sought to understand how the LDJ's adoption assisted the Sixers in their efforts to enhance the gameday experience—the *user* experience—for their Women's and Men's matches. Accordingly, this study sought to answer four interrelated research questions (RQ):

- RQ1: What modifications, if any, were made to the LDJ when the Sixers adopted it into their existing practice?
- RQ2: How was adopting the LDJ perceived by the Sixers staff undertaking the activity?
- RQ3: In what ways did the Sixers's adoption of the LDJ enhance their practice or maintain links between its practice and design thinking themes?
- RQ4: In what ways, if any, did adopting the LDJ allow the Sixers to reflect within their practice?

The answers to these questions have meaningful implications for theory and practice. If the Sixers modified the LDJ to 'fit' into their practice (RQ1) and then considered the LDJ useful (RQ2), the intersection between the original LDJ and the modified LDJ would represent *conceptual blending*, the merging of a borrowed theory with unique traits of the new focal context (Doherty, 2013). Any such merging of design thinking theory into the sport management context might enhance sport management practice (RQ3), specifically by restoring the reflection (RQ4) that is currently thought to be missing from said practice (Edwards, Skinner & Gilbert, 2002).

Literature Review

The sport user

Stewart and Smith (1999) outlined that a unique feature of the sport industry was sport consumers' strong team-level (i.e., brand) loyalty tied to fans' irrational passion—a finding that suggested that such team loyalty remained mostly constant even when on-field results did not. By 2010, the authors had developed a more nuanced view, concluding that sport consumers are not as different from traditional consumers as was previously believed and, notably, that components of their passion for sport serve as proxies for fulfilling interpersonal

and intrapersonal needs (Smith & Stewart, 2010). This development over a single decade highlighted underlying *human* needs—whether psychological, social or cultural—that the sport experience ostensibly fulfils, while also illustrating how these needs change over time (Smith & Stewart, 2010).

Indeed, sport users remain elusive in many ways, making it difficult for sport organisations not only to identify but also fulfil their human needs. Demand for sport itself is shifting; in some cases, Stewart and Smith's (1999) irrational passion is dissolving into loyalty that is spread across multiple teams within the same competition (Fujak et al., 2018), which affects commercial sport enterprises that seek to retain fans and members. Meanwhile, the boundaries between the commercial, non-profit / volunteer, and public sport sectors are blurring, affecting sport users from the industry side and leaving some of those users underserved or unserved (Misener & Misener, 2017). Human users are the common factor in both of these situations, highlighting a need for sport managers to better understand said users to enhance the experience sport might offer them.

Recognising these ongoing changes and the challenges they present to sport organisations, Funk (2017) proposed a sport experience design framework that adopts a user-centred approach that acknowledges the psychological needs of the sport user. He illustrated three interrelated elements of sport experience design that represent different perspectives on sport consumer behaviour: the Sport Context (in which the user experience unfolds), the Sport User (with their needs) and the Sport Organisation (with their own business goals). Funk explained that only where all three of these elements overlap can a holistic sport experience be achieved. He argued that while attention has been paid to researching the role of Sport Users and the Sport Context, little research has integrated the two, and the third perspective—that of the Sport Organisation—usually is overlooked.

In proposing a research agenda for sport innovation management, Ratten (2016) noted that sport organisations enjoy more intimate connections to their consumers than do traditional businesses and are more likely to pursue both profit and non-profit (i.e., hybrid) goals. However, the difficulty of reconciling hybrid goals is illustrated by the differing attitudes towards innovation displayed within exclusively for-profit or non-profit sport organisations. Non-profit sport organisations do not appear risk-averse in their pursuit of social innovations (Winand et al., 2016), whereas for-profit sport organisations usually are not flexible enough to foster innovation how non-profit sport organisations can and do, despite enjoying more research and development capabilities than do their non-profit counterparts (Ratten, 2016). Hence, a sport organisation pursuing hybrid profit and non-profit goals must find a way to overcome this tension to serve the sport user better. Doherty (2013) explained how, in such instances, sport researchers might explore other fields to identify how similar challenges have been overcome. Human-centred challenges abound in the broader field of management, within which an organisational approach to solving human-centred challenges—design thinking—arises as a promising concept the sport management field might utilise (Brown, 2008, 2009; Brown & Wyatt, 2010).

Design thinking

To achieve human-centred outcomes, the design thinking approach prompts practitioners to empathise with their users through various mindsets and techniques (Carlgren et al., 2016). Early models of the process conceptualised this quite simply. Brown's (2008, 2009) model, which introduced the concept into the popular management discourse, involved three repeating steps: inspiration (identifying a problem and/or opportunity worth exploring), ideation (generating and testing designs to solve the problem and/or exploit the opportunity) and implementation (making the design a reality for users). Notably, his model relied on a design thinker to possess a collection of characteristics that enabled their practice (Brown,

2008, 2009). Similarly, Martin (2009) outlined a personal knowledge system that a design thinker must possess to engage in a dynamic interplay between analytical and intuitive thinking en route to human-centred innovation.

These early 'psychological profiles' of design thinkers foreshadowed empirical work in the management field that would uncover similar traits at an organisational level. While early design thinking research was mainly anecdotal (Johansson-Sköldberg, Woodilla & Çetinkaya, 2013; Kimbell, 2011), by 2016, the field had matured to where design thinking practice could be empirically studied (Carlgren et al., 2016). In so studying the use of design thinking within six companies of various sizes, Carlgren et al. (2016) were able to identify five themes that characterised the principles or mindsets, practices, and techniques that each company used in conducting design thinking: user focus (maintaining the unmet needs of the user as the focus of design efforts), problem framing (engaging with and interpreting the problem and/or opportunity at hand), visualisation (the manner in which design thinking practitioners conceive of their path toward meeting unmet user needs), experimentation (iterative testing of solutions and/or ideas), and diversity (seeking and drawing upon differing perspectives within the team). Much like the traits of individual design thinkers outlined by Brown (2008, 2009) and Martin (2009), these themes can be considered organisational traits of design thinking practice; thus, they provide a way to study such practice. In conducting their analysis, Carlgren et al. (2016) assumed the perspective of Feldman and Pentland (2003), who explained that management practice (in which design thinking would be employed) must be considered in two dimensions: the *ostensive* and the *performative*. Such consideration separates practice into both *the idea* (the ostensive dimension) and *the enactment* of the idea by individual actors within specific environments (the performative dimension). If the performative component constitutes the principles / mindsets, practices, and techniques used to achieve the ostensive component, then the ostensive is merely the

outcome that the performative seeks to achieve (Carlgren et al., 2016). In design thinking, this outcome is the human-centred creation of user value (Brown, 2009; Carlgren et al., 2016; Dorst, 2011).

However, the concept of design thinking is not without problems that any porting of the theory to sport management would need to consider or correct. Significantly, design thinking has separated from design theory and has thus evolved in isolation from its parent field (Johansson-Sköldberg et al., 2013). Problematically, designers see design thinking as an oversimplification of their field and are reluctant to correct this separation (Dorst, 2011). Kimbell (2011) identified some ways in which this perceived oversimplification manifests in design thinking, including separating the *thinking* and the *doing* of the designer, assuming that designers' actions (the *doing*) are generalisable, and maintaining the designer as the central agent in the design process. Perhaps most critically, expert designers' reflexivity is mainly absent in prevailing models of design thinking, although it is central to design practice (Kimbell, 2011). Such reflection has also been found to be absent in the practice of commercial sport organisations (Edwards et al., 2002).

Design thinking and reflection in sport management

Considering the promise for user-centred innovation that it ostensibly offers, design thinking has begun to receive attention in sport research. After Schulenkorf (2017) proposed design thinking as a possible means of pursuing innovation in the sport subfield of SFD, indicators of alignment with design thinking themes were uncovered within SFD research (Joachim et al., 2020), and traits of design thinking were found to characterise the culture of highly innovative SFD organisations (Svensson & Mahoney, 2020). The present study was part of a larger project that was the first empirical research of design thinking in sport management practice. In prior studies, links between the Sixers's practice and themes of design thinking

were discovered, suggesting that design thinking was suitable for the Sixers to incorporate into their practice (Joachim et al., 2021). Further, an intervention identified and introduced a design thinking activity—the LDJ—into the Sixers's practice (Study Three). One of the intervention study's promising findings was that the LDJ provided structure for the Sixers to reflect (Study Three). Edwards et al. (2002) outlined that energy to reflect and time for reflection is often absent within commercial sport organisations. Considering the sport environment's unpredictable nature, this lack of reflection can potentially limit sport practitioners' ability to convert their lived experiences into individual and, by extension, organisational knowledge (Edwards et al., 2002). Funk (2019) noted that attention is rarely paid to how using derivative theories in a new context might affect the field from which the theory was derived. As reflection is absent from both design thinking (Kimbell, 2011) and the practice of commercial sport organisations (Edwards et al., 2002), the efforts to study the use of design thinking in the new context of sport management practice aimed to address this inherited conceptual challenge.

In discussing the role of reflection in generating knowledge within sport organisations, Edwards et al. (2002) drew on two of Schön's (1985, 1995) foundational concepts of practice: *reflection-in-action* and *knowledge-in-action*. These concepts were derived from the field of design and thus provide a connection between that field and sport management. In defining his notion of design as a reflexive practice, Schön (1985, 1995) described practice as being knowledge-in-action: the use of know-how. Helpfully, he used two sporting examples to illustrate this point: a baseball pitcher who changes his approach throughout a game depending on the situation (Schön, 1985, 1995) and a tennis player who can instinctively 'feel' whether a ball was hit correctly (Schön, 1985). In his seminal work, Schön (1995) also described the practice of a jazz musician who plays untroubled without sheet music or

considering which note will come next. Such knowledge-in-action is ‘usually tacit, and it is delivered spontaneously, without conscious deliberation’ (Schön, 1985, p. 24).

This knowledge-in-action is the basis of reflection-in-action. Surprises (i.e., unexpected outcomes encountered in applying knowledge-in-action) disrupt the practitioner’s action and prompt reflection. Schön (1985) explained that such reflection typically occurs in the moment, and the practitioner returns to the initial knowledge-in-action to decode what was different in that application to establish how best to solve the problem or capitalise on the opportunity. He further pointed out that this represents artistry: a professional capacity that ‘enables some individuals to be competent in situations that do not fit the preconceived categories of technique, theory, or rule-of-thumb’ (p. 27). Regarding management practice, Schön (1995) explained:

> It is clear that managers do sometimes reflect-in-action. Beginning with questions like, What do consumers really see in our product? What’s really going on underneath the signs of trouble in our organisation? or What can we learn from our encounters with the competition? They surface and question their intuitive understandings; and in order to test their new interpretations, they undertake on-the-spot experiments. (p. 264)

Schön’s (1985, 1995) concepts underpinned Edwards et al.’s (2002) notion that reflection is often absent from sport organisations; similarly, this study used these concepts to guide the exploration of whether adopting the LDJ enabled reflection within the Sixers’s practice.

Methodology

Case Context

The Sixers are one of eight clubs that form the BBL[5]. The Sixers are embedded within Cricket New South Wales (CNSW), the state body responsible for delivering and promoting cricket within New South Wales, Australia. CNSW is embedded within Cricket Australia, the sport's national body. At the time of this study, the Sixers organisation was comprised of six permanent staff supported by not only employees from related organisations but also interns and volunteers. These six staff members (i.e., the general manager; two membership, ticketing and hospitality staff; one digital media staff; one media partnerships staff; and one event operations staff) constituted the Sixers's strategic planning unit that develops, executes and reflects on strategy in annual cycles in line with each season of the Women's and Men's BBL (WBBL and [M]BBL, respectively). The primary strategy–planning event in this cycle is the Sixers's annual planning days, which occur offsite after each season. This study focused on how the Sixers used the LDJ in their planning days of April 2019.

The Sixers's practice linked to themes of design thinking (Joachim et al., 2021), which suggested that design thinking was suitable for the organisation's practice. A subsequent intervention identified the LDJ as a design activity appropriate to how the Sixers preferred to work, and it was introduced to the Sixers in a standalone workshop before the April 2019 planning days (Study Three). The LDJ was developed by the German digital product design agency AJ&Smart (2018) and was later formalised and promoted worldwide (Courtney, 2018). The LDJ relies on designated periods of individual and collaborative work that typically unfolds in five general phases: selecting a topic to brainstorm, exploring the

[5] As the name 'Big Bash League' and acronym 'BBL' refer to both the organisation and the Men's competition therein, confusion can arise with their usage. To avoid this, this article uses 'BBL' to refer to the Big Bash League organisation, '[M]BBL' to refer to the Men's competition, and 'WBBL' to refer to the Women's competition.

problem, articulating ‘how might we’ (HMW) questions, ideating answers to those questions, and prioritising the answers using a value matrix with axes of impact versus effort (Courtney, 2018).

Research approach and theoretical framework

A qualitative case study approach was used to address the research questions. Virtually all design thinking research has explored case studies (e.g., Brown, 2009; Carlgren et al., 2016), and the approach is both popular and well-established in sport research (Hoeber & Shaw, 2017; Shaw & Hoeber, 2016). Specifically, the Sixers case represented what Stake (1995) defined as an instrumental case, the study of which occurred to understand a phenomenon of interest other than the case itself. Indeed, evidence of the principles / mindsets, practices, and techniques associated with the performative component of design thinking was sought when studying the Sixers case. While the findings specific to a particular case are not generalisable (Denzin & Lincoln, 2018), such findings do allow readers to establish connections between the case study and their own experience and to undertake what Stark and Torrance (2004) termed *intuitive generalisation*. Hence, while the findings from this case study may not be generalisable to sport management at large, readers or researchers will be able to make sense of the findings through the lens of their own experience and adapt those insights for their own use.

The thematic design thinking framework (Carlgren et al., 2016) was utilised in this case study. This framework was useful in sport research as an analytical tool in a scoping study of design thinking in SFD (Joachim et al., 2020). Further, the framework was used not only to explore if design thinking was appropriate for the Sixers to adopt (Joachim et al., 2021) but also in a subsequent intervention to identify and introduce a design thinking activity suitable to how the Sixers preferred to work (Study Three). Carlgren et al. (2016) developed the

thematic design thinking framework as a scholarly tool for future studies of design thinking in theory and practice. The framework was constructed from a qualitative analysis of six companies who self-identified as practitioners of design thinking (Carlgren et al., 2016). The findings revealed that although the principles / mindsets, practices, and techniques utilised within the companies varied, they could be categorised into at least one of five themes: user focus, problem framing, visualisation, experimentation and diversity (Carlgren et al., 2016). Hence, this framework was used to discover the principles / mindsets, practices, and techniques (with a focus on reflection) used by the Sixers that aligned with design thinking themes.

Data collection

Data were collected via two methods (i.e., semi-structured interviews and observation) and at multiple times and locations in line with Denzin and Lincoln's (2018) definition of a robust and useful qualitative case study. Data collection began in November 2018 and concluded in April 2019, a period that spanned the Sixers's preparation for the 2018–19 WBBL and [M]BBL seasons, the organisation's navigation and subsequent review of that season, and their subsequent annual planning days.

The primary method of data collection for this study was semi-structured interviews at both the outset (pre-interviews) and conclusion (post-interviews) of the study. Semi-structured interviews are popular in sport management studies (Andrews, Mason & Silk, 2005) as they allow researchers to discover more information to uncover what is 'real' (Barbour & Schostack, 2004). Additionally, semi-structured interviews are uniquely powerful when attempting to understand how known concepts (e.g., design thinking) are used in practice (Ayres, 2008).

Flick (2014) argued that interviews based in theory and the guiding assumptions of a study enable researchers to make explicit the interviewee's implicit knowledge. Consequently, both the pre- and post-interview guides for this study were based on the guiding theoretical framework of thematic design thinking (Carlgren et al., 2016). Interview questions were articulated to uncover both the practical techniques used by the Sixers to pursue innovation (e.g., 'How does the organisation visualise a new concept?' and 'How does the organisation create a new product?') and the individual and organisational attitudes towards this practice (e.g., 'How important is creativity to the organisation?', 'Do you identify as being a creative person?' and 'Has working here made you feel more creative? Less?'). These pre- and post-interviews were conducted one-on-one by the lead author with the Sixers's six permanent members of staff, as they are the central planning unit of the organisation. Pre-interviews included biographic questions and took longer (70–150 minutes) than did the post-interviews (45–60 minutes).

