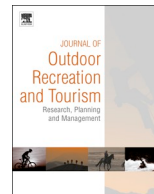




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Collaborative industry risk management in adventure tourism: A case study of the US aerial adventure industry

Marcus Hansen^{a,*}, Dinah Rogers^b, Alan Fyall^c, Thanasis Spyriadis^a, Jackie Brander-Brown^b

^a Manchester Metropolitan University, Department of Marketing, Retail & Tourism, Faculty of Business and Law, Cavendish Building, Cavendish Street, Manchester, M15 6BG, UK

^b Manchester Metropolitan University, Manchester Metropolitan University Business School, Department of Accounting, Finance and Banking, Faculty of Business and Law, All Saints, All Saints, Campus, Manchester, M15 6BH, UK

^c Rosen College of Hospitality Management and National Center for Integrated Coastal Research University of Central Florida, 9907, Universal Blvd, Orlando, FL, 32819, USA

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ABSTRACT

This paper considers the need for an industry-wide approach to risk management within the US aerial adventure industry, a sub-sector of adventure tourism. Since its inception in 2008, the industry has quickly become one of the fastest growing adventure tourism sectors in the US with many established attractions, such as ski resorts adding them to their portfolio. However, due to a number of serious accidents in recent years, the industry faces questions over its risk management procedures and as a result its long-term sustainability, with a drop in consumer confidence being a good example of this. Despite a number of industry standards having been published, the industry remains largely unregulated. As a result of the recognised need for improved risk management procedures, the drop in consumer confidence and the industry being largely self-regulated, this paper calls for an industry-wide approach to risk management involving public and private stakeholders. Through a qualitative case-study 20 semi-structured interviews were conducted with senior managers from the public and private sectors taking part. The purpose was to explore the levels of stakeholder collaboration within the industry. This paper provides two contributions to knowledge: first, the use of industry-wide stakeholder collaboration to improve risk management procedures within the aerial adventure industry. The creation of the Safety Committee Life Cycle adds another theoretical contribution to knowledge, particularly tourism.

Management Implications

- This paper documents considerable challenges to risk management experienced within the US aerial adventure industry, with questions being raised over its long-term sustainability.
- Due to the fragmented state of the industry, collaborative industry risk management is proposed as a solution to improve risk management procedures across the industry by bringing the stakeholders together, thereby recognising stakeholders' mutual dependency for future success.
- The formation of a safety committee for the industry is thus found to be necessary.
- This paper highlights the need for the creation of a Collaborative Industry Risk Management Group, a collaborative effort, consisting of public and private stakeholders with the sole focus of improving risk management procedures.

- Due to a lack of knowledge sharing within the AAI, this paper also recommends the creation of something similar to SaferParks, from the amusement ride industry, to disseminate knowledge from the safety committee.
- Due to the fragmented state of adventure tourism and tourism in general, these recommendations are therefore also suitable beyond the aerial adventure industry.

1. Introduction

This paper considers the need for an industry-wide approach to risk management within the US aerial adventure industry, a more recent sector of adventure tourism, though it has yet to be recognised academically in this field. The US aerial adventure industry has become one of the fastest growing adventure tourism sectors since its inception in 2007 (ASTM, 2013). Whilst research into the industry is relatively

* Corresponding author.

E-mail addresses: marcushansen@gmx.com (M. Hansen), d.a.rogers@mmu.ac.uk (D. Rogers), Alan.Fyall@ucf.edu (A. Fyall), T.spyriadis@mmu.ac.uk (T. Spyriadis), j.brander-brown@mmu.ac.uk (J. Brander-Brown).

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scarce, perhaps due to its infancy, a recent industry report noted a 9% increase in visitation in 2017 (Adventure Park Insider, 2018b). Smith (2015) found 252 parks in existence and reported double-digit annual growth between 2008 and 2015. Xola (2015) reported a 40% annual growth between 2014 and 2015 alone. Yet, whilst Cummings (2018) predict growth to continue, he also argued consolidation will take place as the industry evolves and the emergence of major brands to occur. The latter has already occurred, with major brands such as Outplay Adventures, Treego, Go Ape!, Ropes Courses Inc., and Wild Play already established and having multiple sites across the country. Thus, in a short space of time hundreds of parks have opened up and other tourist attractions, such as ski resorts, have diversified to accommodate the activity (Smith, 2015).

Originating in Europe, where it is estimated a thousand parks exist today (Harris, 2015), an aerial adventure park is perhaps best described as a military training obstacle course set between 10 and 60 ft in the air. This type of structure is also known as a ropes course, though ropes courses tend to refer to the non-commercial element, such as those built exclusively for summer camps or team building (Treego, 2014; Wagstaff, 2015). This paper has a sole focus on the commercial aspect and will thus refer only to the aerial adventure parks. These parks consist of elements including, but not limited to, rope bridges, tight ropes, ladders, cargo nets and zip lines (Jiminy Peak, 2013). As with tourism in general (Czernek, 2013) most organisations within this industry are SMEs. As an activity it has become considerably popular among both non-profit and for-profit organisations, with an emphasis on providing educational, therapeutic and leisure experiences, or so-called pay-to-play (Wagstaff, 2015). This apparent success has however, put pressure on governing agencies to regulate the industry (Wagstaff, 2015).