To collect and analyse data that were as comprehensive as possible, observation was undertaken in three settings. Of primary interest to this study was observing how the Sixers used a design activity—the LDJ—in two sessions of the organisation's annual planning days. Data that were gathered from observing nine work in progress (WIP) meetings also contributed to the study, as these meetings not only constituted the Sixers's primary forum for developing strategy and pursuing innovation, but also afforded insight into their processes for the same. Observation invaluably complemented the data collected from interviews, as it provided the opportunity for some of the phenomena described in those interviews to be witnessed in natural settings. Stake (1995) argued that observation enables a greater understanding of the case, as good records of observation provide 'a relatively incontestable description for further analysis' (p. 62). Observation data were captured through multiple channels—including field notes and audio recording for all observation and video recording

for the three design thinking workshops—to ensure such good records were kept. Overall, the researchers heeded the advice of Emerson, Fretz and Shaw (2011), who suggested field notes should capture the lead author's initial impressions and personal sense of significance and unexpectedness, while also seeking to uncover if and how observed events were significant to those being observed. Thus, field notes transform witnessed events into words that can be reconsulted and analysed. However, field notes can also be selective (i.e., the observer decides what is worth recording), and steps were taken to mitigate the risk that something important was unintentionally missed (Emerson et al., 2011). Specifically, all observed WIP meetings were audio-recorded, and all authors could review the recordings. Further, reviewing audio or video recordings can allow researchers to uncover insights—such as tone of voice (Morgan & Guevara, 2008) or non-verbal cues (Shrum & Duque, 2008)—that went unnoticed in the moment.

Data analysis

After data collection, the lead author transcribed and digitised all interview transcripts and field notes from observation and shadowing into text form, enabling NVivo 12 to be used for data analysis. Carlgren et al.'s (2016) framework was designed specifically as a tool to 'be used to outline and design further empirical research, and for theoretical studies of [design thinking] in relation to other academic discourses' (p. 53). Hence, coding utilised *a priori* codes derived from the framework—codes that had been similarly employed in sport research (Joachim et al., 2020; Joachim et al., 2021). Creswell and Creswell (2017) suggested developing a qualitative codebook when theory provides codes in this way. Accordingly, a codebook for all codes (i.e., indicators of alignment with the framework) that included definitions for each code was developed. In total, 47 codes were used, which is under the suggested maximum of 50 that coders can reasonably keep in the front of their mind (Miles, Huberman & Saldaña, 2019). In line with this study's instrumental case study approach, this

coding process allowed the researchers to discern both the expected *and* the unexpected relationships in the data (Stake, 1995).

Creswell and Creswell (2017) noted that as researchers are interested in the meaning of codes rather than the literal wording of those codes, their understanding of said codes can change as more data are collected, and a greater understanding of the case is thereby developed. Consequently, any data that had been collected and analysed prior to this study (e.g., pre-interview data, which was previously utilised in an exploration of the Sixers's innovation practice) were analysed anew for this study. All authors participated in cross-author checking to ensure accurate and consistent coding against the qualitative codebook (Patton, 2015). To remove the potential for bias in this checking process, all participants were de-identified through the assignment of gender-neutral pseudonyms by the lead author.

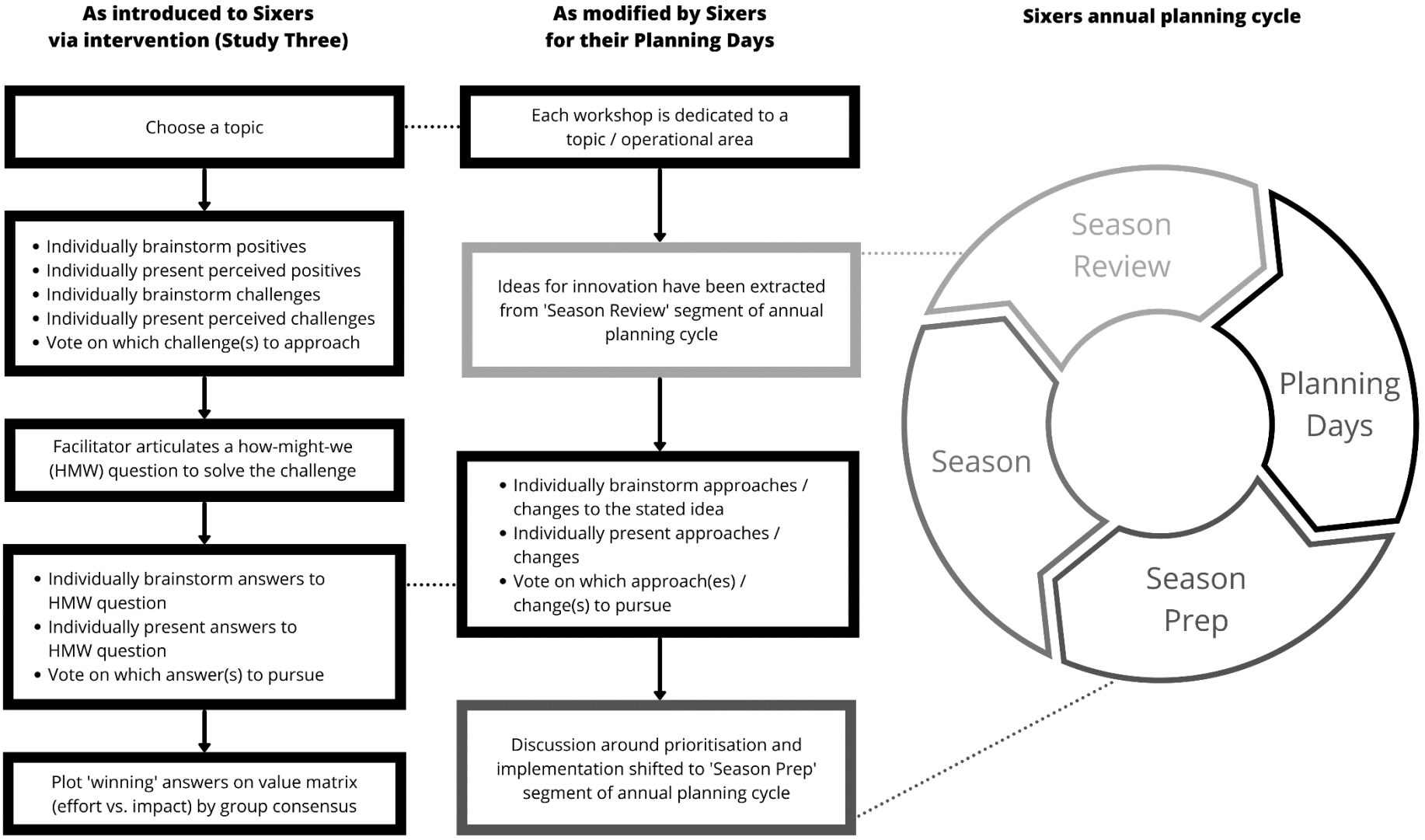
Findings and Discussion

Adoption of the LDJ into the Sixers' practice (RQ1, RQ2)

As noted, the LDJ was first introduced to the Sixers's practice in a standalone workshop (Study Three) in which the Sixers were guided through the LDJ as described and recommended by AJ&Smart (2018) and Courtney (2018). This study extends work on the LDJ—within the Sixers's practice and generally—by investigating how the Sixers adopted and used the LDJ in their annual planning days. Specifically, RQ1 was concerned with the nature of any modifications the Sixers made to the LDJ to make it 'fit' the organisation's approach to their planning days. Similarly, RQ2 was concerned with how the Sixers's staff perceived the organisation's use of the LDJ.

Regarding RQ1, the Sixers made modifications to the LDJ. These modifications are illustrated in Figure 7; the original five stages of the LDJ appear in the left column, and the

Figure 7: Modifications made to the LDJ by the Sixers



centre column indicates the stages as modified by the Sixers for use in their annual planning days. Selecting one topic of focus at the start of the process was maintained; the LDJ was run in every session of the planning days, each of which was dedicated to a particular topic or operational area. However, while the LDJ prompts practitioners to brainstorm both positives and challenges associated with a specific topic (with the challenges becoming the subsequent focus of the LDJ), the Sixers instead discussed ideas for innovations that had emerged in the formal season review (conducted in the weeks prior to the planning days). This alteration made redundant what is usually the next step of the LDJ (i.e., articulating how-might-we [HMW] questions); thus, that step was eliminated. Thereafter, the process of brainstorming and voting on ideas for how to overcome a challenge or to capitalise on an opportunity remained mostly intact, and the final step of the LDJ—prioritising ideas for planning and implementation—was moved to the season prep stage of the Sixers's annual planning cycle.

As revealed in both interviews and observations, these modifications appeared to suit the Sixers (RQ2). Field notes recorded the nature of the conversation between two Sixers staff members during a break between two observed planning day sessions:

> In between sessions, a bit of chatting about why they prefer this approach
>
> - [Staff member 1] mentions this process is higher level, not bogged down in detail.
>
> - [Staff member 2]: 'Better than death by PowerPoint.'

The comment regarding the excessive use of PowerPoint echoed a frequent complaint about previous planning days that Sixers staff expressed in post-interviews. Indeed, one staff member used the same phrase while also underscoring the effectiveness of importing ideas from the season review:

> If I think back to the previous planning days … Last year was a bit of a 'death by PowerPoint' situation, and it felt like we re-hashed a lot of stuff from our reviews rather than leaving the reviews where they were and thinking forward. I felt like the [use of the modified LDJ] as a whole was a step forward.

Other staff members drew similar comparisons in their post-interviews, sometimes quite directly as this staff member did:

> It's a fun way to do things, I think. To put things on a piece of paper and hear what everyone else thinks is the best thing to do in regard to certain problems. It's better than sitting there looking at a slide show and having 15 minutes for thoughts at the end.

Similarly, regarding the nature of conversation in the planning days, one staff member noted that 'it's such an open discussion. It's not just one person up there kind of talking about their area.' Another staff member described how the format of previous planning days limited staff members' ability to share ideas, whereas the LDJ encouraged it:

> All ideas are forced to be put out there [in the modified LDJ]. Previously we would have just sat around and talked about something, and if you don't think your idea is great you wouldn't put it out there, whereas now you're kind of forced to put your ideas out there whether [you think they're] going to be good or not.

Each of these quotations complements the comments made during the planning day sessions and, considered as a whole, indicate broad approval of the LDJ as the new format for the Sixers's planning days. Indeed, no staff member expressed a negative opinion.

Notably, the Sixers modified the LDJ without involving the researchers. The Sixers's ability to critically engage with the original LDJ suggests what Stark and Torrance (2004) termed

intuitive generalisation. That is, the Sixers were able to draw on their experience and discern which components of the LDJ to maintain, which to discard, and which to shift to other phases of their annual planning cycle. The Sixers being able to adapt the researcher intervention to suit the organisation's practice suggested that other sport organisations could do the same. Indeed, adopting design activities to suit specific organisational contexts marked the maturation of design thinking as a concept in the broader field of management (Carlgren et al., 2016). Therefore, repeatedly adopting design activities may do the same within the field of sport management and might lead to the development a design thinking model specifically suited to the field—an implication (alongside others) explored in more detail later in this article.

Links to themes of design thinking (RQ3)

As the Sixers modified the LDJ (RQ1) to suit the organisation's work preferences (RQ2), the next research question (RQ3) sought to determine whether the Sixers's modified LDJ maintains—or even enhances—the organisation's practice and its links to design thinking themes.

The firms that Carlgren et al. (2016) studied self-identified as engaging in design thinking and the principles / mindsets, practices, and techniques they used to do so could be linked to five broad themes of design thinking: user focus, problem framing, visualisation, experimentation and diversity. Introducing the LDJ to the Sixers in a standalone workshop confirmed that the organisation's innovation practices linked to all themes of design thinking, with the use of the LDJ itself displaying links to the themes of problem framing and diversity (Study Three). Thus, by addressing RQ3, the Sixers's modification of the LDJ necessitated a re-examination of the links between the organisation's use of the activity and themes of

design thinking to ensure that said modifications maintained their broader organisational alignment with all five themes.

When exploring the links between the modified LDJ and the themes of design thinking, the researchers confirmed that the links to *problem framing* and *diversity* that were established in the LDJ's introduction had been maintained, meaning that the Sixers's practice remained linked to all five themes of design thinking. In this study, each occurrence of the modified LDJ began with both expansion of and focus on one problem, with both actions aligning with the problem framing theme (Carlgren et al., 2016). These actions were captured in field notes at the outset of a workshop focused on enhancing the [M]BBL gameday experience: '[The team] are "exploding" moments out to the highest level and then drilling down'. The benefit of such an approach was illustrated in this way by one staff member in a post-interview:

> The [modified LDJ] has helped a lot in terms of exploring an idea or how we're going to do things differently because it's given us a much wider perspective.

Another interviewee credited the LDJ with helping the Sixers focus their problem-solving efforts:

> As a team, we've got a better focus now on how we problem-solve, how we frame things up, and trying to look differently—outside the square—to expand our thought. Especially outside of our own areas, as well.

While these quotations indicated a link between the Sixers's practice and the theme of problem framing, embedded phrases (i.e., 'has helped a lot' and 'we've got a better focus now') also suggested that practical improvement had been achieved by using the LDJ and that the use of design activities in sport management practice can enhance said practice and its links to design thinking themes. Similar language appeared in comments related to the

theme of diversity. This theme relates to a diversity of thought in the design process and manifests through indicators such as ‘collaboration’, ‘a democratic spirit’, and a ‘diversity of perspectives’ (Carlgren et al., 2016). One staff member touched on each of these indicators during a post-interview:

> Everybody has an equal say on things [in the LDJ]. It’s not just ‘present on your area and give me your thoughts’. It’s like: this is the problem in this department, everybody else put your thoughts down. It’s not like ‘here’s a [department] problem’, [then everybody offers suggestions] and then [the people from that department say] ‘no, that’s too expensive’. It’s just laying out all possible solutions without thinking about any negative consequences—or any consequences. Everyone having that equal voice is a big thing. Everybody thinks differently and has different ideas, so you may as well use them.

Suggestions of enhanced practice are embedded in this language, as the staff member is comparing the use of the LDJ to the approach used in previous planning days, which comprised departmental presentations followed by a group discussion. Indeed, this staff member noted how the previous approach allowed expertise to override collaboration. This staff member suggested that in sessions led by department managers, ideas might be ‘shot down’ before they have a chance to gain momentum. However, the LDJ gives everybody an equal voice. This appraisal was iterated in another staff member’s post-interview:

> I think when you’re in that room, and you’re giving everyone a say, it’s a flow-on effect. You give your thoughts, you be as creative as you want, and it keeps everyone involved. It keeps that energy up and encourages everyone.

In addition to the maintained links with the problem framing and diversity themes, a link to the theme of *experimentation* was also discovered. The experimentation theme relates to the

willingness of an organisation to generate and test ideas in an iterative manner (Carlgren et al., 2016). Indicators of alignment with this theme—including 'eager to share', 'optimistic and energetic' and 'playful and humoristic'—were captured in field notes, as outlined in Table 13. These indicators also manifested in post-interviews, including in the above quotation regarding diversity (i.e., 'It keeps that energy up and encourages everyone. It's a fun way to do things, I think.') and in more general thoughts regarding organisational attitudes towards problems (i.e., 'We're generally pretty positive about problems.') and how they are framed (i.e., 'We see [problems] as opportunities. There's always room to change a product.').

Table 13: Fieldnotes indicating alignment with design thinking theme *experimentation*

Indicator of design thinking alignment	**Excerpts from fieldnotes aligning with given indicator(s)**
Eager to share	'Everybody explaining and justifying their ideas.'
	'They gather around [staff member's] phone and watch video of 'Zombie Nation' towel waving at a basketball match. Immediately they brainstorm how to customise towels for their own goals. [Staff member] suggests printing a '4' on one side of the towel and a '6' on the other, and others start building on this idea.'
Optimistic & energetic	'[General manager] checks in with staff members who would have to deliver on a brainstormed idea: "Are you happy?"'
	'Frequent breaks. [Staff member] tells me this is to keep energy up.'
Playful & humouristic	'Everybody dressed casually: jeans, t-shirts, hoodies.'
	'Music playing the whole time - turned up during brainstorming sessions.'
	'Light mood - joking but making progress.'

As the original LDJ did not meaningfully link to experimentation, the link evidently emerged after the Sixers modified the activity. Considered alongside the improvements in links to problem framing and diversity, this new thematic link further suggested that the Sixers's modifications to the LDJ enhanced its usefulness for the organisation's practical purposes.

Enabling reflection in sport management practice (RQ4)

The final research question (RQ4) sought to discover how the Sixers's use of the modified LDJ enabled reflection within the organisation's practice. Indications of reflection were discovered when the Sixers were introduced to the LDJ (Study Three), and reflection was similarly discovered in how the organisation used the modified LDJ.

The Sixers's strategic and innovation practice is based on questioning concerning the 'Why?' of its business. Even before the organisation used the LDJ, one staff member explained in a pre-interview, 'We spend a lot of time asking "Why? Why do we want to do certain things?"' Later, observation field notes recorded a staff member asking 'Who is this for?' while the team discussed a new idea during an in-season WIP meeting. In line with the organisation's willingness to question problems, the Sixers frequently interrogated current practice to align it with what users desire. During the planning day sessions, field notes captured many such questions (e.g., 'Do we even need [existing match day] themes?' and 'Are we "fans first" if we do this?') in addition to notes regarding the type of value the Sixers were seeking to create for those users (e.g., '[They] seem to be going for a community feel' and '[M]BBL is conceptualised as a night club, WBBL a day club').

These approaches resembled what Schön and Wiggins (1992) described as levels of seeing. They discussed a design student who 'sees' in two different ways: a literal seeing of a space in which to design and a cognitive seeing that the space is problematic for various reasons. Although the case of their student related to architectural drawing, the same phenomenon manifested in the Sixers's use of the LDJ: the organisation saw not only a problem (one that was obvious or had been highlighted in surveys or other instruments) objectively but also the underlying factors causing the problem. Examples of this were observed when the Sixers were brainstorming ideas for enhancing the [M]BBL match day experience. When

brainstorming ideas for a signature ‘Sixers Moment’, one staff member proposed having live music during the innings break, yet at the same time noted the logistical challenges associated with the idea: ‘I know this would be expensive, and a lot of people are in the bathroom or waiting in line for a beer at that time’. Similarly, an idea for enhancing the ‘run on’ (when the team or first two batters take the field, depending on the innings) related to the use of pyrotechnics and, again, logistical concerns (‘I would rather just give away $100 notes’) were raised at the same time. Both of these examples are notable not only because they illustrate levels of seeing on the part of the Sixers staff, but also because they indicate that the LDJ had, to at least some extent, freed their thinking and willingness to share that thinking. That is: ideas were being suggested even when they contained embedded challenges. This represented a dramatic change from previous planning days, which one staff member explained in a post-interview:

> ‘in [using the modified LDJ] I didn’t mind putting ideas out there, whereas last year was a bit of… [a department’s] presentation would finish, you would make a suggestion, and often the [presenting team members] would tell you why that would never work. And that was kind of that.’

This second ‘cognitive’ seeing was enabled by the Sixers’s knowledge-in-action: their intuition or ‘know-how’ (Schön, 1995). Examples of this manifested throughout the use of the modified LDJ. During brainstorming sessions, the lead author observed that ‘some ideas are left on the table’ and then noted that these ideas (e.g., ‘marching bands’ and ‘other music options’) were shared later but for a different topic. This suggested intuition: that staff members knew not only that the idea was good but also that it was inappropriate for their current context (hence it was saved for later rather than discarded).

This intuition was enhanced through intentional and unintentional learning. In an interview, one staff member described how the latter occurs:

> [Another staff member and I] went to a few [Sydney] Swans [Australian Football League] games this year—not really for the purpose of researching, I guess, but when you're there, and you're working in the industry, you do just pick up on things. Like we'll talk about what stuff they do on the big screen for members and how their fans engage with it. I think that just happens—sort of second nature, I guess. You don't really pay much attention to your doing it, but at the time you are taking stuff in, then you get back to the office on Monday, and you're saying, 'Oh, remember when they did this? I thought what could we do similar to that … the same but a bit different.' So I think that's a big thing we try to do.

As this team member explicitly stated, learning occurs without intention or realisation in the moment. While intentional research or learning—such as investigating the offerings of competing teams or teams in other sports—is also conducted, one staff member implied that more could be done: 'I would actually prefer [we trawl] the internet looking through examples and ideas and those sorts of things [when we have down time]'.

Notably, it was knowledge-in-action and reflection-in-action that Edwards et al. (2002) revealed was mainly absent from the practice of commercial sport organisations. Further, Kimbell (2011) noted that the absence of reflexivity in prevailing models of design thinking was problematic. In our study, the use of a design thinking activity—specifically, one adopted by sport practitioners to suit their operational contexts—appears to resolve both concerns by restoring reflection into sport management (and, hence, design thinking) practice. The implications of this finding, among others, are discussed in the next section.

Implications and Contributions

Sport management

This study's findings have several implications for sport management research and practice. First, the Sixers's modification of the LDJ (RQ1) constitutes what Doherty (2013) termed *conceptual blending*, merging a borrowed theory (design thinking) with the unique traits of the new focal context (sport management practice). At a high level, this proved that design activities can be meaningfully and usefully incorporated into sport management to achieve human-centred outcomes. Further, it suggested that sport managers can incorporate design activities into their practice by using what Stark and Torrance (2004) termed *intuitive generalisation*. Indeed, the Sixers reshaped the original LDJ to make it better serve the organisation's needs in context.

Second, this proof of concept highlighted how useful it is to incorporate design activities into sport management practice to enhance sport experience design through Funk's (2017) framework from the organisational perspective—a perspective that has been mostly overlooked in sport consumer research. Notably, staff members reacted positively to the Sixers adopting the LDJ (RQ2). They praised the process itself and indicated that the team's abilities had improved in many ways. Perceived organisational performance—along with innovative work behaviour, psychological wellbeing, and lower intention to leave—has been linked to high employee engagement in for-profit sport organisations (Shuck, Adelson & Reio, 2017). In Australian sport organisations, a positive culture and employee suitability have also been found to influence the interaction quality with the most valuable sport consumers: season ticket holders (Lee, Kunkel, Funk, Karg & McDonald, 2019). Thus, a conceptual loop is created in which human-centred approaches positively affect sport organisations, generating further positive user outcomes.

Further, the Sixers use of knowledge-in-action to engage in reflection-in-action (RQ4) reinforced the potential value of studying such phenomena in sport management practice, potentially toward generating new sport theory. Edwards et al. (2002) noted that such reflective practice is underexplored in sport management. Indeed, while researchers have given some attention to the reflection-in-action of sport psychologists (e.g., Anderson, Knowles & Gilbourne, 2004; Martindale & Collins, 2012) or the use of reflection to enhance sport education (Martin, Fleming, Ferkins, Wiersma & Coll, 2010), not much similar research has been conducted in sport management. This could be because reflection is uncommon in sport practice, as sport managers report that the energy and time one would commit to reflection is better used to address the immediate and often unpredictable demands of sport practice (Edwards et al., 2002). This study's findings echo these claims. Prior to using the LDJ, some Sixers staff discussed being uncomfortable engaging in reflective activity unless they had allocated time for doing so. However, these findings also highlighted that using a design thinking activity encouraged such reflection. For the Sixers, this fulfilled some staff's desires to have structured time to reflect. For other sport organisations, this suggests that adopting design thinking activities might enable sport practitioners to dedicate personal (energy) and organisational (time) resources to reflection. Edwards et al. (2002) suggested that research could be used to develop sport theories of reflection—which might meaningfully enhance the understanding of the conditions under which sport practitioners operate—into concepts such as reflection-in-action as they manifest in sport settings.

Considered together, these findings suggested that sport organisations increasingly adopting design activities (the performative component of design thinking) that contribute to achieving human-centred outcomes (the ostensive component of design thinking) can have flow-on effects beyond the designs being pursued. This renders design thinking not as merely a tool, but as a useful approach to practice for sport organisations to utilise. Further, this echoes

Brown's (2008, 2009) and Martin's (2009) psychological profiles of design thinkers and suggests that repeated adoption might yield a set of design thinking activities tailored to sport management practice. These activities would prove a useful way to approach sport experience design from an organisational perspective (Funk, 2017).

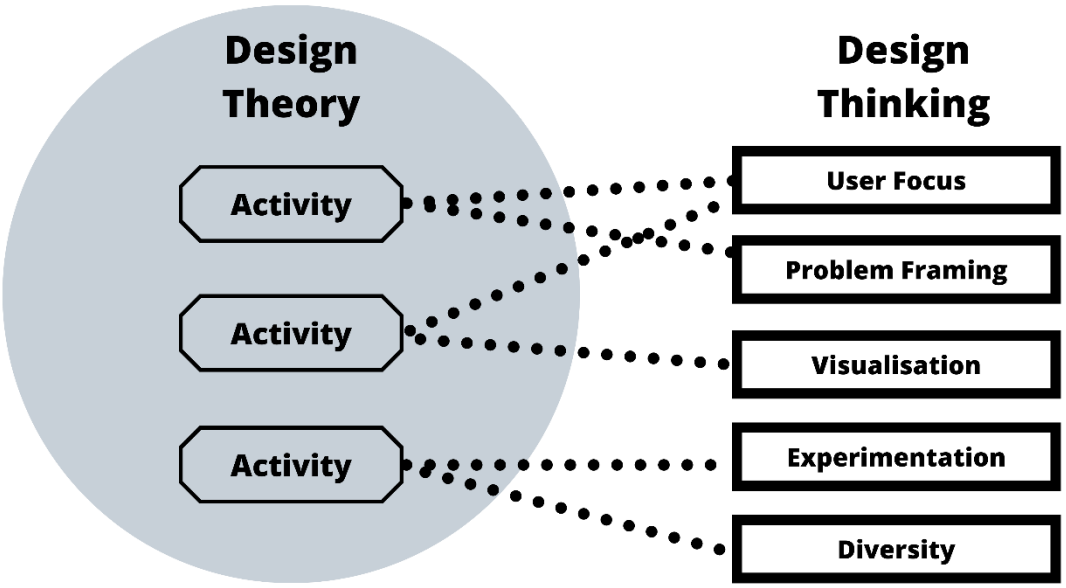
Design thinking

Funk (2019) noted that sport researchers often failed to consider that implementing derivative concepts in the sport management field might have implications for the parent field. This study's researchers heeded Funk's advice when outlining two specific contributions this study makes to the design thinking field.

First, design thinking continues to evolve separately to design theory (Johansson-Sköldberg et al., 2013), which potentially hinders its evolution. Our study revealed a connection between how the Sixers used the LDJ (a design activity utilised for design thinking outcomes) and extant design theory to span the divide between design and design thinking. Specifically, this connection manifested between the LDJ and design thinking themes (RQ3) and between the LDJ and Schön's (1985, 1995) concepts of knowledge-in-action and reflection-in-action (RQ4). Indeed, Schön's (1985, 1995) concepts of reflection are the foundation of a stream of design theory that conceptualises design as a reflexive practice. Hence, the Sixers's use of the modified LDJ is connected to both design thinking theory and design theory. While this connection does not in itself reconnect the two fields, it does illustrate how such a reconnection can be achieved. Indeed, if organisations like the Sixers adopted more design activities (the performative component) and aimed to achieve human-centred outcomes (the ostensive component), a 'complete' design thinking practice might be achievable in which all these activities provided links to all five themes of design thinking. Such a hypothetical practice is illustrated in Figure 9. Activities that are derived from

design—as the LDJ was in this study—could be intentionally linked to extant design theory. When an array of such design activities is also linked to each of the five themes of design thinking, a 'complete' design thinking practice is achieved through which design theory is linked to design thinking theory. Were such a 'complete' practice to be developed, studying it would be quite valuable because the design thinking practice would inform the design practice, and vice-versa, towards ever-enhanced practice.

Figure 9: A hypothetical practice based in design theory and linking to design thinking themes.



Second, successfully incorporating a design thinking activity into sport management practice supports Dorst's (2011) claim that practitioners in all fields can benefit from understanding how designers work. The Sixers's use of the LDJ—an activity derived from expert design practice—demonstrated reflection-in-action (Schön, 1995). Design as a reflexive practice is a subdiscourse of what Johansson-Sköldberg et al. (2013) termed *designerly thinking* and, as such, represents a theoretical perspective of what professional design practice is for. Hence, by reflecting through and within design practice, the Sixers have begun to behave like designers within the context of the organisation's own practice. Such behaviour represents the development of *designerly ways of being* within the organisation. In the field of design

education, progress towards developing designerly ways of being is indicated by crossing certain thresholds. One example of these thresholds is accepting uncertainty as an unavoidable and necessary feature of the design space and design work. After design students cross this threshold, they can self-assess their navigation of that design space towards establishing a personal designerly way of being (Tracey & Hutchinson, 2016). As design thinking practitioners, the Sixers are shown to resemble designers in this study—if only nominally. This is an important contribution to the fields of design, design thinking and, by extension, design education, as it suggests that the three fields might be meaningfully and beneficially linked in future research to enhance design thinking practice using the established theories of design education.

Concluding remarks, limitations, and future directions

This study sought to explore how the adoption of the LDJ influenced the innovation practices of the Sixers. In doing so, this study discovered that the Sixers had modified the LDJ (RQ1) in a way that was perceived by their staff to suit their working preferences (RQ2). Further, the modifications made to the LDJ enhanced the Sixers's practice and maintained its links to design thinking themes (RQ3). Finally, the use of the modified LDJ was found to allow for reflection within the Sixers's practice that has been noted to typically be absent from the practice of commercial sport organisations (Edwards et al., 2002).

Although this study was not without limitations, which must be acknowledged, these limitations offer a promising starting point for future research. First, the findings of a case study are not, by definition, generalisable to a larger population. However, and as we have previously noted, detailed case studies do enable an intuitive generalisation through which researchers and practitioners can make sense of the findings through the lens of their own experience and then adapt such insights as they see fit (Stark & Torrance, 2004). Indeed, as

the Sixers's modifications to the LDJ were undertaken without researcher involvement, proof is offered that sport practitioners can and do adopt research interventions into their ongoing practice with positive effect.

Second, while the theoretical framework usefully bounded our qualitative exploration of the Sixers's practice for the present study, there are potentially insights to be uncovered outside of this boundary. As discussed in our implications, findings such as strong perceptions of ability indicate high employee engagement (Shuck et al., 2017). The analysis of such topics is outside the scope of our study, but future research might usefully link the use of design thinking to changes in employee engagement, among other related concepts. From the design perspective, such concepts might include indicators that designerly ways of being are developed through design thinking practice in sport management. Any such development would reinforce the utility of links between design thinking theory and design theory, as it would indicate the ongoing development of design competency in sport management practice.

Overall, this study highlights the usefulness of adopting design thinking activities into sport management practice as a means of not only generating value for the sport user but also enhancing organisational practice with techniques—such as reflection—that also characterise expert design. We hope that this will be merely the starting point for future work in human-centred design thinking in the sport management field.

Discussion

This doctoral project is concerned with the use of design thinking – a human-centred means of creating user value which makes the thinking and the doing (the cognition and the action) of expert designers accessible to non-design practitioners (Carlgren et al., 2016) – in the field of sport management. At the outset of this project in January 2016, design thinking had received no attention in the field of sport management. However, in the time since, the concept has been identified as a valuable avenue for future research in the sport sub-field of SFD (Schulenkorf, 2017) and has also been suggested as a structure for a sport management university capstone course (Pierce et al., 2019), suggesting that researchers see the potential value design thinking offers sport researchers and practitioners alike. Indeed, other researchers have engaged with the first published article that arose from this doctoral project in highlighting that design thinking traits characterise the culture of innovative SFD organisations (Svensson & Mahoney, 2020). Despite this interest, however, this thesis and the component studies within represent the first empirical study of design thinking in sport management practice. Accordingly, contributions are made to the theory and practice of both fields, as summarised in this section. This concluding chapter of the thesis offers a review of the overall doctoral project, including the overarching research aims. Key findings and implications from the component studies are then discussed ahead of the project's contributions to theory and practice in both the sport management and design thinking fields. On the back of these contributions, directions for future research are thereafter suggested.

Review of doctoral project

Design thinking served as the phenomenon of interest at the heart of this doctoral project and – owing to user-centric challenges apparent in the field – sport management provided a promising context in which to study the potential value, use, and adoption of design thinking as a derivative concept. Recall that the sport user is always evolving, along with our understanding of them. At the turn of the century, Stewart and Smith (1999) outlined unique features of the sport industry. These features included strong team-level loyalty of sport consumers tied to what they deemed the 'irrational passion' of fans - findings which suggested that such team loyalty largely remained constant even when on-field results did not. By 2010, however, the authors had developed a more nuanced view, concluding that sport consumers are not as different to traditional consumers as once believed and, notably, that components of their passion for sport serve as proxies for the fulfilment of inter- and intra- personal needs (Smith & Stewart, 2010). This development over a single decade highlights underlying human needs – be they psychological, social, or cultural – which the sport experience purports to fulfil (Smith & Stewart, 2010).

However, attempts to address these underlying human needs of the sport user have not considered all perspectives. This is illustrated within Funk's (2017) proposed Sport Experience Design framework, which adopts a 'consumer-centred' approach that acknowledges the psychological needs - the human needs - of the sport user. He illustrates three interrelated elements of sport experience design which also represent three differing perspectives on sport consumer behaviour: sport context ('user experience'), sport user ('consumer needs') and sport organisation ('business goals'). Only where all three of these elements overlap, he explains, can a holistic sport experience be achieved. Funk (2017) argues that while attention has been paid to researching sport consumers from the perspective of the sport context or the sport user, little research has integrated the two. Further, the third

perspective – that of the sport organisation – tends to be overlooked. This doctoral project has aimed to address this omission by exploring what value design thinking might have in approaching such human-centred needs in sport organisations.