Due to a number of serious accidents in recent years, the industry faces questions over its risk management procedures (Annas, 2016; Billock, Anderegg, Mehan, Chounthirath, & Smith, 2015). An industry report carried out by Adventure Park Insider (2018a, 2018b) found that the US aerial adventure industry experienced one incident per thousand participants, which included minor injuries such as bruises and minor lacerations. Yet, the report also found a drop in consumer confidence due to serious incidents occurring and having received negative coverage in mainstream media as a result (see FOXKRBK, 2018; Fowler, 2016; Adams, 2014 for examples). Given the nature of the industry, it is considered a high-risk activity, similar to other adventure tourism attractions like skiing for example. Serious accidents have occurred at these parks. In December 2014, a fatality occurred at a park in Florida due to equipment malfunction (Adventure Park Insider, 2015), whilst another fatality occurred at a park in Delaware in 2016 (Horn & Small, 2016). Particularly, the zipline sections of the parks have been acknowledged for their inherent risk of injury by numerous states (Billock et al., 2015).

Industry standards have been published by a number of standard-writing organisations, although in many cases these are not enforced by law (Wagstaff, 2015). Increasingly, states are opting to regulate the industry, but many are struggling to do so effectively having limited knowledge and understanding of the activity. The states that do enforce them do not take a uniform approach to the matter and often rely on different standards to each other (Billock et al., 2015; Wagstaff, 2015). Further, states are introducing numerous editions of the regulations as they learn on a trial and error basis. This is unlike in the UK, for example, in which one agency, the Adventure Activities Licensing Authority, is in charge of inspecting and licensing the industry (AALA, 2018). Simultaneously, the industry is increasingly experiencing demands for faster, bigger and better parks, continuously challenging current capabilities. As is the case with many other adventure tourism activities, participants of aerial adventures demand thrilling experiences, delivering sensations of risk taking, but do not wish to face actual risks, leading to a paradox between safety and risk (Buckley, 2012; Fletcher, 2010). The onus is therefore on the industry to create an

illusion of risk in which the participant feels they are taking a risk, but where possible, the actual risk has been diluted to such an extent it is a mere illusion (Pomfret & Bramwell, 2016). Indeed, it is, among other characteristics, this relationship with risk that should categorise this activity as an adventure tourism activity, which has yet to occur. Other shared characteristics include co-creation, the levels of responsibility placed on participants in regards to their personal safety and motivations for participating (Fletcher, 2010; Prebensen & Xie, 2017; Smith, 2015).

This paper contends the different standards have split the industry into different groups, resulting in a fragmented industry adhering to different standards and therefore having different understandings of what is permitted and not permitted. It further argues industry stakeholder collaboration on risk management procedures is required to ensure the long-term sustainability of the aerial adventure industry. This paper contributes through an industry-wide focus on collaboration, by calling for the creation of a safety committee, the development of a new collaborative framework depicting the process of such collaboration and the creation of the Safety Committee Life Cycle.

2. Collaboration theory: the path to effective risk management

The US aerial adventure industry is, in a similar sense to tourism in general, particularly fragmented. The industry consists of organisations of all sizes, be it so-called “mom-and-pop” businesses to parks being a part of major brands, including amusement parks, ski resorts and family entertainment centres (Adventure Park Insider, 2018a, 2018b; Cummings, 2018). Indeed, many larger attractions, such as ski resorts, see aerial adventure parks as an avenue to combat seasonality (Cummings, 2018). Many organisations supplying the industry also supply other industries, such as CLiC-iT (2018) and Petzl (2018), two organisations also supplying safety equipment to rock climbers and the shipping industry. The industry is further fragmented due to the numerous safety standards available, meaning industry stakeholders are split over which standards to adhere to (Billock et al., 2015).

As a result of the fragmented nature of the aerial adventure industry, considerable levels of collaboration and coordination between the various stakeholders, such as operators, the state, builders and suppliers, are required (Adu-Ampong, 2014; Beritelli, 2011; Bramwell, 2011; Mosedale, 2011, pp. 93–108; Waayers, Lee, & Newsome, 2012; Wang & Fesenmaier, 2007). To sustain the growth and success of the industry, the sharing of knowledge between stakeholders is key (Adu-Ampong, 2014). Indeed, Gray (1985) described collaboration as a process of shared decision-making between key stakeholders of a problem domain regarding the future of said problem domain. However, little academic research exists on collaboration between stakeholders for effective risk management in general and let alone the aerial adventure industry. Collaboration theory was introduced to tourism studies in Jamal and Getz seminal work (1995). Since, numerous studies have been published investigating both the theoretical and empirical aspects of stakeholder collaboration, focussing on three areas: identifying and involving stakeholders (Aas, Ladkin, & Fletcher, 2005; Everett & Jamal, 2004; Graci, 2013; Roberts & Simpson, 1999; Vernon, Essex, Pinder, & Curry, 2005), the maintenance of collaborations (Jamal & Stronza, 2009; Vernon et al., 2005) and the long-term implementation of the solutions (Graci, 2013; Jamal & Stronza, 2009).

Collaboration brings organisations and individuals from both the public and private sectors together to achieve certain goals that otherwise would be unattainable on an individual basis (Graci, 2013; Purdy, 2012). However, several definitions of the meaning of *collaboration* exists resulting in a lack of consensus on the exact meaning (Adu-Ampong, 2014; Fyall & Garrod, 2005). Stakeholder collaboration can be described as a joint effort among the key stakeholders in a problem domain attempting to solve that problem, whilst also managing issues in regards to the planning and development of the domain and, finally, furthering shared visions (Gray, 1989; Jamal & Getz, 1995;

Ladkin & Bertramini, 2002). It is generally understood that many of the issues industries face today cannot be solved by single organisations, hence the need for stakeholder collaboration (Gray, 1985; Mandell, 1999). Collaboration offers a flexible and dynamic process capable of change over time thereby allowing stakeholders to address complex issues (Jamal & Stronza, 2009). To understand stakeholder collaboration, Gray (1989) developed a framework consisting of three stages: 1) problem setting. The stakeholders agree on what the problem is and that it is important enough to collaborate with others in order to find a solution (Graci, 2013); 2) Direction setting. Rules and agreements are set among the stakeholders, whilst the various options and opinions available are explored. This will, in turn, enable the group to reach agreement over a course of action supported by the group overall (Graci, 2013); 3) Implementation. This final stage, thus, involves implementing the chosen course of action in which support, structure and compliance are key (Graci, 2013; Jamal & Stronza, 2009).