In attempting to understand how design thinking might hold value for the field of sport management in general and for sport organisations in particular, this doctoral project (and the component studies thereof) addressed four core research aims:

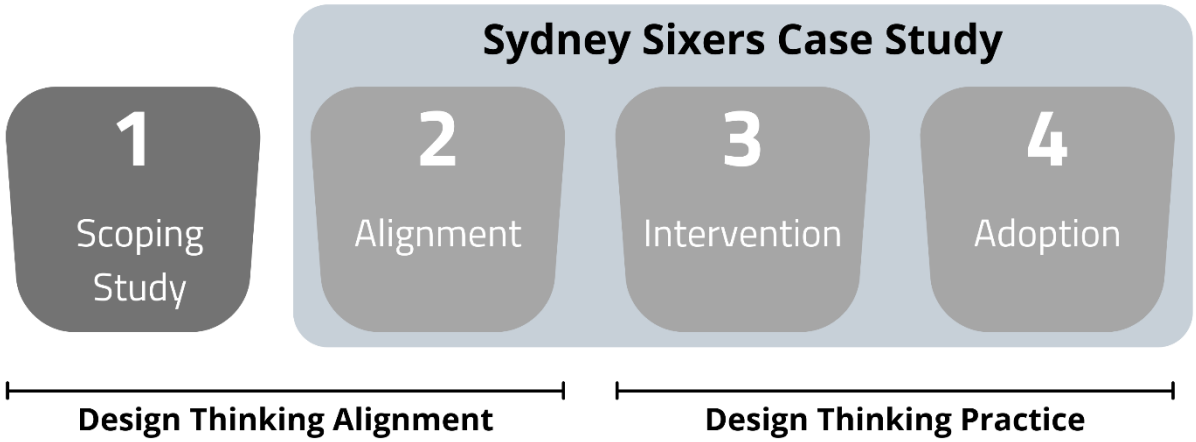
> **Study / Aim One:** Explore to what extent (if any) do current organisational activities in sport organisations and/or studies align with themes of design thinking - as a means of checking the general fit of design thinking for sport organisations in general.
>
> **Study / Aim Two:** Explore to what extent (if any) does the current practice of a professional sport organisation (Sydney Sixers) align with themes of design thinking - as a means of assessing the suitability of design thinking for possible adoption into the Sixers' practice.
>
> **Study / Aim Three:** Undertake an intervention with the Sixers to identify a design activity which would suit their way of working and maintain – if not enhance – their organisational alignment with design thinking themes.
>
> **Study / Aim Four:** Explore the adoption of the design activity introduced in Study Three – the Lightning Decision Jam (LDJ) – into the Sixers' practice. Specifically: did their adoption of the LDJ maintain links to design thinking theory, and did their adoption of the activity result in alignment with design theory?

Taken as a whole, these studies and research aims consider design thinking as a potential means by which the organisational perspective might be better represented in a holistic user-centric sport experience design. While this carries implications for sport management practice and research, this doctoral project also makes contributions to the fields of design and design thinking. The next section offers a discussion of the project's key findings and implications ahead of a detailed discussion of the contributions of the overarching doctoral project.

Key findings and implications

Two complementary qualitative study approaches were adopted in approaching the aims of the project articulated in the previous section: a scoping study (Study One) and the Sixers case study (Studies Two, Three, and Four). These four component studies and their conceptual place in the doctoral project are reaffirmed in Figure 10.

Figure 10: Conceptual illustration of component studies and their linkages



Accordingly, the following sections critically discuss the key findings of the doctoral project along with the implications of those findings. Owing to the different approach taken in Study One, the findings are distinct to those of the Sixers case study, and are thus discussed separately. Meanwhile, as the findings of Studies Two, Three and Four build on each other (and are thus, in many instances, interrelated), those findings have been synthesised into a single discussion for conceptual clarity and ease of reading. Further, this synthesis provides a

foundation for the subsequent discussion of the doctoral project's practical and theoretical contributions to the fields of sport management and design thinking.

Scoping study (Study One)

In addressing the first aim of the doctoral project, a scoping study of sport research and practice was undertaken as a means of (a) determining if and in what ways the field currently features design thinking mentalities; and (b) how the field presents opportunities for the meaningful employment of design thinking approaches, specifically toward enhancing organisational innovation. As detailed in Study One, the sport subfield of SFD was selected as the focus of the scoping study, as organisations within span both the *public* and *non-profit/volunteer* sport sectors.

The scoping study approach was selected as it enables the review and rapid mapping of the literature in a field regardless of differences in study design and without the need to account for research quality per se (Arksey & O'Malley, 2005; Daudt, van Mossel, & Scott, 2013; Levac, Colquhoun, & O'Brien, 2010). The approach taken for this study ensured a comprehensive review, thus allowing for the identification of gaps in the existing research without compromising the overall quality of the scoping study itself (Arksey & O'Malley, 2005). The scoping study employed the five-stage framework developed and outlined by Arksey and O'Malley (2005): (a) identify the research question; (b) identify relevant studies; (c) select studies; (d) chart the data; and (e) collate, summarise, and report the results. A total of 80 articles met the selection criteria – being published in key sport management journals and containing the phrase "sport[-]for[-]development" in the article title, abstract or keywords – and were thus reviewed. Following the charting of the data against indicators of alignment with design thinking themes, a frequency analysis was undertaken as a means of identifying trends in that data. All 80 articles presented at least one design thinking indicator in at least

one theme, revealing that design thinking traits are present (to at least a nominal extent) across the breadth of recent SFD research. This alignment across all reviewed articles suggested that design thinking may hold value to SFD researchers and practitioners.

Further, 14 of the reviewed articles presented at least one indicator from all five themes of design thinking practice and thus presented total alignment with the thematic design thinking framework. As such, these articles are henceforth referred to as *totally aligned*. In line with Arksey and O'Malley's (2005) recommendation of revising the research question through iterations of a scoping review, a further frequency analysis was undertaken to determine if the frequency of specific indicators among totally aligned articles varied significantly from the larger (total) population of articles. Indeed, five indicators were found to be more heavily concentrated among totally aligned articles than they were across the total population of articles: (a) deep user understanding, (b) diversity of perspectives, (c) test to obtain user feedback, (d) futuristic thinking, and (e) bias toward action. Hence, these five indicators suggested that there may be thematic links between and among the totally aligned articles – that the articles may, as a group, display unique traits or perspectives beyond the fact that they all present indicators in each of the five themes. Any such traits might provide 'points of entry' for the use of design thinking in SFD work. Consequently, thematic analysis was subsequently performed in an attempt to make deeper sense of these frequency findings and to generally build on the overall picture that had emerged. Such an analysis was critical in order to establish not only that there was alignment with design thinking practice, but also to determine the ways in which alignment existed and, consequently, how such alignment was leveraged in research and practice. The findings from this analysis, and the implications thereof, are now presented by indicator of alignment and related design thinking theme.

Deep user understanding (theme: user focus)

The different approaches uncovered in totally aligned articles presenting this indicator illustrate that *deep user understanding* is best achieved by considering users from multiple angles. In SFD, this may usefully take the form of including disconnected (or subjugated) local voices in the design of programs, thus closing the gap between those who deliver SFD programs and those who stand to benefit from them (Nicholls, Giles, & Sethna, 2011). Techniques for achieving such deep user understanding include informal conversations with users, the development of empathy maps, and ethnographic research (Carlgren et al., 2016). Pursuing deep user understanding and actively involving users in design thinking practice is the core of Brown's (2009) foundational model of design thinking in which human users are kept at the centre of all practice. Where SFD practitioners are already pursuing deep user understanding, Brown's three-stage model of ideation, inspiration, and implementation may represent a valuable means of focusing their practice on enhancing organisational innovation through design thinking.

Diversity of perspectives (theme: diversity)

Within totally aligned articles, multiple studies of homogenous stakeholder groups demonstrate *diversity of perspectives*, such as in Whitley, Wright, and Gould's (2013) study of 19 coaches, in which data were collected from five different focus groups. While the coaches might have had a similar hierarchical perspective, views from the ground differed among coaches operating in different geographic locations. Elsewhere, diversity of perspectives manifested as the consideration of views from multiple stakeholder groups. Such approaches ranged from the study of merely two groups (e.g. the participants and partners studied by Meir, 2017) to more comprehensive studies (such as Burnett's, 2013, study which considered the perspectives of managers, participants, and the significant others of participants). This variety of approaches to pursuing a diversity of perspectives highlights not

only that SFD researchers and practitioners are already capable of achieving such diversity, but also that they desire to do so. Recall that a key tenet of design thinking is the involvement of users in the design process. Finding ever-better ways of including the users who stand to benefit from a program will maintain any existing diversity of perspectives, or help to establish such diversity where it is missing.

Futuristic thinking (theme: problem framing)

Totally aligned articles presenting this indicator focused their *futuristic thinking* through a lens of the program itself and/or those who delivered the program. A focus on the program itself was apparent in Bean and Forneris's (2016) study of the Nunavik Youth Hockey Development Program, which drew on identified themes and subthemes of program successes and challenges to offer not only recommendations, but also future directions for the program. Likewise, Meir (2017) studied the Leadership and Empowerment through Sport organisation in a manner that displayed obvious futuristic thinking. Rather than stopping with empirical observations, Meir sought to connect those observations to theoretical perspectives as a means of informing not only future practice in the program, but also future development of the same. This broadly reflects a widening of the problem space, which in turn leads to a widening of the solution space (Carlgren et al., 2016) that requires novel approaches. The implementation of design thinking as such an approach can enable SFD organisations to achieve design abduction, as outlined by Dorst (2011). Design abduction begins with only the *value* that the organisation wishes to create; value that has been identified through futuristic thinking. From here, the organisation can work backwards to uncover what *thing* (for example: sport users) will be put through a *working principle* (a specific aspect of the SFD program, if not the program itself) to create that value. The use of "how-might-we-questions" or separating available data into "FOG" (facts, opinions, guesses) as a means of synthesising findings (Carlgren et al., 2016) are two possible approaches to achieving such ends.

Test to obtain user feedback (theme: experimentation)

Owing to its iterative nature, the indicator *test to obtain user feedback* was presented in various forms by totally aligned articles. These forms included pre- and post- methods of data collection (e.g. Burnett, 2013; Welty Peachey, Cunningham, et al., 2015), consideration of program sustainability based on user feedback (Schulenkorf, 2013), or merely a desire to utilise obtained user feedback in future practice of the studied program(s) in particular (e.g. Cooper, Blom, Gerstein, Hankemeier, & Indovina 2016; Gannett, Kaufman, Clark, & McGarvey 2014; Wells & Welty Peachey, 2016) or the field of SFD in general (e.g. Bean & Forneris, 2016; Mandigo et al., 2016; Whitley et al., 2013). This variety of different approaches to gathering user feedback underscores that the manner in which user feedback is gathered is less important than the fact that it is being gathered at all. Perhaps more critical still is the manner in which the gathered feedback is employed (Brown & Wyatt, 2010; Johansson-Sköldberg et al., 2013). All of these articles refer to user feedback not as the end goal, but as an intermediate step of a larger process: as one means of learning (through action). Indeed, practical (and low-stakes) techniques for experimentation are still available even when resources are limited. While typical SFD organisations cannot afford to fail intermediately in the pursuit of success – let alone to fail repeatedly – the use of design thinking techniques such as soft prototyping (role play, etc.) allow for experimentation without added expense (Carlgren et al., 2016).

Bias toward action (theme: visualisation)

A *bias toward action* manifested in two primary ways within totally aligned articles: (a) undertaking practice as a means of learning immediately and improving future practice, and (b) in more quickly building effective practice by basing it on existing knowledge (perhaps from other fields). Meir (2017) used the study of current practice in SFD programs by starting with pilot programs. The program itself was a test, indicating a pull toward action rather than

getting mired in extended planning. Relying on existing infrastructure may be one means of bridging this possible gap between researchers and design thinking practitioners in SFD, and two totally aligned articles took this approach. Mandigo et al. (2016) relied on physical education programs in order to take immediate action, ultimately applying their findings toward improvements in the program. Similarly, Beacom and Golder (2015) drew on existing theory from outside of SFD (specifically, critical pedagogy) to jump immediately into action on a small scale with an aim to grow from there. However, and as noted in the previous section, many SFD organisations simply cannot afford to fail. Jumping immediately into action, then, might end disastrously. Resource shortfalls aside, there is also a concern that to expose a stakeholder group such as participants to a program that is 'unfinished' would represent a tremendous risk to those participants (Welty Peachey & Cohen, 2015). Where SFD programs are aimed at marginalised populations, the risk is greater still. Should a program fail to accomplish outcomes, the effect on participants could be catastrophically negative. Consequently, any attempt by an SFD organisation to engage in design thinking must take care to involve would-be users in a responsible manner.

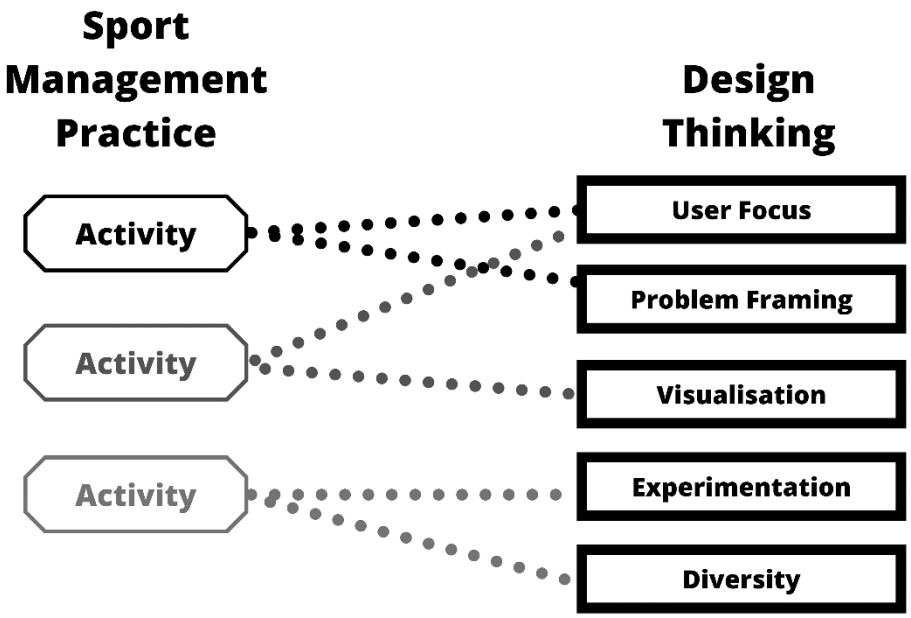
Linking the scoping study and case study

The findings of the scoping study confirm the presence of design thinking indicators across the breadth of SFD research. Further, they highlight that existing SFD work which aligns with all five themes of design thinking – the totally aligned articles – share traits which, when considered thematically and holistically, represent points of entry for the possible implementation of design thinking practice into the SFD field. Recall that Carlgren et al. (2016) outlined two components of design thinking: the *ostensive* (the idea) and the *performative* (the enactment). The SFD work captured in the totally aligned articles suggests that the organisations studied are already capable of the performative component. Hence, in order to enjoy the benefits of enhanced organisational innovation, any totally aligned SFD

organisation would still have to intentionally engage with the ostensive component of design thinking to enable and leverage desired outcomes.

As discussed throughout this thesis, the ostensive component of design thinking can be usefully thought of as merely the human-centred focus of any performative activity. That is to say, a design activity which is oriented in a human-centred manner toward creating value for users would make a useful component of a holistic design thinking practice. Further, such an activity can complement other, similar activities which together link to all five themes of design thinking. Such a hypothetical array of design activities is illustrated in Figure 11.

Figure 11: Hypothetical array of activities displaying links to all five themes of design thinking



Considered in this manner, existing sport management practice which is aligned with all five themes of design thinking can be ‘shaped’ into a design thinking practice by refocusing those same activities toward human-centred value generation. However, such a ‘shaping’ of practice would – all other things held equal – be disconnected with design theory in the same way that models of design thinking used in management continue to be (Johansson-Sköldberg et al., 2013; Kimbell, 2011), as such practice would not be theoretically connected to extant

and evolving design theory, and may not resemble design at all. This echoes Doherty's (2013) warning that borrowed theories bring with them conceptual questions from the parent field. Hence, in attempting to import design thinking into sport management practice through an intervention with the Sydney Sixers, efforts were made to do so in a way which enhanced the Sixers' practice but which also addressed identified weaknesses of design thinking.

Specifically, Ratten (2016) noted that the explicit and tacit knowledge of a sport organisation (and its members) must be incorporated into adopted innovation techniques, which highlights such organisational knowledge as a potential focal point for identifying and modifying adopted innovation approaches for use in different contexts. However, Edwards, Skinner, and Gilbert (2002) outlined that energy and time for reflection is often absent within the practice of commercial sport organisations. Given the unpredictable nature of the sport environment, this lack of reflection has the potential to limit the ability of sport practitioners to convert their lived experiences into individual and, by extension, organisational knowledge (Edwards et al., 2002). Notably, one weakness of design thinking is that the reflection of designers is often overlooked as part of the process (Kimbell, 2011). Hence, any design thinking activity introduced into sport management practice would ideally fit the organisational context into which it is being adopted while also enabling reflection on the part of practitioners undertaking the new approach.

That indicators of alignment with design thinking themes are present across the breadth of SFD work aligns with Ratten's (2016) findings that non-profit sport organisations tend to be more capable of fostering innovation than are their for-profit counterparts. Recall that a conundrum is present in sport innovation management: that the sport organisations which tend to be most willing to pursue innovation – generally, non-profit organisations – also tend to be the least capable of doing so, and vice-versa. Caught in the middle of this conundrum

are professional sport organisations pursuing hybrid for- and non- profit goals. While they typically enjoy more research and development capabilities – to say nothing of human and financial resources – than do strictly non-profit sport organisations (Winand & Anagnostopoulos, 2017), they are also less flexible and more accountable to ensuring any pursued innovation results in a financial return (Ratten 2016). A middle ground must be found, then, in order to reconcile hybrid goals while also pursuing innovation. Accordingly, the case study at the heart of this doctoral project focused on one such professional sport organisation which pursues hybrid goals: the Sydney Sixers.

Case study (Studies Two, Three, and Four)

The social constructivist paradigm that underpins this doctoral project informed a qualitative case study approach for Studies Two, Three and Four. These three component studies were focused on the Sydney Sixers instrumental case and constituted an exploration of the existing Sixers practice (Study Two), an intervention to identify and import a design thinking activity into their practice (Study Three), and an exploration of their eventual adoption of this activity into their ongoing practice and planning cycle (Study Four). As qualitative research allows for data to be collected in natural settings through the use of multiple techniques (Denzin & Lincoln, 2018), a combination of semi-structured interviews, observation, and shadowing was employed in order to create as detailed a picture of the case as possible. Overviews of these methods are outlined in the introduction chapter and are further detailed within the relevant component studies.

Study Two found the existing practice of the Sixers to be aligned with all five themes of design thinking, suggesting the organisation was already practically capable of the performative component of design thinking: the enactment. In linking a professional sport organisation to themes of design thinking, Study Two extended the findings of the scoping

study (Study One) from sport for development into sport development. Considering that SFD organisations (the focus of Study One) operate primarily in the *public* and *volunteer / non-profit* sectors (Svensson & Woods, 2017), the findings of this exploration of a *professional* organisation had the effect of revealing design thinking links in all three traditional sectors of sport.

The Sixers pursue hybrid – i.e. both profit and non-profit – goals, which represents a challenge for their innovation efforts. Recall that non-profit sport organisations are thought to be less risk-averse than larger sport organisations owing to the fact that they often enjoy steady funding regardless of financial return of pursued innovations (Ratten, 2016). The Sixers, however, rely on revenue generation for their financial sustainability, suggesting that pursued innovations need to produce a financial return – and yet the Sixers are demonstrably willing to experiment in all aspects of their operation. This challenges assumptions about the risk-aversion of sport organisations in different sectors and represents a promising avenue for future research.

Further, the Sixers alignment with the design thinking theme of *diversity* demonstrates that external stakeholders can contribute positively to innovation, and that the conflict of competing institutional demands (in this case, the sometimes incompatible expectations of the Sixers' parent organisations) might be solved by adopting similar approaches. Indeed, the manner in which the Sixers integrate external partners such as their event presentation contractors aligns with Svensson and Hambrick's (2018) finding that external stakeholders can and do positively contribute to organisational innovation. That design thinking embraces a diversity of perspectives suggests that it might also be a way by which the challenge of competing institutional demands might be effectively managed to avoid organisational dysfunction (Svensson, 2017).

As for the sport user and their unmet needs, the Sixers' alignment with the themes of user focus, problem framing, and visualisation link to components of the SX framework, an approach to designing holistic sport experiences that is 'consumer-centred' just as design thinking is user-centred (Funk, 2017). The Sixers have put the user at the centre of their strategic planning, which suggests full engagement with the Sport User component of the SX framework. Meanwhile, the *problem framing* and *visualisation* capabilities of the Sixers suggest engagement with the Sport Context component of the SX Framework. Funk (2017) notes that the Sport Organisation component of the SX framework is under-researched and that professional sport organisations in particular have a hard time reconciling the sacrifice of maximum financial return in order to deliver their part of an experience design. Engagement with 'the idea' of design thinking, then, might be the way by which such competing demands can be usefully balanced in service of the sport user.

Indeed, Carlgren et al. (2016) note that a holistic design thinking practice is comprised of both the *performative* (the enactment) and the *ostensive* (the idea). As the Sixers practice was found to be capable of the performative (as indicated by their alignment with design thinking themes), their practice needed only be brought in alignment with 'the idea' – namely: human-centred design – in order to begin building their design thinking capabilities. Such was the focus of **Study Three**, which identified a design activity – a structured brainstorming activity called the Lightning Decision Jam (LDJ) – and introduced it to the Sixers via a standalone workshop.

Undertaking the LDJ as part of the intervention enabled the Sixers to design for themselves. That is: they undertook the structured brainstorming exercise as a means to better their own internal work processes, thus making themselves the humans at the centre of their human-

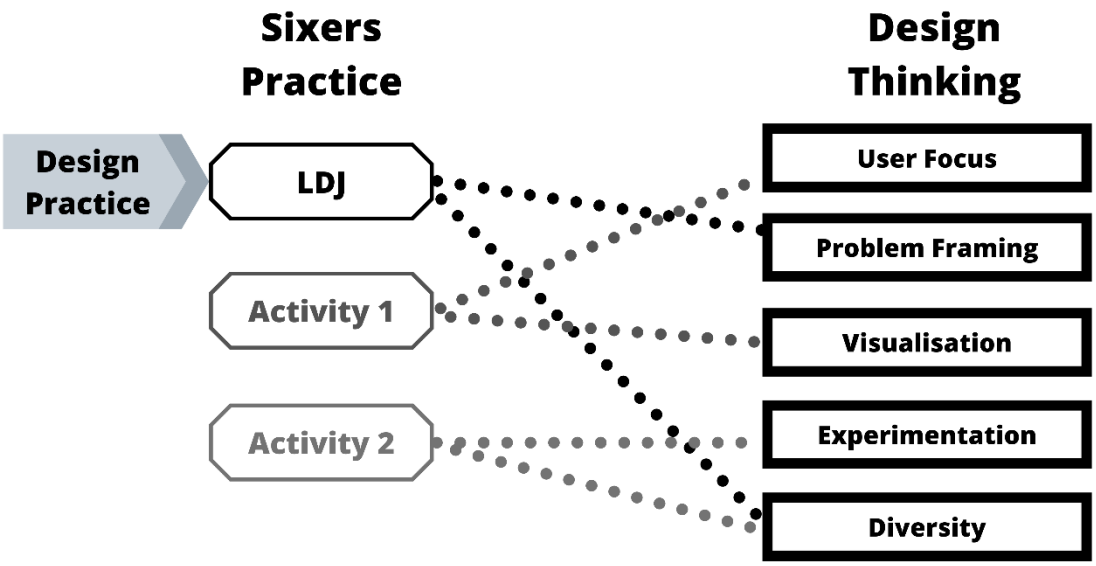
centred design process. This undertaking ultimately linked to two themes of design thinking – *problem framing* and *diversity* – and 'fit' the manner in which the Sixers prefer to work.

The reflection built into the LDJ – to say nothing of the fact that the Sixers elected to brainstorm for themselves, inviting deeper reflection still – restores to their practice the reflection that Edwards, Skinner, and Gilbert (2002) note is often missing from the practice of commercial sport organisations, and which Kimbell (2011) notes is likewise missing from design thinking practice. Hence, an identified problem of design thinking is not transferred to sport management as Doherty (2013) warned is possible. Instead, similar problems in both fields are overcome through thoughtful selection of a design activity for adoption.

A further criticism of design thinking in the literature is that it is too often misinterpreted as being a toolbox to be used situationally, rather than as an approach to practice (Johansson-Sköldberg et al., 2013). This criticism is overcome through the intervention of Study Three, as the process of identifying a design activity which suited the Sixers' way of working frames it not as a standalone activity (or a tool in a box) but as a manner of practice which can be meaningfully integrated into their own. That is to say: rather than fitting the Sixers' practice to absorb a prescribed model of design thinking, the intervention instead found a design activity which fits *them*. This addresses Ratten's (2016) argument that the explicit and tacit knowledge of a sport organisation (and its members) must be incorporated into adopted innovation techniques. Figure 12 offers an indicative illustration of how the LDJ – derived from design – connects to design thinking themes of problem framing and diversity. A holistic design thinking practice is ultimately achieved where the complete array of activities within a practice aligns with all five themes. Hence, a hypothetical Activity 1 and Activity 2 might be likewise derived from design and connected to other themes of design thinking.

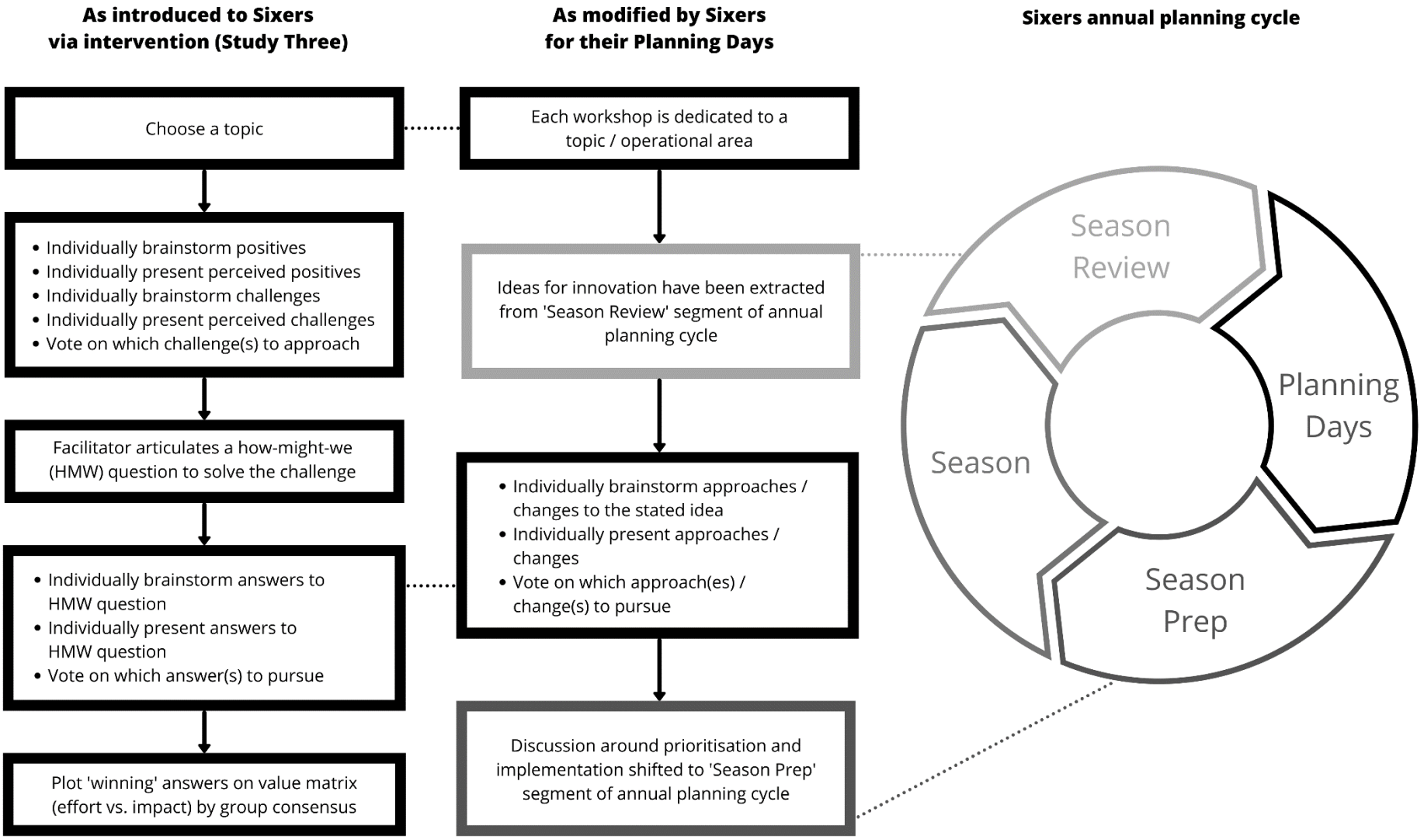
Assembled in this manner, such an array would be based in design practice and theory, potentially reconnecting the two fields.

Figure 12: Illustration of how the LDJ might complement other design thinking activities



In seeking the establishment of such a connection between design theory and design thinking, **Study Four** explored the adoption of the LDJ into the Sixers' practice during their annual planning days. This adoption included modifications to the LDJ as it had been taught to them in the intervention, suggesting the Sixers had engaged in *intuitive generalisation* (Stark & Torrance, 2004) by drawing on their experience to identify which parts of the LDJ to keep, which to modify, and which to shift to or from other segments of their annual planning cycle. These changes are reaffirmed in Figure 13, where the centre column illustrates their modified undertaking of the LDJ and the left column illustrates the LDJ as it was taught to them. The selection of a single topic of focus at the start of the process was maintained. However, whereas the LDJ prompts practitioners to brainstorm both positives and challenges associated with a given topic, the Sixers instead imported ideas for innovations that had emerged in their formal season review (conducted in the weeks prior to the planning days). This alteration also

Figure 13: Modifications made to the LDJ by the Sixers



had the effect of making redundant what is usually the next step of the LDJ – the articulation of how-might-we (HMW) questions – and thus that step was eliminated by the Sixers. Thereafter, the process of brainstorming and voting on ideas for how to overcome a given challenge or capitalise upon a given opportunity remained largely intact, while the final step of the LDJ – prioritising ideas for planning and implementation – was shifted to the season prep stage of the Sixers' annual planning cycle.

Encouragingly, the links between the LDJ and design thinking themes of *problem framing* and *diversity* established in the initial introduction of the LDJ were maintained, meaning that the Sixers' overall practice remained connected to all five themes of design thinking. In other words: the modifications to the LDJ did not cause the initial links to design thinking themes to be severed. Further, an emergent link to the theme of *experimentation* was discovered after the Sixers' modifications to the LDJ, suggesting that these modifications enhanced the usefulness of the activity for their practical purposes. Such enhancement as a result of adoption through intuitive generalisation illustrates the adaptability of design activities specifically and thus, by extension, the very concept of design thinking. Where practitioners are left to navigate their environment in the absence of theory, their ability to undertake such generalisation will help them do so. Such is the case with sport organisations, the perspective of which has been largely unexplored by sport researchers when considering how to design holistic and consumer-centric sport experiences (Funk, 2017). Here the Sixers represent a sport organisation which has asserted its own perspective into such design, as Funk (2017) calls for.

In addition to alignment with design thinking themes, the Sixers' use of the modified LDJ also displayed strong alignment with the designerly thinking sub-discourse of design as *reflexive practice*, based in the work of Donald Schön (1995). Specifically, the Sixers

displayed knowledge-in-action, reflection-in-action, and levels of seeing as they employed the LDJ toward better serving their users. Notably, it is reflection-in-action which Edwards, Skinner and Gilbert (2002) note tends to be overlooked in the practice of commercial sport organisations. That the Sixers manifest these actions suggests that the use of the modified LDJ has restored reflection to professional sport practice while also establishing a connection between design thinking (to which it is thematically linked) and design theory (from which it is derived). As discussed throughout this thesis, the ongoing disconnect between design thinking and design theory has arrested development of the design thinking field (Carlgren et al., 2016), depriving both fields of learning from one another (Dorst, 2011). Here, in at least the instance of the Sixers' use of the modified LDJ, that disconnect has been repaired and the effects are immediately apparent. Specifically, the Sixers began to develop individual and organisational *designerly ways of being* in the form of their reflection-in-action (D. Schön, 1995). Such reflection-in-action also evokes Martin's (2009) concept of dynamic interplay between analytical and intuitive thinking which characterises design thinkers, reinforcing the linkage between the design and design thinking fields. Further, if the actions of the Sixers can be framed in design theory in this way, it creates the possibility of adopting other useful derivative theories from the field of design education through linking their practice to such theories.

Contributions of doctoral project

Taken together, the findings discussed in the previous section carry very important implications for both the sport management and design thinking fields. As such, and to maintain conceptual clarity, separate sections are dedicated to discussing the contributions this doctoral project makes to each field.

Contributions to sport management theory and practice

In establishing the suitability of design thinking for adoption into the Sixers practice, this doctoral project represents the first empirical study of design thinking in sport management practice. As such, it makes several contributions to theory and practice in the field.

First, design thinking has successfully been imported to sport management as a derivative theory. While Doherty (2013) noted that such importation risks also importing any conceptual questions surrounding a theory borrowed from another field, this project has sought to correct identified issues with design thinking (as further detailed in the next section). Further, this intentionally addresses Funk's (2019) conclusion that the use of derivative theory in sport management should be considered for potential contributions back to the parent field. Indeed, the modification of the LDJ undertaken by the Sixers to adopt it into their practice constitutes what Doherty (2013) called *conceptual blending*: the merging of a borrowed theory (design thinking) with unique traits of the new focal context (sport management practice). At a high level this offers at least proof of concept: a demonstration that design activities can be meaningfully and usefully adopted into sport management toward achieving human-centred outcomes. Further, and as previously noted, it illustrates that what Stark and Torrance (2004) call *intuitive generalisation* is also possible for sport practitioners, as the Sixers were able to take the LDJ as delivered to them in an intervention and then reshape the activity to make it better serve their needs.