The aerial adventure industry is particularly complex and dynamic, as stated previously, due to the linkages, various stakeholders with diverse and conflicting opinions and the lack of control by a single organisation or individual (Billock et al., 2015; Jamal & Stronza, 2009). Standard-writing organisations such as the Association for Challenge Course Technology [ACCT], the Professional Ropes Course Association [PRCA] or the American Society for Testing Materials [ASTM] have limited powers, for example, and are merely capable of offering advice and guidance. This has resulted in a complex management situation and Trist (1983) for example called for tourism organisations to move away from an intra-organisational focus to an inter-organisational domain in order to determine strategies that enables the maximisation of everyone's interests. Indeed, through collaboration it is possible to effectively create and implement policies by bringing together numerous stakeholders (Adu-Ampong, 2014). This can be achieved by assembling stakeholders from the public, private and civil sectors who may then address the problem domain (Ansell & Gash, 2008).

3. The importance of trust in collaborations

Numerous scholars have portrayed trust as the essence of collaboration (Huxham, 2003; Lee, Olson, & Trimi, 2012; Milward & Provan, 2006; Van Slyke, 2009, pp. 137–155). Trust can and will be gained over time, however, as the stakeholders work together, get familiar with each other and through this assure each other that they are reliable (Fisher & Brown, 1989). Within the aerial adventure park industry, most stakeholders will be familiar with each other as a result of the collaborative efforts already taking place within the industry by organisations such as ACCT, ASTM and PRCA. Trust among the participating stakeholders has a big impact on the eventual outcome of the collaborative process (Roberts & Simpson, 2000; Wang, Hutchinson, Okumus, & Naipaul, 2012). Yet, it presents a major challenge to create if it does not already exist (Jamal & Getz, 1995). For example, Wong, Mistilis, and Dwyer (2011) study found that it took ten years in their particular case. As such, a considerable amount of time, attention and effort must be put into this area. Further, trust can be gained through the sharing of resources, evidencing expertise, good intentions, clear communication, transparency, goal alignment, reciprocity and delivering on agreements (Bryson, Crosby, & Stone, 2015; Cummings & Bromiley, 1996; O'Leary & Vij, 2012). On the other hand, however, failing to deliver on some of these points or being too focussed on personal interests, rather than the group's as a whole, can erode trust (Chen, 2010). Competition among the participating stakeholders may also hamper the process as it can lead to a reluctance to collaborate due to trust issues (Naipaul, Wang, & Okumus, 2009; Sharfman, Gray, & Yan, 1991; Wang et al., 2012).

4. The motivations and challenges behind collaborations

Wang and Fesenmaier (2005) developed four constructs, essentially

outlining the nature and dynamics of collaborative alliances. The constructs are; 1) the precondition construct portrays the economic, social and environmental conditions for the creation of an alliance; 2) the motivation construct seeks to describe the reasons behind organisations opting to participate in strategic alliances as a method to achieve their goals; 3) the stage construct depicts the dynamics of the collaborative activities; 4) the outcome construct subsequently explains the results of the collaborative activities. However, the creation and management of collaborative networks also comes with substantial challenges for the stakeholders (March & Wilkinson, 2009). For example, a network is not owned by any person, even if some have more power than others, but is instead developed by a number of stakeholders. Despite this, the advantages of collaborating within the tourism industry has been explored for over two decades (Boivin, 1987, pp. 147–150). Stakeholders potentially participating in a collaborative alliance exist in an environment consisting of many influences, including competitive, technological, task-related, political, socio-cultural and economic (Fyall & Garrod, 2004). These influences will in many scenarios, encourage collaboration among the stakeholders (Wang & Fesenmaier, 2007).

Influences also exist that encourage stakeholders to collaborate during social concerns or when major issues emerge (Wang & Fesenmaier, 2007). Thus, clearly stakeholders may enter into collaborative alliances with a number of different motivations (Wang et al., 2012). For example, research has highlighted a number of influences or pressures, which may lead to collaboration among stakeholders. These include:

- Crises that direct the attention of stakeholders towards a certain issue (Crotts & Wilson, 1995; Wang & Fesenmaier, 2007).
- Current collaborations that introduce potential participants to each other as well as the problems they may both be facing (Fyall & Garrod, 2004).
- It is generally required that one individual among the group exhibits visionary leadership skills to take charge of assembling and move the collaboration on (Fyall, Callod, & Edwards., 2003).
- Economic or technological advances resulting in organisations being unable to compete successfully on an individual basis (Wahab & Cooper, 2001; Wang & Fesenmaier, 2007).
- A third-party convener may provide the forum or develop the opportunity for collaboration (Hall, 1999; Wang & Fesenmaier, 2007).

Evidently, a number of preconditions and requirements are needed for stakeholder collaboration to work. The following sections explore whether these are present within the US aerial adventure industry, and how these might impact the collaborative levels of the industry, in an effort to improve the risk management procedures within the industry.