Second, a framework has been provided for 'fitting' design thinking for sport management practice. Specifically, the approach taken to the intervention with the Sixers – exploration, intervention, and evaluation – provides a roadmap for future sport researchers to repeat the approach toward installing design thinking into the practice of other sport organisations. Where an organisation's practice may not already link to all five themes of design thinking,

design activities could first be identified which complete such links. To do so would provide a means by which the organisational perspective might come to be represented in Funk's (2017) consumer-centric sport experience design framework, specifically toward holistic designs which satisfy the needs of all stakeholders. While extant research has studied the sport context perspective (environmental settings as experienced by the sport users) and sport user perspective (including individual and social-psychological characteristics of those users) of this framework, the managerial aspect of the sport organisation perspective (i.e. the manner in which organisational characteristics influence designs) has largely been overlooked (Funk 2017). The Sixers case study contributes to rectifying this shortfall, positioning design thinking as a means by which sport organisations can have it both ways: maximise business goals while still working to identify the unmet needs of their users – needs which may not neatly translate to financial profit maximisation. Such approaches might help organisations stave off the organisational dysfunction which can occur in the face of divergent institutional demands (Svensson, 2017); divergent demands which are increasingly being forced onto sport organisations as boundaries between sectors continue to blur (Misener & Misener, 2017).

Third, and further to the previous contribution, the case study with the Sixers offers practical proof of concept, as it illustrates the benefits which design thinking might offer sport organisations – namely: the ability to use the thinking and the doing of designers to achieve *human-centred* value creation. Similar empirical work might utilise the intervention approach taken in this project as a means of fitting design thinking to other sport management domains, including SFD practice. Such interventions could meaningfully study and seek to capitalise upon the thematic alignment with design thinking found to already exist in SFD work, or might approach larger issues that continue to plague the field of SFD, such as those relating to the SFD program delivery. The field of SFD has been accused of displaying neo-colonial

tendencies (Darnell & Hayhurst, 2011) and despite an apparent awareness of this issue, many programs continue to be designed and delivered by international actors (and from higher-income countries, in particular; Schulenkorf et al., 2016). As a process reliant on empathy for the user, design thinking may provide a means by which this gap can finally be meaningfully reconciled.

Fourth, the LDJ itself is highlighted as a means by which reflection can be restored to the practice of professional sport organisations, with or without the broader design thinking concept. Edwards, Skinner and Gilbert (2002) note that the absence of such reflection in the practice of sport organisations serves as a block to knowledge generation. Members of professional sport organisations are typically starved of the time needed for reflection and, owing to rarely engaging in the practice, they are not able to best use reflection as a means of converting their lived experience into individual and organisational knowledge. Not only does the LDJ require reflection – indeed, it calls for a minimum amount of time to be dedicated exclusively to reflection – but the centrality of reflection within the broader LDJ process provides an intuitive framework in which the effectiveness of such reflection is maximised. Hence, the LDJ is a useful activity for sport practitioners, with or without the broader design thinking context in which it has been studied in the present project.

Fifth, increased adoption of design activities (the *performative* component of design thinking) which are utilised toward achieving human-centred outcomes (the *ostensive* component of design thinking) by sport organisations can have flow on effects beyond the designs being pursued. The adoption of the LDJ was well received by members of the Sixers staff, who indicated their perception of the team's abilities had in many ways improved (and had in no way deteriorated). Perceived organisational performance in regard to social responsibility and the creation of valuable products and services has been linked to individual identification

with the organisation (Carmeli et al., 2007). In Australian sport organisations, such a positive culture and employee 'fit' has been found to influence interaction quality with the most valuable of sport consumers: season ticket holders (Lee et al., 2019). Thus, a conceptual loop is created in which human-centred approaches positively impact sport organisations, generating still further positive user outcomes. This locates design thinking practice as merely one tool for sport organisations to utilise, echoing Brown (2008, 2009) and Martin's (2009) psychological profiles of design thinkers and suggesting that repeated adoptions might yield a set of design thinking activities specifically tailored to sport management practice. Such a collection of activities would prove a useful means by which to approach sport experience design from the organisational perspective (Funk, 2017).

Finally, the effective use of shadowing as a data collection technique highlights its usefulness for future qualitative sport management research. The use of shadowing to collect data has been rare in the field of sport management or, possibly, it has not consistently been distinguished or de-coupled from mere observation. Indeed, shadowing is often implicit as a component of ethnography and is thus typically mentioned in passing (if at all) rather than being cited as a data collection method unto itself in those studies (see, e.g., Richards, 2015). However, the approach may be uniquely suitable for use in sport management research. For example, Radu & Emery (2007) used shadowing at the request of their subject who, as a sport manager, was used to being shadowed by work-experience students. As a result, the presence of the researcher was considered less intrusive; the collected data less influenced by that presence. This was found to be the case in engaging in four shadowing sessions during the course of this project. The presence of the researcher was often masked to the shadowed staff member by the presence of an intern (for whom the staff member was responsible). However, the researcher did not always stay in the background. When the team member being shadowed was engaged in a physically intensive activity such as packing down the "fan

zone", the author offered their assistance. This did not escape the attention of the team, and the help was even acknowledged in the post-match debrief following the first shadowing event. As a result, shadowing was found to be useful in building trust between researchers and subjects (in addition to the scientific benefits of using shadowing previously discussed in the introduction chapter and the 'method' section of Study Two). In line with recent calls for more diverse data collection methods in qualitative sport management research (Hoeber & Shaw, 2017; Shaw & Hoeber, 2016), the use of shadowing – decoupled (and thus distinct) from observation – is highlighted here as a valuable data collection method for future sport management studies.

Contributions to design thinking theory and practice

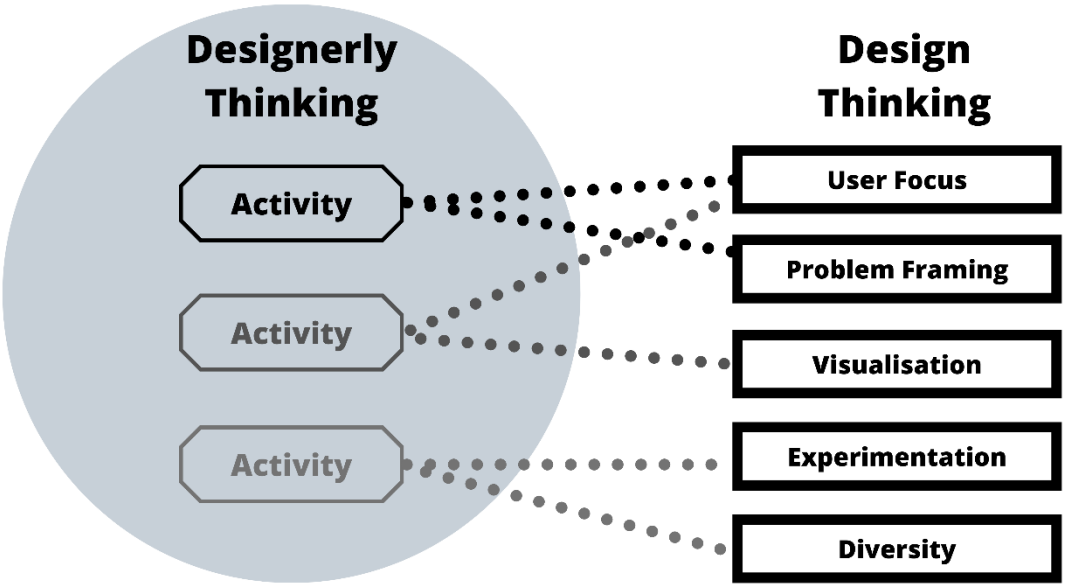
Funk (2019) notes that, when implementing derivative concepts in the sport management field, sport researchers often fail to consider implications that such implementations might carry for the parent field. This doctoral project heeds his advice to do so in outlining contributions the project makes to the design thinking field.

First, the usefulness of the thematic design thinking framework (Carlgren et al., 2016) for exploring and enhancing design thinking practice is demonstrated. Indeed, using indicators of alignment with this framework allowed for the identification of the *performative* component of design thinking – the principles / mindsets, practices, and techniques used by design thinking practitioners – in the practice of a sport organisation. Building on this, the framework was also useful as a tool for evaluating the effectiveness of introducing a design activity – the LDJ – into that same practice. Indeed, the framework is successfully used in this doctoral project in just the way it was posited: as a tool to "be used to outline and design further empirical research, and for theoretical studies of [design thinking] in relation to other

academic discourses" (Carlgren et al., 2016, p. 53). Hence, the thematic design thinking framework is shown to be fit for purpose.

Second, the Sixers' adoption of the LDJ reveals a connection between their use of the LDJ (a design activity utilised toward design thinking outcomes) and extant design theory. This connection manifests as links between the LDJ and design thinking themes, as well as between the LDJ (and the broader Sixers practice) and the designerly thinking sub-discourse of design as *reflexive practice*. While this connection does not in itself reconnect the two fields, it does illustrate the means by which such a reconnection might be achieved (as alluded to in the previous section). Indeed, were the Sixers to adopt more design activities (the *performative* component of design thinking) into their practice and orient those activities toward achieving human-centred outcomes (the *ostensive* component), it is possible that a 'complete' design thinking practice could eventually be achieved where all of these activities provide links to all five themes of design thinking. Such a hypothetical practice is illustrated in Figure 14:

Figure 14: Hypothetical practice based in design theory and linking to design thinking



Were such a ‘complete’ practice to be developed, the study of it would be very valuable as, presumably, design thinking activities would shape connections to design theory and vice-versa toward ever-enhanced design thinking practice. Indeed, such development might help overcome the persisting disconnect between design thinking and design theory, to the betterment of both fields (Johansson-Sköldberg et al., 2013).

Finally, the successful importation of a design thinking activity into sport management practice supports Dorst’s (2011) claim that practitioners in all fields can benefit from understanding how designers work. As already detailed, the Sixers’ use of the LDJ – an activity derived from expert design practice – demonstrates reflection-in-action (Schön, 1995). Design as reflexive practice is a sub-discourse of what Johansson-Sköldberg et al. (2013) call designerly thinking and, as such, represents a theoretical perspective of what professional design practice is for. Hence, in engaging in reflection through and within design practice, the Sixers have begun to behave like designers within the context of their own practice. Recall that the Sixers developed individual and organisational *designerly ways of being* in the form of their reflection-in-action (D. Schön, 1995). In the field of design education, progress toward the development of designerly ways of being is indicated by the crossing of certain thresholds. One example of such a threshold is the acceptance of uncertainty as an unavoidable – and necessary – feature of the design space and, thus, design work. Once design students find their way across this particular threshold, they are then able to self-assess their own navigation of that design space toward the establishment of a personal designerly way of being (Tracey & Hutchinson, 2016). That design thinking practitioners are shown in this study to resemble designers – if only nominally – is an important contribution to the fields of design, design thinking, and design education, as it suggests that the three fields might be meaningfully and beneficially linked in future research. This possibility is discussed, along with other ideas for future work, in the next section.

Avenues for future work

Further to the contributions outlined in the previous section, several promising opportunities arise for future work which might extend and/or build upon the findings of this doctoral study. In particular, this section concludes with a subsection dedicated to the proposal of a conceptual boundary between design and design thinking which might allow the fields of design and design thinking to meaningfully enhance each other while remaining usefully and conceptually separate.

First, this doctoral study represents the first empirical study of design thinking being used in sport management practice. While the findings presented in this thesis are promising, future case studies of design thinking in sport management can support and/or extend them. Specifically, future work might make use of the intervention approach used in Study Three, as it is shown to be an effective means by which to assess existing sport management practice for design thinking 'fit', identify a design thinking activity that would best suit the organisation's practice, and evaluate the adoption of that activity. Flyvbjerg (2006) recalls Thomas Kuhn in positing that it is only the production of case studies – that eventually become exemplars – that prevents a field of inquiry from becoming ineffective. As the study of design thinking in sport management is in its infancy and, indeed, design thinking as a field of study remains relatively new, further case studies will help the concept evolve and remain relevant.

Second, and further to the first suggestion, the manner in which the use of design thinking might enable sport organisations to more meaningfully engage with the SX framework toward the design of holistic sport experiences for sport users has been alluded to throughout this thesis, but is not specifically studied here. Hence, future work might pursue these allusions and investigate the extent to which design thinking is able to help sport

organisations fulfill the requirements of the Sport Organisation component of the SX framework. Such work would address a shortfall of research into the sport organisation element of sport experiences noted by Funk (2017).

Third, the discovery that sport management practitioners had begun to develop *designerly ways of being* through the use of a design thinking activity is deserving of deeper investigation. As discussed in the previous section, the progress of designers toward the development of designerly ways of being is studied in the field of design education. Specifically, the development of designers is marked by the crossing of certain thresholds. One such threshold is a shift from a certainty orientation to an uncertainty orientation; a cognitive change from seeking certainty in practice to instead seeking – and embracing – uncertainty (Tracey & Hutchinson, 2016). Edwards, Skinner and Gilbert (2002) note that the sport environment is largely unpredictable and that sport managers are not always able to optimally engage with this unpredictability. In other words, the sport environment would be best navigated by practitioners with an uncertainty orientation: those who can accept uncertainty as unavoidable and thus are able to optimally engage with it (Tracey & Hutchinson, 2016). Because uncertainty orientation is a threshold concept in design education, future work might explore how principles of design education might be usefully employed within the use of design thinking in sport management. Indeed, uncertainty orientation represents a threshold concept for which measures already exist in social science (Sorrentino et al., 1992). That these measures have been used in flexible ways – such as to assess differences in uncertainty orientation across students of different cultures (Shuper et al., 2004) – offers promise that they can likewise be meaningfully employed in new contexts, such as sport management. Such work might breed uncertainty orientation in sport practice, enabling sport managers to better navigate their unpredictable environment (Edwards et al., 2002).

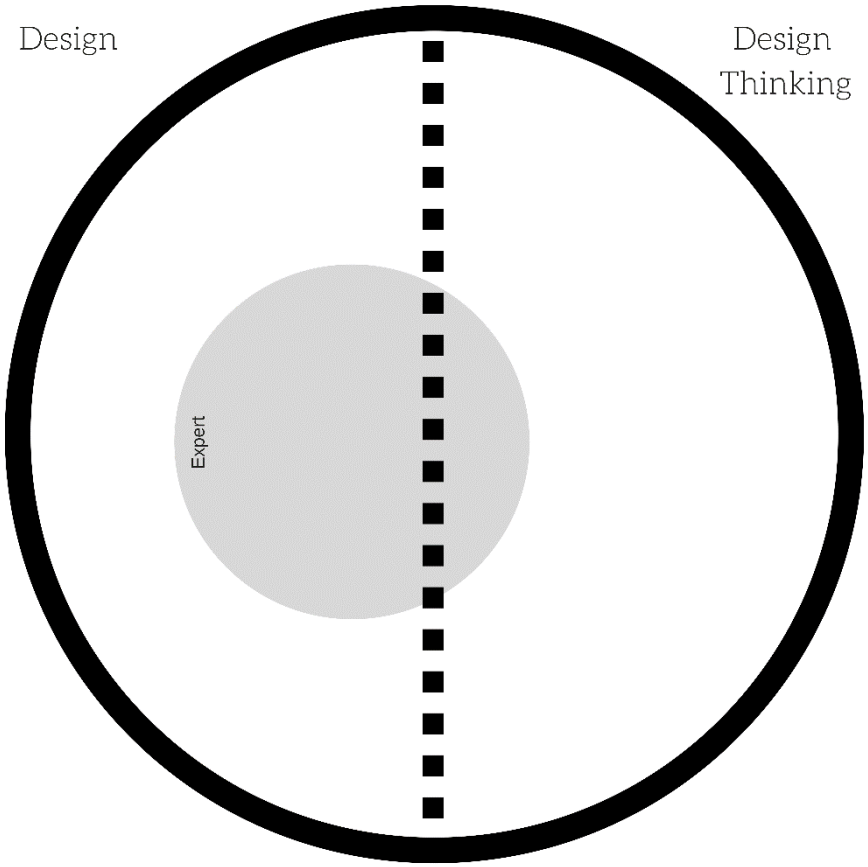
However, this final suggestion for future work carries deeper possibilities still. Tracey and Hutchinson (2016) relate the development of designerly ways of being to a designer identity. While this is appropriate and desirable in a design context, the effects of developing designerly ways of being and, by extension, a designer identity within non-design practitioners are, so far, unknown. Accordingly, the fourth avenue of future research proposed is the study of a conceptual boundary between the design and design thinking that would allow the two fields to develop alongside each other while maintaining the integrity of each field as distinct. This proposed boundary is outlined in the following subsection.

Proposing a conceptual boundary between design and design thinking

This doctoral project has highlighted the need for design and design thinking to be reunited, and yet there is also value in maintaining conceptual independence between design and design thinking. Because this project has linked design thinking practice to design theory by prompting design thinkers – in this instance: those in a professional sport organisation – to behave like designers, it is worth considering why the two fields must remain conceptually distinct even as their practices come to resemble the practices of the other. A particularly useful illustration of the importance of – and the need for – such a boundary comes from outside the design field. Richard Hofstadter was a historian interested in the distinction between intelligence and intellect; between the intelligent person and the intellectual person. Hofstadter argued that a professional worker – a *mental technician* – may be intelligent and also an intellectual, but their intellectual side would play virtually no role in their professional practice: "At home he [sic] may happen to be an intellectual, but at his [sic] job he [sic] is a hired mental technician who uses his [sic] mind for the pursuit of externally determined ends" (Hofstadter, 1963, p. 27).

This distinction between a mental technician and an intellectual is the same distinction that can be seen between a design thinker and a designer, respectively. A design thinker may share the designer's essential interest in design as both the means and the end, but in practice that design expertise is put to use toward the practical – and typically externally-determined – goals of the organisation. Borrowing from the political ideas of Max Weber, Hofstadter goes on to suggest that "the professional man [sic] lives off ideas, not for them" (Hofstadter, 1963, p. 27). This thesis argues that the same can be said of design thinkers: they live off design, not for design.

Figure 15: Indicative concentration of design experts between design and design thinking

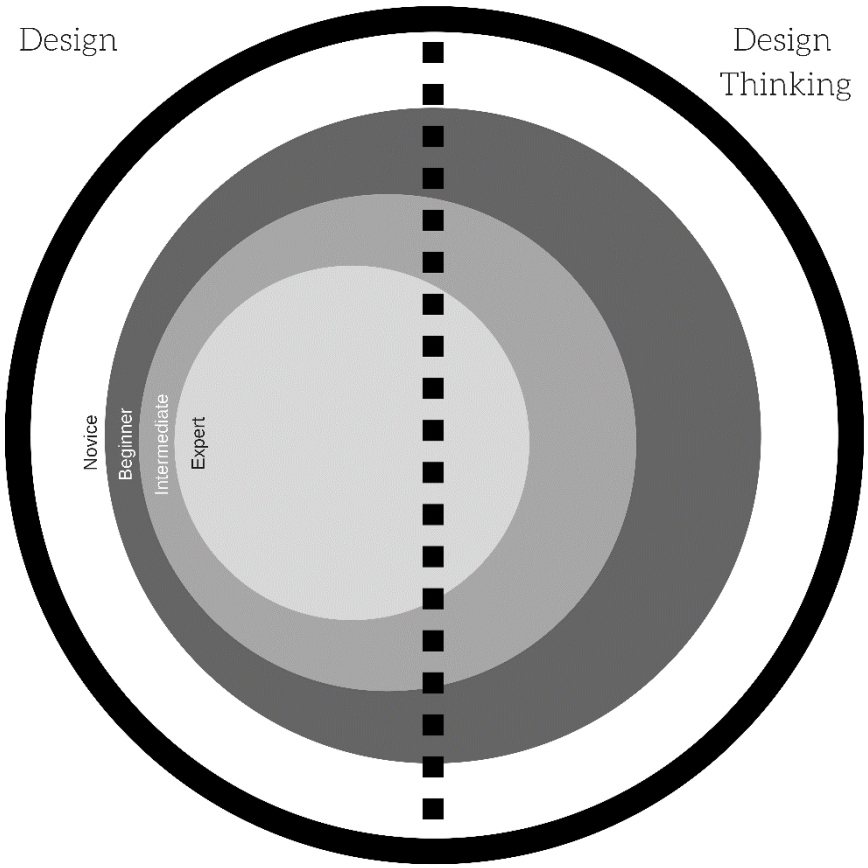


This difference in desired outcome – the distinction between living off design rather than for it – is where a conceptual boundary between design and design thinking could be established. This proposed boundary distinguishes design thinking from design without limiting the

potential of the former to resemble the latter. With this conceptual boundary in place, design thinking practitioners can come to behave like expert designers without design itself being their primary or exclusive goal. This even allows a design thinker to gain design expertise without becoming a designer in essence, as their goal of a non-design outcome would keep them established firmly as a design thinker. This boundary is indicatively represented by a dotted line in Figure 15.

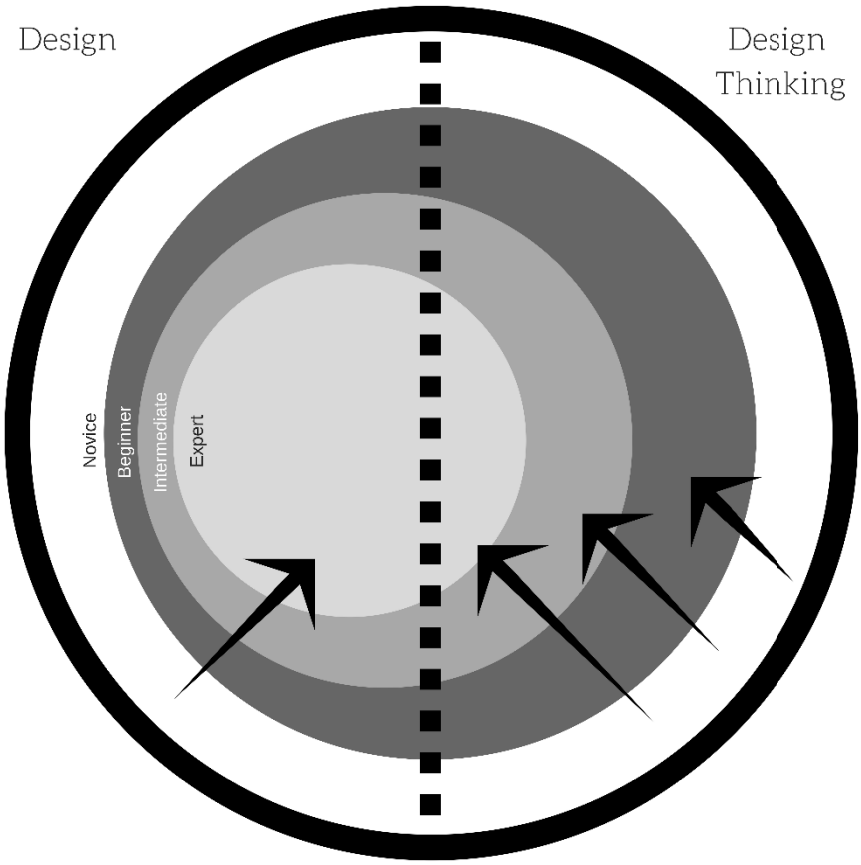
As this illustration demonstrates, the conceptual boundary does not limit the potential of a design thinker to also develop into an expert designer. Indeed, it reinforces that it is possible to be an expert designer without being a designer in essence; i.e., without living for design. This relates back to the ultimate goal of a design thinker, which is typically some externally-dictated non-design outcome – the business objective component of Funk's (2017) SX framework, for example. A sport organisation – or indeed, any organisation – that adopts design thinking into their practice is not necessarily doing so toward a goal of every member of the organisation becoming an expert designer. After all, if the goal of the organisation is to be populated with expert designers, the logical course of action would be to start a design firm rather than a sport organisation. But design thinking has not become popular as a way of converting non-design organisations into design firms, and this fact suggests that the development of design expertise in every member of the organisation is not desirable or necessary. This difference can be illustrated at an organisational level, where the lower rungs of design competencies (novice, beginner, intermediate) would be more widely populated in a design thinking team within a sports organisation than they would be on a design team (where it is thought the organisation would be comprised only of experts and experts-in-training). This is illustrated in Figure 16.

Figure 16: Indicative concentration of all design competencies between design and design thinking



On the design side of the boundary, the pathway to expertise is a straight line from novice to expert. Meanwhile, on the design thinking side of the boundary, the pathway for design thinkers differs. Because not all members of the design thinking sport organisation are required to have anything more than novice – let alone expert – design skills, members of a design thinking organisation might only ever obtain 'beginner' or 'intermediate' design competency, depending upon the needs of the organisation. Indeed, within design thinking teams, the lower rungs of design competency will have long-term populations – that is to say: these rungs are not merely thoroughfares on the pathway to expertise. These differing pathways are indicated by the arrows in Figure 17.

Figure 17: Indicative development pathways within design and design thinking



The delineation of such a conceptual boundary between design and design thinking offers a promising avenue for future research – research which can be conducted within sport management as a means of extending the work presented in this thesis. In the field of design education, progress along developmental pathways is indicated by the crossing of certain thresholds. As discussed in the previous section, one example of such a threshold is the acceptance of uncertainty as an unavoidable – and necessary – feature of design spaces and work. Once design students find their way across this particular threshold, they are then able to self-assess their own navigation of that design space toward the establishment of a personal *designerly way of being* (Tracey & Hutchinson, 2016). In this same course, the student learns to engage in reflection-in-action, such as that which manifested within the Sixers' practice after they adopted the LDJ into their ongoing practice. This reflection allows design students

to critically examine the standard responses to uncertainty embedded in their practice and to overcome them by being open to a range of responses as diverse as the range of problems they face (Schön, 1995). For sport practitioners, such reflection could enable them to convert their experiences within an unpredictable sport environment into individual and organisational knowledge (Edwards et al., 2002).

In conclusion

This doctoral project was concerned with the use of design thinking in the field of sport management. Design thinking is a human-centred approach to generating value for users which makes the *thinking* and the *doing* of expert designers accessible to practitioners in non-design fields such as sport management (Brown, 2009; Carlgren, Rauth, & Elmquist, 2016). At the outset of this project design thinking had received no attention in the field of sport management, despite representing a potential means of overcoming user-centric challenges currently faced by sport organisations.

The project involved a scoping study and a case study. The findings of the scoping study confirmed the existence of at least nominal design thinking alignment in each sport organisation captured in reviewed articles. Sport organisations which align with all five themes of design thinking were found to share traits which, when considered thematically and holistically, represent points of entry for the possible implementation of design thinking practice into the field.

To explore how such engagement with design thinking might unfold in sport management practice, a case study was undertaken with the Sydney Sixers, one of eight clubs in the Big Bash League, Australia's professional Women's and Men's T20 cricket competition. The overall case study unfolded as three discrete studies: an exploration of the existing Sixers practice, an intervention to identify and import a design thinking activity into their practice,

and an exploration of their eventual adoption of this activity into their ongoing practice and planning cycle. The initial exploration revealed the existing practice of the Sixers to be aligned with all five themes of design thinking, which suggested they were capable of the *performative* component of design thinking and needed only to engage with the *ostensive* component – the *idea*. The subsequent intervention sought to initiate engagement with the ostensive component by identifying a design activity which would both suit the Sixers' preferred way of working and maintain, if not enhance, their existing links to design thinking themes. A structured brainstorming activity known as the LDJ achieved these objectives. Thereafter, the final study explored the Sixers' subsequent adoption of the LDJ into their ongoing practice and planning cycle. The Sixers modified the LDJ to better fit their specific needs and these modifications enhanced the links between their practice and design thinking themes. Further, their use of the modified LDJ brought their practice into alignment with a sub-discourse of designerly thinking, suggesting that design thinking had been reconnected to design theory through their practice.

Six contributions are made to the field of sport management. First, design thinking is shown to be useful in sport management as a derivative theory. Second, a framework is provided for 'fitting' design thinking for sport management practice. Third, design thinking is foregrounded as a means by which human-centred innovation can be achieved in sport. Fourth, the LDJ is highlighted as a means by which reflection can be restored to the practice of professional sport organisations. Fifth, increased adoption of design activities (the performative component of design thinking) which are utilised toward achieving human-centred outcomes (the ostensive component of design thinking) by sport organisations can have flow on effects beyond the designs being pursued, such as enhanced perceptions of organisational performance. Finally, the value of shadowing as a data collection technique in qualitative sport management research is highlighted.

Three contributions are also made to the field of design thinking. First, the usefulness of the thematic design thinking framework (Carlgren et al., 2016) for exploring and enhancing design thinking practice is demonstrated. Second, the adoption into sport practice of an activity derived from expert design practice suggests the creation of a link between design thinking and design theory. Finally, the successful importation of a design thinking activity into sport management practice supports Dorst's (2011) claim that practitioners in all fields can benefit from understanding how designers work.

This thesis also suggests four avenues of future research. First, while the findings presented in this thesis are promising, future case studies of design thinking in sport management can support and/or extend them. Second, such future case studies might investigate the extent to which design thinking is able to help sport organisations fulfill the requirements of the Sport Organisation component of the SX framework. Third, the discovery that sport management practitioners had begun to develop designerly ways of being through the use of a design thinking activity is deserving of deeper investigation, possibly by linking theory from design education to the use of design thinking in sport management. Finally, a conceptual boundary between design and design thinking is proposed and outlined as a promising avenue for future research and practice.

As this doctoral project represents the first empirical study of design thinking in the field of sport management, it is hoped that it will serve as a starting point for the continued study and refinement of the concept. As noted above, while such future work might make contributions to the fields of design, design thinking, design education, and sport management, the most valuable contributions would almost certainly be those which benefit not only the sport user, but also the sport practitioners who aim to better serve those users.

Appendix I:

Complete scoping study chart

Journal	Citation	User focus	Problem framing	Visualisation	Experimentation	Diversity
JSFD	(Mataruna, Range, Guimaraes, & Melo, 2015)			Making sense of data		
JSFD	(Siefken, Schofield, & Malcata, 2014)			Making sense of data		
JSFD	(Hills, Gómez Velásquez, & Walker, 2018)		Problem focus	Making sense of data		
				Making tangible		
JSFD	(Gadais, Webb, & Garcia, 2017)			Making sense of data		Considering ideas from other fields
				Thinking through doing		Systemic perspective
JSFD	(Gardam, Giles, & Hayhurst, 2017)			Making tangible		Background research
				Making sense of data		
JSM	(Schulenkorf, 2016)		Problem exploration	Making sense of data		
				Making tangible		
SMR	(Reis, Vieira, & Sousa-Mast, 2016)		Questioning the problem	Making sense of data		
			Problem exploration	Making tangible		

JSFD	(Svensson & Woods, 2017)		Unconstrained view of the problem Problem exploration	Making sense of data	Systemic perspective Background research
JSFD	(Welty Peachey, Cohen, & Musser, 2016)	Deep user understanding Active user involvement	Unconstrained view of the problem	Making sense of data	
JSFD	(Hamilton, Foster, & Richards, 2016)		Question the problem Identifying pain points	Making sense of data	Systemic perspective
JSFD	(Obadiora, 2016)	User orientation Human-centredness		Making sense of data	Systemic perspective
JSFD	(Cottingham, Blais, Gearity, Bogle, & Zapalac, 2015)		Problem exploration Identifying pain points	Making sense of data	Diversity of perspectives Systemic perspective
JSFD	(Smith, Wegwood, Llewellyn, & Shuttleworth, 2015)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data	
JSFD	(Bean, Forneris, & Fortier, 2015)	User orientation	Problem exploration	Making sense of data	
JSFD	(Hanrahan & Ramm, 2015)	User orientation	Problem exploration Open to unexpected	Making sense of data	

JSFD	(Mayrand, 2013)		Problem exploration	Making sense of data		Background research Considering ideas from other fields
JSFD	(Ekholt, 2013)		Futuristic thinking	Making sense of data Making tangible		Background research
JSFD	(Coleby & Giles, 2013)		Problem exploration	Making sense of data		Media Diversity of perspectives
JSFD	(Wagnsson, Augustsson, & Patriksson, 2013)	User orientation Deep user understanding	Widen the problem Identify larger problem space	Making sense of data		
JSM	(Svensson & Seifried, 2017)		Widen the problem Identify larger problem space	Making sense of data Making tangible		Considering ideas from other fields Systemic perspective
JSM	(Misener & Schulenkorf, 2016)		Problem exploration	Making sense of data Bias towards action	Action orientation Optimistic & energetic	
JSM	(Schulenkorf, Sherry, & Rowe, 2016)		Widen the problem Identify larger problem space	Making sense of data		Systemic perspective Diversity of perspectives

				Making tangible		
JSM	(Marshall & Barry, 2015)		Problem exploration	Making sense of data	Iteration and testing	
JSM	(Inoue, Funk, & Jordan, 2013)	User orientation	Problem exploration	Making sense of data		
ESMQ	(MacIntosh, Arellano, & Forneris, 2016)		Problem exploration Identifying pain points	Making sense of data Making tangible		Diversity of perspectives
SMR	(Edwards, 2015)		Problem exploration Widen the problem Identify larger problem space	Making sense of data Making tangible		Considering ideas from other fields Systemic perspective
SMR	(Gallant, Sherry, & Nicholson, 2015)	User orientation	Problem exploration	Making sense of data		
SMR	(Welty Peachey, Borland, Lobpries, & Cohen, 2015)	User orientation	Problem exploration	Making sense of data		
JSFD	(Wright, Jacobs, Howell, & Ressler, 2018)	Deep user understanding	Problem exploration	Making sense of data	Iteration and testing Test to obtain user feedback	
JSFD	(Zipp & Nauright, 2018)	Deep user understanding Empathetic	Identify larger problem space Widen the problem	Making sense of data		Diversity of perspectives