5. Methodology

This paper was guided by a qualitative research method and analysis, having been deemed the most appropriate approach to achieve the aim. Qualitative research starts with assumptions, a world-view, potentially using a theoretical lens and studying research problems exploring the meaning individuals or groups impute to a certain problem (Creswell, 2007). Further, a single-case study approach was chosen, with a focus on the US aerial adventure industry and its key stakeholders. This allowed the paper to deeply explore the current risk management procedures within the industry and ascertaining the potential suitability of industry-wide collaboration. Case study research is the study of a problem setting explored through single or multiple cases (Creswell, 2007). Eisenhardt and Graebner (2007) argue that such an approach is relevant to research projects seeking to gain a deep understanding of the issue being researched. Yin (2009) further argues that case study research is one of the best methods to describe real-life as the researcher is able to appreciate the richness of participants describing their experiences in a certain context. Therefore, such a

strategy goes hand-in-hand with the chosen approach of this paper, particularly bearing in mind the importance of the quality of the data gathering. Real-life recounts were indeed key in the effort to discovering whether collaboration can improve risk management within the aerial adventure industry. The sampling was guided by Mitchell et al.'s (1997) theory of stakeholder identification and salience. For this paper, non-probability sampling techniques were utilised as using random sampling was not deemed feasible. This was due to only certain stakeholders being considered for this paper, and not all cases within the sample universe.

6. Sampling

A combination of convenience sampling, snowball sampling and purposeful sampling techniques were employed. Initially, the authors combined a list of stakeholders to approach, including ones known to the authors. However, during the initial interviews further stakeholders were suggested by the interview participants. In some cases, introductions were made between the authors and new potential interview participants through existing interview participants. As a result, these leads led to further interviews being conducted. Builders, operators, insurance providers, engineers, potential/actual regulators and standard writers were interviewed for this study. Senior managers from the respective organisations were approached to participate due to their knowledge and influence in regards to risk management procedures and industry collaboration. The states with the most aerial adventure parks were given priority in the hope that they would have more experience and understanding of collaborating with the industry. States represented by the interview participants included Florida, Colorado, North Carolina and Oklahoma. Further, some operations were SMEs, whereas others were part of larger resorts and multi-site operations. However, one stakeholder group, the consumer, was left out. Whilst this study does recognise their legitimacy, it was deemed they lack the required knowledge, experience and expertise on such complex matters as risk management and stakeholder collaboration. Instead, a more knowledgeable stakeholder was deemed more apt, the state. Bearing in mind the objective of the state is to uphold public safety in this case, their participation and representation of the consumer was deemed appropriate.

7. Data analysis

Accurate data analysis was key to the overall study, with the following interpretations developed as the authors made sense of the data at hand as well as the lessons learned throughout the study (Lincoln & Guba, 1985). Creswell (2007) argued that these interpretations may be based on hunches, insight or intuition formed via the larger meanings gathered from the data. As the case study focussed on an industry, but gathered data through speaking to various stakeholders within it, an embedded analysis was employed. This allowed the case study to focus on the industry as a whole, whilst not forgetting the "sub-units", or stakeholders, that ultimately make up the industry (Yin, 2014).

8. Thematic analysis

Thematic analysis was used to carry out the analysis the data to assist in this. According to Boyatzis (1998), thematic analysis is 'a way of seeing'. Qualitative research is particularly diverse and thematic analysis provides the foundations to qualitative analysis (Braun & Clarke, 2006). Using this approach, researchers are able to see what others might not as patterns or themes are discovered within the data collected (Boyatzis, 1998). Thematic analysis increases the accuracy and sensitivity of the researcher's understanding and interpretation of the data collected. Creswell (2003) points out that the themes showcase numerous perspectives from participants that can further be supported by the literature. For example, the themes developed for this paper

were supported by segments from the interviews (Creswell, 2007). The thematic analysis process involved three stages: deciding on sampling and design issues, developing themes and a code and finally validating and using the code (Boyatzis, 1998). Creswell (2003) further argues that this approach is ideal for designing useful descriptions for case studies. For this paper, an abductive approach was chosen as this involved developing thematic codes from the literature as well as the data collected. Given the interview guides were guided by the literature, it was inevitable that themes in the data collected would also reflect the literature. The subsequent name for the code should relate to the purpose of the research (Saunders, Lewis, & Thornhill, 2012). Bearing this in mind, one code was devised, namely stakeholder collaboration. Six themes were subsequently identified.

9. Results

9.1. Theme one: current levels of industry stakeholder collaboration

A number of interview participants spoke positively on collaborating, in general, with their industry colleagues. According to participant 5, for example, it provided part of the foundation of their own and the industry's success:

"it's what makes us successful in the industry and what makes the industry successful as a whole"

Participant 10 described the enthusiastic approach at their state taken to involve the local stakeholders in decisions pertaining the regulations on the aerial adventure industry, an approach that has proved popular with the stakeholders:

"So, we, whenever we do, um, any changes or proposed changes to our regulations, in fact even before that, it starts with our engaging with stakeholders"

In a similar vein, participant 18 also spoke of an open-door policy, though perhaps somewhat less formal to participant 10. Participant 18 also spoke of how collaborating with their stakeholders had helped the state prevent risky attractions open up in the past:

"We have a, you know, one-on-one working relationship with them. [...] So, yeah, we, we collaborate that way. We just interact"

Participant 17 also spoke positively of collaborating and the leadership already provided by ACCT:

"Um, we do [collaborate] very much so and it's something that I think, um, has its roots in the ACCT organisation"

However, it appeared that a big faction of the industry, for various reasons, did not participate heavily in the industry and those that were most engaged in collaboration were a select group, described by as an "old boys club" by participant 5. Indeed, it was noticeable during the interviews with participant 11 and 12 how limited they collaborate with other stakeholders in the industry, other than their builder. Further, participant 3 spoke of the large section of the industry not currently engaged in collaboration and its potential consequences:

"I would say in our community, if you look at just the commercial realm, probably 20% of the businesses are active in ACCT. [...] if we're unable to, to bring a larger portion of those people into these network, [...] we're really going to struggle"

Like participant 3, participant 9 also spoke of the levels of collaboration currently within the industry and how they have changed since the industry turned predominantly commercial:

"I think it's [collaboration] diminished some with the advent of the commercial operator. [...] I think it's 50/50 on the commercial operators"

9.2. Theme two: benefits of industry stakeholder collaboration

Overall, the importance of collaboration for the aerial adventure industry was not lost on the interview participants during the data gathering. It appeared that the main benefit of collaborating was the sharing of knowledge. Participant 3 commented on the benefits of collaboration and the ensuing learning it brought:

“Well, I think, um, one, obviously, is it's [the benefit is] insight”.

Similarly, participant 6 spoke of the co-learning taking place when asked about the benefits of collaborating:

“[...] It's, it's, um, it's a greater collective consciousness that's brought to bear on important issues”.

Participant 19 also spoke of the co-learning:

“Um, if incidents are happening on other similar aerial parks, we can learn from it”.

In a similar vein, participant 14 spoke of the co-learning taking place through communicating with other stakeholders as a benefit of collaboration. Further, they also argued that collaboration improves relationships within the industry:

“So, I think it's important. The communication and collaboration helps, you know, open lines”.

According to participant 2 communication was the biggest benefit of collaboration, thus along the same lines of many of the interview participants. Participant 2 commented:

“Well, sure. I mean, the communication is good because it keeps everyone up to speed if there's an issue that comes up”.

Participant 20 spoke of the improvements collaboration bring, particularly in regards to innovation:

“Collaboration leads to evolution. [...] collaboration leads to invention. That invention leads to competitiveness and competitiveness always leads to safety. It starts with collaboration”.

According to participant 10, collaborating with the industry has made their job of regulating the industry much easier as it has improved their understanding of the aerial adventure parks. Participant 10 commented:

“We're actually here to ensure the public is safe and I think by collaborating with the industry we can do a better job of ensuring the public is safe, than not collaborating with industry”.

Yet, participant 14 spoke of the need for more data:

“The more knowledge you can get about something the better, the better you are”.

9.3. Theme three: the requirements of stakeholder collaboration

During the data gathering it became apparent that trust plays an important role, according to the participants, for collaboration to work. Participant 3, for example, commented on the requirements to collaboration that they have experienced:

“Well, I think, first and foremost trust. [...] the other thing, and this goes along with trust, is having the other person's best interests in mind”.

Participant 6 also spoke of the need for trust. When asked about the need for trust, participant 6 commented:

“[...] there's a, there's a pretty strong network of companies or vendors in this industry that I have a high level of trust and because we have the history, you know, we've developed that over years of a relationship”.

Participant 20 also spoke of the need for trust and credibility as well

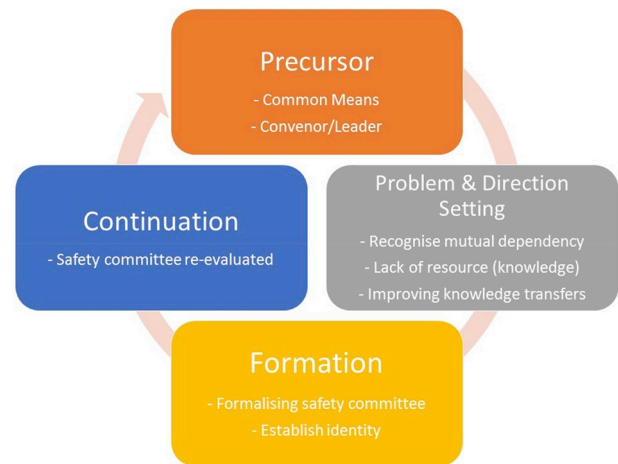


Fig. 1. The safety committee life cycle (Author, 2018).

as the need for the industry to become more open:

“You have to have knowledge and be able to be credible. Then there's the level of trust that's even more overpowering than credibility. [...] we've got to become a more open industry”.

Respect was another attribute required for collaboration to work, as participant 17 noted:

“Um, mutual respect, um, number one. Um, honesty and a willingness to learn and make changes, willingness to receive, um, criticism, but then also give honest and productive criticism, for sure”.

On the other hand, participant 7 alluded to the need for a certain mind-set from the individual stakeholders:

“I think, one, people have to be open to it, they have to see the need, they have to understand why it's important, um, ultimately, how it, um, it, um, can help them learn and grow, become better”.

Similarly to participant 7, participant 18 also referred to the need for a certain mind-set and having common goals:

“I think, everybody having the same common goal [...] that helps a lot”.

On the other hand, participant 19 argued for guaranteed anonymity when sharing sensitive information, such as incident data, with their fellow stakeholders. They argued this was required to enable collaboration as it would help protect company images:

“Um, I think if there is a way to help keep it, somewhat, anonymous, um, more people would be willing to share”.

Participant 15 also called for anonymity when sharing information on risk management:

“Um, it's important to share general risk management information, [...] they should never be able to figure out [...] where that incident occurred”.

Interestingly, participant 5 called for some infrastructure to enable collaboration, arguing the need for a risk management committee:

“what a risk management committee would do with us is, is with our industry right now, is collect that data and collect what was being shared, um, and then put out a report”.

9.4. Theme four: barriers to stakeholder collaboration

Participants also found various barriers to achieving effective collaboration. Whilst the ACCT conference appeared the main gathering point for many industry stakeholders, away from that it appeared the

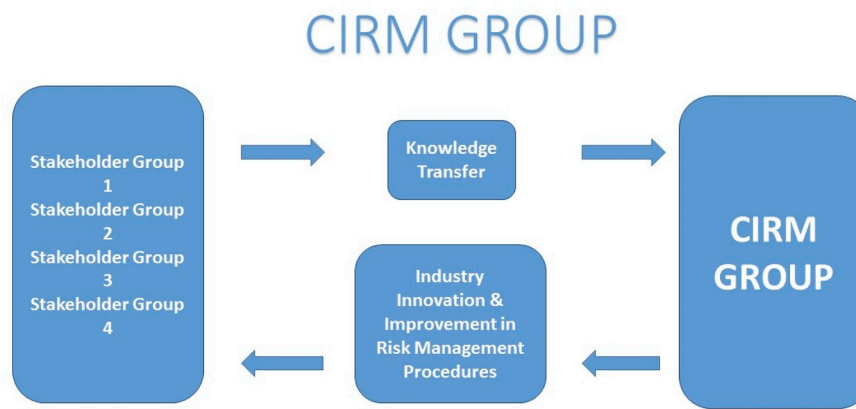


Fig. 2. Cirm group (Author, 2018).

industry was faced with numerous barriers. Participant 4, for example, found time, finances and infrastructure to be barriers to collaboration:

"I think the first problem is just time, right? [...] I think, um, um, sort of an infrastructure to be able to share information is another barrier for us, [...] And then, um, I think the other thing, um, would be, um, controlling the information [...] I think that's [costs of attending conferences] a challenge."

Participant 9 also argued that the location of the ACCT conference presents a barrier to collaboration as attendance, for smaller organisations, tends to be based on their proximity to the conference:

"[...] the smaller organisations, they tend to attend based on their geographical location".

Participant 10 spoke of the time constraints many have in the industry and how they try to accommodate such constraints:

"[...] smaller operations, they have finite amount of people and, yeah, their time away from the business is extremely important".

On the other hand, whilst participant 6 also spoke of time constraints as being a barrier, they seemingly felt that individual attitudes presented the biggest barrier to collaboration:

"if all you do is just sit there and learn from everybody and you're not really contributing [...] there's a portion of them that do that".

Further, participant 17 spoke of the struggles that smaller operations have in meeting new regulations due to the financial implications of said regulations and therefore making collaboration difficult:

"Um, I think that a lot of the smaller, um, organisations can find themselves in a tough spot, um, as more and more regulations are piled on".

Similarly, participant 20 commented on struggles of the smaller organisations within the industry as well as the stakeholders on the outskirts of the industry. Further, participant 20 also argued that some regulators may be preventing collaboration within the industry:

"[...] the only way we can share that information and data throughout the industry is by having regulators out there, um, that aren't carrying a stick, [...] it's not the 95%, it's the 5% on the, on the outskirts that are going to affect the industry in a negative way".

It appeared that the aforementioned trust might also provide a barrier to collaboration if there is a lack thereof. Participant 12, for example, spoke of concerns of losing intellectual property by collaborating with competitors. When asked if sharing information within the industry could improve the industry as a whole, they answered:

"So, the worry about collaborating does prevent true collaborating".

Further, similarly to other participants, participant 19 also pointed out that a lack of infrastructure encouraging collaboration was presenting the industry with a barrier to collaborating on risk management, whilst also commenting that such a task was, somewhat, foreign to the people within the industry:

"[...] yeah, there's definitely some infrastructure missing. There's, um, it's not in our culture to share that information".

On the other hand, participant 20 argued that the many standard-writing organisations, ACCT, ASTM and PRCA, were presenting barriers to collaboration within the industry:

"[...] we've got two groups of people, or three groups of people, PRCA is also another group in the States, um, and we're not all on the same page".

Some participants also spoke of isolationism being a barrier to collaboration within the industry, with some stakeholders, apparently, refusing to take an interest in the wider industry. Participant 7, for example, commented:

"[...] it's not going to happen with people in isolation, just kind of, ignoring what else is happening".

Indeed, participant 3 spoke of isolationism as the biggest fear they have in the industry:

"[...] the biggest fear I have is isolationism [...] I think, it's that isolationism and, I think it's an arrogance, um, that, that is really prominent in this industry with operators that aren't part of the community".

9.5. Theme five: motivating stakeholders to collaborate

Given the apparent small number of stakeholders currently actively engaged in collaborating with each other and the number of barriers present to collaboration within the industry, the interview participants were asked how they envisaged the rest of the industry becoming more collaborative. A number of the interview participants had opinions on how to motivate their fellow stakeholders to collaborate and become more active in the industry. Participant 3 spoke of the changing landscape within the industry:

"I think, ultimately, things that's going to, um, really help people in to be more collaborative that jurisdictions are going to start regulating".

On the other hand, participant 1 was less enthusiastic on the prospect of motivating stakeholders to collaborate more:

"I think, um, maybe the only thing that may change them at some point is, um, that, that they see other people, you know, collaborating".

Participant 10 spoke of how their open-door policy encouraged stakeholders to collaborate and share information, be it through

meetings or site visits. It seemed that their active approach encouraged stakeholder collaboration:

"[...] what I've found has been effective is just, kind of, building ... um, you know, the recognition that, yeah, this agency is really interested in hearing from you and it's going to value that, your feedback".

However, participant 6 proposed that an organisation, like the ACCT, ought to mandate its members to be actively involved. When asked how stakeholders could be motivated to collaborate, they replied:

"You have to reach out, you have to do surveys, you have to ask for it".

These thoughts were echoed by participant 19:

"[...] you know, there's a chance that, like ACCT could require all of their PVMs and, or, accredited programs to do that".