JSFD	(Whitley, Massey, & Farrel, 2017)	User orientation	Problem focus Question the problem	Making sense of data		Integrative thinking
JSFD	(Mwaanga & Adeosun, 2017)		Problem focus Question the problem	Making sense of data Making tangible	Iteration and testing Test to obtain user feedback	Systemic perspective
JSFD	(Stewart-Withers, Sewabu, & S Richardson, 2017)	User orientation	Problem exploration	Making sense of data		Diversity of perspectives
JSFD	(Meyer & Roche, 2017)	User orientation	Problem exploration	Making sense of data		Systemic perspective Diversity of perspectives
JSFD	(Devine et al., 2017)	User orientation Deep user understanding	Identifying pain points Problem exploration Identify larger problem space	Making sense of data		Diversity of perspectives Democratic spirit
JSFD	(Warner, Sparvero, Shapiro, & Anderson, 2017)	User orientation	Problem exploration	Making sense of data		Integrate diverse outside perspectives
JSFD	(Halsall & Forneris, 2016)	User orientation Deep user understanding	Widen the problem Identify larger problem space	Making sense of data Making tangible	Test to obtain user feedback	
JSFD	(Lopes, 2015)	User orientation	Problem exploration	Making sense of data		Systemic perspective Diversity of perspectives

JSFD	(Forber-Pratt., 2015)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data		Diversity of perspectives Systemic perspective
JSFD	(Inoue & Forneris, 2015)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data		Diversity of perspectives Systemic perspective
JSFD	(Bruening et al., 2015)	User orientation Deep user understanding	Unconstrained view of the problem Problem exploration Identifying pain points Futuristic thinking	Making sense of data		Open to differences in personality
JSFD	(Blom et al., 2015)	User orientation		Making sense of data	Test to obtain user feedback	Systemic perspective
JSFD	(Simard, Laberge, & Dusseault, 2014)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data		Open to differences in personality
JSFD	(Romeo-Velilla et al., 2013)	User orientation	Problem exploration	Making sense of data		Diversity of perspectives
JSFD	(Lecrom & Dwyer, 2013)	User orientation	Problem exploration	Making sense of data		Open to differences in personality

JSFD	(Sherry & O'May, 2013)	User orientation Deep user understanding	Problem exploration	Making sense of data	Diversity of perspectives
JSFD	(Rock, Valle, & Grabman, 2013)	User orientation	Problem exploration	Making sense of data	Systemic perspective
JSFD	(Hancock, Lyras, & Ha, 2013)	User orientation	Problem exploration	Making sense of data Making tangible	Background research
JSM	(Svensson, Andersson, & Faulk, 2018)	User orientation	Problem exploration Question the problem	Making sense of data Making tangible	Systemic perspective Diversity of perspectives
JSM	(Welty Peachey, Burton, Wells, & Chung, 2018)	User orientation	Problem exploration	Making sense of data Making tangible	Diversity of perspectives
JSM	(Jones, Wegner, Bunds, Edwards, & Bocarro, 2018)	User orientation	Widen the problem Identify larger problem space	Making sense of data	Diversity of perspectives
JSM	(Thorpe & Chawansky, 2017)	User orientation Deep user understanding	Problem exploration	Making sense of data Making tangible	Considering ideas from other fields Systemic perspective

JSM	(Welty Peachey & Cohen, 2016)	User orientation Deep user understanding	Problem exploration Identifying pain points	Making sense of data Making tangible	Diversity of perspectives
JSM	(Spaaij & Schulenkorf, 2014)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data Making tangible	Systemic perspective Diversity of perspectives
SMR	(Bruening et al., 2015)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data	Considering ideas from other fields Systemic perspective
SMR	(Cohen & Welty Peachey, 2015)	User orientation Human-centredness Deep user understanding	Unconstrained view of the problem Comfortable with complexity & ambiguity	Making sense of data	Considering ideas from other fields Systemic perspective
SMR	(Harris & Adams, 2016)	User orientation	Question the problem Problem exploration	Making sense of data	Considering ideas from other fields Systemic perspective
SMR	(Svensson & Hambrick, 2016)	User orientation	Problem exploration	Making sense of data	Considering ideas from other fields Diversity of perspectives

SMR	(Schulenkorf, 2017)	User orientation	Question the problem Problem exploration Futuristic thinking	Making sense of data Making tangible	Diversity of perspectives
SMR	(Emma Sherry, Schulenkorf, Seal, Nicholson, & Hoye, 2017)	User orientation	Question the problem Problem exploration	Making sense of data Making tangible	Diversity of perspectives
SMR	(Rochelle Stewart-Withers, Koli Sewabu, & Sam Richardson, 2017)	User orientation Deep user understanding	Question the problem Problem exploration	Making sense of data Making tangible	Collaboration Combinations of different skills and personalities Open to differences in personalities Diversity of perspectives
SMR	(Svensson, 2017)	User orientation	Futuristic thinking Widen the problem Identify larger problem space	Making sense of data Making tangible	Considering ideas from other fields
SMR	(Inoue, Heffernan, Yamaguchi, & Filo, 2018)	User orientation	Problem exploration	Making sense of data Making tangible	Diversity of perspectives

SMR	(Jones, Edwards, Bocarro, Bunds, & Smith, 2018)	User orientation	Questioning the problem Problem exploration	Making sense of data Making tangible		Considering ideas from other fields
SMR	(Spaaij, Schulenkorf, Jeanes, & Oxford, 2018)	User orientation	Question the problem Problem exploration	Making sense of data Making tangible		Considering ideas from other fields Systemic perspective
SMR	(Welty Peachey, Cohen, Shin, & Fusaro, 2018)	User orientation Deep user understanding	Problem exploration Identifying pain points	Making sense of data Making tangible		Collaboration Systemic perspective Diversity of perspectives
JSFD	(Walters, Spencer, Farnham, Williams, & Lucas, 2018)	Human-centredness User orientation	Problem exploration Futuristic thinking	Making sense of data	Test to obtain user feedback Optimistic & energetic	Diversity of perspectives
JSFD	(Meir, 2017)	User orientation	Unconstrained view of the problem Problem exploration Identifying pain points Futuristic thinking	Bias toward action Making sense of data	Optimistic & energetic Learning-oriented	Diversity of perspectives
JSFD	(Wells & Welty Peachey, 2016)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback	Diversity of perspectives

					Optimistic & energetic	Open to differences in personality
JSFD	(Mandigo, Corlett, & Ticas, 2016)	User orientation Deep user understanding	Widen the problem Identify larger problem space	Making sense of data Bias towards action	Test to obtain user feedback	Diversity of perspectives Considering ideas from other fields
JSFD	(Bean & Forneris, 2016)	User orientation Deep user understanding	Problem exploration Futuristic thinking	Making sense of data	Test to obtain user feedback Action orientation	Diversity of perspectives
JSFD	(Cooper, Blom, Gerstein, Hankemeier, & Indovina, 2016)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback Learning-oriented	Collaboration
JSFD	(Beacom & Golder, 2015)	User orientation Deep user understanding	Problem exploration Futuristic thinking	Bias toward action Making sense of data	Action orientation Learning-oriented	Systemic perspective Considering ideas from other fields
JSFD	(Gannett, Kaufman, Clark, & McGarvey, 2014)	User orientation	Problem exploration Open to unexpected	Making sense of data	Test to obtain user feedback	Systemic perspective Open to differences in personality
JSFD	(Meredith A Whitley, Wright, & Gould, 2013)	User orientation Deep user understanding	Problem exploration Identifying pain points	Making tangible Making sense of data	Test to obtain user feedback	Systemic perspective Diversity of perspectives

JSFD	(Burnett, 2013)	User orientation	Problem exploration	Making sense of data	Test to obtain user feedback	Diversity of perspectives Collaboration
JSFD	(Schulenkorf, 2013)	User orientation	Identify larger problem space Widen the problem	Making sense of data Making tangible	Test to obtain user feedback	Diversity of perspectives
JSM	(Welty Peachey, Cunningham, Lyras, Cohen, & Bruening, 2015)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback	Diversity of perspectives Open to differences in personality
JSM	(Welty Peachey, Bruening, Lyras, Cohen, & Cunningham, 2015)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data	Learning oriented	Diversity of perspectives
SMR	(Olushola, Jones, Dixon, & Green, 2013)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data Making tangible	Test to obtain user feedback	Diversity of perspectives

Note. ESMQ = *European Sport Management Quarterly*; JSFD = *Journal of Sport for Development*; JSM = *Journal of Sport Management*; SMR = *Sport Management Review*.

Appendix II:

Guide for semi-structured interviews

Can you tell me about your role and responsibilities with the Sydney Sixers?

What's your background? Education? Career experience?

How long have you been in cricket?

What attracted you to work in cricket?

Tell me what it's like working with the Sixers.

What are your favourite things about working here?

What's your favourite memory about working here?

What's your proudest accomplishment at the Sixers? (if not answered previously)

What's the culture like at the Sixers?

How are operational decisions typically made? Who is involved in the process?

For example: if there is a problem that needs to be solved or an opportunity arises

Does the boss dictate tasks?

Is it collaborative?

When the team is attempting to [*do the above process*], what methods are used?

For example: brainstorming, mind maps, prototyping, role playing

Who are the end users of the Sydney Sixers? That is, who are you trying to please?

What role does the end user play in strategy planning?

Are users ever involved in the design of a product or service being built for them?

If yes: how is their input processed and utilised?

How would the organisation approach the following situations:

Creating a new product/service

Reflecting on the success (or lack thereof) of a product/service

Solving a problem with an obvious cause

Solving a problem with an unknown cause

Make sense of organisational practice

Create meaning

How do you personally feel when confronted with a task that must be completed, but the way forward is not clear? How do you proceed?

Tell me about a time this happened to you.

What was the task?

What was unclear?

How did you approach things?

How are new concepts visualised?

Sketching? Prototypes?

How does the organisation experiment?

Example: charging for WBBL admission. How will you measure success?

Example: Beach Blast – how did you determine what worked and what did not?

Scenario: How was the Sixers Beach Blast developed?

Where did the idea come from?

What role did you play in bringing it to fruition?

Who drove the whole effort – did the boss dictate tasks, was it collaborative?

How are problems discussed?

Are they seen as challenges? Opportunities? Negatively? Positively?

What happens when “the shit hits the fan”?

Walk me through a time when this happened.

How important is a diversity of perspectives in approaching a challenge or opportunity?

What views are represented?

What views are missing?

Generally: do you feel you are seen and heard? Why or why not?

Do you feel *everybody* is seen and heard?

Do you do anything in particular to ensure everybody has a voice? What do you do?

Would you say that members of the team are not afraid to fail? Encouraged to fail?

How important is creativity in the organisation?

When approaching problems, how much time is spent “thinking outside of the box”?

Or do you just try to find something that works?

Do you identify as being a creative person?

Do you like trying new approaches?

Would you say you embrace innovation?

Has working at the Sixers made you feel more creative? Less? Why?

What would you need to pursue even more creativity? More time? More training?

Can you see any benefit to pursuing more creativity? Why, why not?

Can you see a place for design thinking (as I’ve described it) at the Sixers?

Is there anything about the way the Sixers approach problems and opportunities that you would do differently?

This is not to say you think the current practice is wrong.

Is there anybody else you work with (not a Sixers employee) who I could contact for a quick chat?

Is there anything we haven’t covered about life at the Sixers?

Appendix III:

Participant information sheet and consent form

PARTICIPANT INFORMATION SHEET
Using Design Thinking in a Sport Organisation
UTS HREC REF NO. ETH18-2664

WHO IS DOING THE RESEARCH?

My name is Greg Joachim and I am a PhD researcher at UTS. My supervisor is Dr. Nico Schulenkorf.

WHAT IS THIS RESEARCH ABOUT?

This research concerns the use of "design thinking" to generate innovation in a sport organisation.

FUNDING

Funding for this project has been received from the Australian Government's Research Training Program and a UTS Doctoral Scholarship.

WHY HAVE I BEEN ASKED?

You have been invited to participate in this study because you have been identified as a member of the decision-making team at the Sydney Sixers. Your contact details were obtained from Jodie Hawkins, General Manager of the Sydney Sixers.

IF I SAY YES, WHAT WILL IT INVOLVE?

If you decide to participate, I will invite you to participate in semi-structured interviews, at least one design thinking training session, and subsequent design thinking sessions. I will also observe you and the Sydney Sixers when you engage in design thinking activities and, at times, everyday operational activity.

The interviews will last 45 – 120 minutes and will be scheduled at your convenience and within working hours. These interviews will be conducted at least twice – once at the beginning of the project and again toward or at the end of the project. These interviews will be audio recorded.

The initial design thinking training session will last up to four hours, while subsequent sessions will vary in length depending on the activity you, the team, choose to engage in. As design thinking relies upon collaboration, these will all be team sessions scheduled through Jodie Hawkins, General Manager of the Sydney Sixers. These sessions will be recorded via audio and video. Photographs will also be taken (with your permission). Artefacts produced within the training session will be retained or photographed for purposes of analysis. Over the course of these sessions I will also ask you to complete a very short questionnaire at regular intervals.

During the 2018-19 season(s) I may shadow you during the course of either a BBL or WBBL match. I will observe you in the course of your duties and may ask you questions when it would not interrupt your duties. This will be arranged at the discretion of Jodie Hawkins and scheduled at your convenience.

Additionally, I may observe you in meetings and when you're engaged in work activities relating to the design thinking process.

You will always be aware of my presence and activities, and most of my data collection (as described above) will be scheduled in advance.

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ARE THERE ANY RISKS/INCONVENIENCE?

Yes, there are some risks and/or possible inconveniences. You may, at various times:

- Feel embarrassed or stressed about being interviewed.
- Feel distressed at perceived "lost time" while participating.
- Become bored or mentally fatigued while being interviewed or otherwise participating.
- Become hungry and/or dehydrated while participating in the design thinking process and/or interviews.
- Perceive a risk to your job security if you are seen to be not cooperating or succeeding with design thinking.
- Perceive a violation of your privacy.
- Perceive a violation of your private working space (such as your office).
- Feel uncomfortable with being recorded and/or photographed.

DO I HAVE TO SAY YES?

Participation in this study is voluntary. It is completely up to you whether or not you decide to take part.

WHAT WILL HAPPEN IF I SAY NO?

If you decide not to participate, it will not affect your relationship with the researchers or the University of Technology Sydney. If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason, by contacting Greg Joachim [contact details removed in thesis].

If you decide to leave the research project, we will not collect additional personal information from you, although personal information already collected will be retained to ensure that the results of the research project can be measured properly and to comply with law. You should be aware that data collected up to the time you withdraw will form part of the research project results.

CONFIDENTIALITY

By signing the consent form you consent to the research team collecting and using personal information about you for the research project. All this information will be treated confidentially. All data collected during the research project – including your personal information – will be stored securely in line with UTS research standards. Only the research team will have access to this data.

Your information will only be used for the purpose of this research project and it will only be disclosed with your permission, except as required by law.

We plan to publish the results in academic journal articles, conference papers and presentations, popular media articles and books. In any publication, information will be relayed in such a way that you cannot be identified.

WHAT IF I HAVE CONCERNS OR A COMPLAINT?

If you have concerns about the research that you think I or my supervisor can help you with, please feel free to contact us on [contact details removed in thesis].

You will be given a copy of this form to keep.

NOTE:

This study has been approved by the University of Technology Sydney Human Research Ethics Committee [UTS HREC]. If you have any concerns or complaints about any aspect of the conduct of this research, please contact the Ethics Secretariat on ph.: +61 2 9514 2478 or email: Research.Ethics@uts.edu.au], and quote the UTS HREC reference number. Any matter raised will be treated confidentially, investigated and you will be informed of the outcome.

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CONSENT FORM
Applying Design Thinking in a Sport Management Organisation
UTS HREC REF NO. ETH18-2664

I _____ agree to participate in the research project **Applying Design Thinking in a Sport Management Organisation [UTS HREC REF NO. ETH18-2664]** being conducted by Greg Joachim. I understand that funding for this research has been provided by the Australian Government Research Training Program and a UTS Doctoral Scholarship.

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research as described in the Participant Information Sheet.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time without affecting my relationship with the researchers or the University of Technology Sydney.

I understand that I will be given a signed copy of this document to keep.

I agree to be:
☐ Audio recorded
☐ Video recorded
☐ Photographed
☐ Interviewed
☐ Observed

I agree that the research data gathered from this project may be published in a form that:
☐ Identifies me
☐ Does not identify me in any way
☐ May be used for future research purposes

I am aware that I can contact Greg Joachim if I have any concerns about the research.

_____ ____/____/____
Name and Signature [participant] Date

_____ ____/____/____
Name and Signature [researcher or delegate] Date

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