9.6. Theme six: public stakeholder industry experience

The concern over the lack experience, specific to the aerial adventure industry, among the public stakeholders was a recurring theme during the interviews. It seemed to indicate a compelling need for collaboration between public and private stakeholders. Participant 3, for example, bemoaned the "rubber stamp" process that many states utilise when it comes to regulation. Similarly, participant 15 argued that many states simply have a "paper regulation":

"I don't think the public agencies have enough knowledge [...] It, it's more of a, um, a paper regulation in, in a lot of states".

When asked how many states currently regulate the industry, participant 19 further commented:

"Um, I bet we're up to about 20. I don't know for sure [...] they range from, like California [...] inspect every course, um, to states [...] that just tell you to turn in an inspection report from a qualified person".

Participant 1 also seemed to allude to similar issues of 'rubber stamping' when commenting on their experience in dealing with the public stakeholder:

"[...] you know one state is, um ... they're kind of giving, handing over to the fire department [...] And they're doing an inspection of our courses [...] they just don't have the qualifications to deal with an inspection".

Further, participant 8 pointed out that many jurisdictions are learning on the job and whilst some are keen to collaborate with the industry in an attempt to understand what they are trying to regulate, others are less interested:

"[...] everybody is kind of learning how to regulate these things and, um, it's still more often than not regulated, but the ones that are trying to regulate it don't get it right the first time".

On the other hand, participant 9 seemed more sympathetic toward the public stakeholder, commenting on the struggles they have in understanding the industry and thereby classifying it correctly. However, they too found they, to a certain extent, had to educate the public stakeholder:

"I think, um, yes and no. Um, I think they have a hard time deciding what we are, [...] there's the other side that wants to see us as, um, more in line with the amusement parks and so, that causes conflict and that causes the debate that usually struggles".

Indeed, participant 9 argued that the involvement of the public stakeholder was positive for the industry and provided another layer of risk management:

"[...] all of them have the best intent at heart, which is [...] provide safety to the general public, if you can keep that in your mind-set it makes it a lot easier to work together".

Like participant 9, participant 17 also spoke of successfully working with public stakeholders, making the process of regulating the industry in those particular states more of a joint effort:

"They do, um, look to the industry and, and, um [...] ask, you know, industry professionals on an individual level, um, in consultation".

10. Discussion

The lack of trust and appropriate infrastructure encouraging industry-wide stakeholder collaboration on risk management was an issue repeated throughout the participant interviews. This paper has also paid much attention to the apparent lack of knowledge transfers on incident and accident data within the industry with some sort of organisation needed to facilitate the transfer of knowledge. Many of the interview participants argued that the industry was suffering from a lack of true statistical data and that a need existed for a national database to assist the stakeholders in their decision-making on risk management. Data within the aerial adventure industry seemed so sparse that interview participants were unsure how many states currently regulate the industry. The desire to gain hold of such data appeared to be one of the key motivations behind the interview participants' willingness to collaborate. As such, a problem domain and a key motivator was established, a requirement for collaboration to be successful (Gray, 1989).

The data seemed to indicate a need and a desire for a safety committee and something similar to SaferParks to disseminate this knowledge. This would be a similar outlet utilised by the amusement rides industry on an international level to share knowledge on incidences, yet also similar to the "Incident Log Reports" utilised by the European Ropes Course Association (ERCA, 2018). It was argued that such a committee could provide the missing infrastructure and facilitate learning, communication, innovation and improvement, all areas sought in collaboration. Such a committee could seemingly assist in the education of stakeholders, whilst also highlight areas of improvement in the industry due to the data. The data appeared to suggest a safety committee could provide a central knowledge hub for the industry, one of the key requirements in motivating stakeholders to collaborate. The creation of a safety committee is supported by Annas (2016). The literature has long recognised the value of knowledge, describing it as the most meaningful resource today (Tzortzaki & Mihotis, 2012). Knowledge transfers provide the foundations of collaboration (O'Leary & Vij, 2012) and can lead to innovation and improve operations (Tidd, Bessant, & Pavitt, 2005; Shaw & Williams, 2009; Hjalager, 2002).

However, the importance of confidentiality was, once again, stressed and others warned against simply creating another organisation, such as the ACCT or the ASTM. Yet, the data argued the ACCT and/or the ASTM could provide the setting for the safety committee, presumably as an extension of either or both organisations, instead of creating new group and as such would take place at a national level. Indeed, Wang and Fesenmaier (2007) argued that a third party convener could provide one of the motivations for stakeholder collaboration, which in this case could be in the shape of the ACCT or ASTM. However, this would likely require the two groups to merge, which in turn might eradicate the fragmentation currently existing within the industry. Further, such a merger would also streamline the standards and thereby the safety committee, whilst gather all industry stakeholders. By doing so, the industry would also portray a united front when collaborating with the public stakeholder, making the effort more effective as a result. Indeed, this would improve the likelihood of the collaborative effort being successful through the shared vision of the industry and its stakeholders.

As such, one can deduce the need for stakeholder collaboration to occur at a more integrated level. The industry appears to be suffering from a lack of data, with knowledge transfers not taking place industry-wide, but through a select few. Yet, the data holds key knowledge

required by both public and private stakeholders to make informed decisions on risk management. It would seem that a great deal could be learned from the various incidents and accidents undoubtedly taking place within the industry and the data and the literature both argue that sharing these lessons in turn will lead to a better and ultimately safer industry. With an increasing demand for longer, faster and bigger attractions it would seem that industry-wide stakeholder collaboration is essential to maintain the growth and sustainability of the industry.

The continuous innovation taking place within the industry may also impact the safety committee and stakeholder collaboration. In light of the ceaseless risk management and innovation cycles, a need for a continuous approach to collaboration is seemingly needed to maintain its life cycle. However, a long-term approach to industry-wide stakeholder collaboration is a complex matter, hence the need for a safety committee. Indeed, [Jamal and Getz \(1995\)](#) called for the establishment of an organisation to continuously monitor and re-evaluate the collaborative efforts. [Selin and Chavez \(1995\)](#) introduced “An Evolutionary Model of Tourism Partnership”, a life cycle model of five phases, including a feed-back loop, namely: antecedents, problem setting, direction setting, structuring and outcomes. They acknowledged that stakeholder collaboration may cease at the “outcomes” stage if the purpose had been fulfilled or, somewhat ominously, if the problem was still unsolved. However, the re-evaluation cycle of [Selin and Chavez' \(1995\)](#) model may also lead to a broadening of scope. Nevertheless, given the continuous cycle of risk management and innovation within the aerial adventure industry, it is also possible neither of these outcomes may occur as the safety committee continues its focus on disseminating knowledge to the industry stakeholders. Indeed, [Caffyn's \(2000\)](#) tourism partnership life cycle found six stages of a typical collaborative arrangement within tourism: pre-partnership, take-off, growth, prime, deceleration, and continuation or ‘after-life’ options, in which she recognised the likelihood of a collaborative arrangement simply continuing its work due to a never-ending purpose. However, clearly, continuous re-evaluation would seem a requisite to ensure the safety committee remains credible. Introducing a new model, a combination of [Selin and Chavez' \(1995\)](#) and [Caffyn's \(2000\)](#) life cycles, would therefore seem appropriate for this paper.

Bearing this in mind, [Fig. 1](#) depicts the proposed life cycle of the safety committee, a model based largely on the works of [Selin and Chavez \(1995\)](#) and [Caffyn \(2000\)](#). The first stage, precursor alludes to the existence of a common means, a requisite for stakeholder collaboration to take place, as well as a convener and leader to sell the vision of the common means and gather the key stakeholders. During the second stage of problem and direction setting, the stakeholders recognise their mutual dependency, in the case of improving industry-wide risk management procedures, whilst also recognising the lack of resources existing in the industry in regards to knowledge on incident data, for example. As a result, the stakeholders set out to improve knowledge transfers within the industry. The “formation” stage therefore involves formalising the safety committee and establishing its identity, its purpose with roles assigned and the goals set. Finally, the safety committee is re-evaluated in the “continuation” stage to ensure it is continuously relevant, meaning the cycle is never-ending as long as the conditions in the previous stages exist. The continuation stage further links back to [Reid, Smith, and McCloskey \(2008\)](#) argument that collaborative outcomes must be evaluated on a long-term basis.

11. Conclusion, recommendations and limitations

In conclusion, this paper has provided two contributions to knowledge: first, the use of industry-wide stakeholder collaboration to improve risk management procedures within the aerial adventure industry. The creation of the Safety Committee Life Cycle model adds another theoretical contribution to knowledge, particularly adventure tourism. Heavily inspired by the works of [Selin and Chavez \(1995\)](#) and [Caffyn's \(2000\)](#) tourism partnership models, this model posits the never-

ending need for industry-wide stakeholder collaboration and a safety committee in the aerial adventure industry, in light of the never-ending cycles of risk management and innovation faced by the industry. Further, this paper has argued for the creation of a Collaborative Industry Risk Management (CIRM) Group, depicted in [Fig. 2](#), a collaborative effort between public and private stakeholders within the aerial adventure industry, with the sole focus of improving risk management procedures at an industry-wide level. [Fig. 2](#) shows how the flow of information would flow between stakeholders and the safety committee.

Unlike previous studies on collaboration, this paper focussed on a nation-wide industry as a whole and how stakeholder collaboration might improve risk management procedures, therefore providing one of the underpinning contributions of the paper, which is also applicable to adventure tourism and tourism in general. Evidently the aerial adventure industry is fragmented and suffers from an individualistic mind-set, similarly to other sub-sectors within tourism. Stakeholders suffer from a lack incident and accident data, which would enable improved decision making in regards to risk management and innovation, yet the data is not readily available for a number of reasons. Perhaps due to the infancy of the industry, a lack of trust is evident within the industry, meaning stakeholders are uncomfortable sharing sensitive information, such as incident and accident data. However, the creation of an outlet similar to SaferParks, in conjunction with the CIRM Group, would provide the desired confidentiality, whilst still supporting knowledge transfers within the industry. This would enable the stakeholders to transfer critical knowledge, anonymously, to the CIRM Group, which in turn, would disseminate this knowledge to the rest of the industry through something similar to SaferParks. As such, this would further help the spread of critical knowledge on risk management procedures and innovations.

Going forward, further insight into the combination of stakeholder collaboration and risk management would seem warranted within the adventure tourism literature. Exploring the motivations behind stakeholder collaboration would also seem warranted in light of the findings of this study. Much of the tourism research on the motivations behind stakeholder collaboration has been conducted on destinations or regions, not at an industry level. Thus, a study on the motivations behind stakeholder collaborating on an industry level would, in turn, further our understanding in this field. It would also be valuable to get the consumer's point of view as the aerial adventure industry is introduced to academia. Further, a longitudinal study to validate or invalidate the life cycle proposed in this paper is warranted. The life cycle has, for example, been proposed in light of the current state of the industry. However, if innovation slows considerably, the safety committee may not be required to the same extent as currently proposed. Currently, the lack of data is evidently a considerable concern among the stakeholders and arguably needs to be more effective given how dynamic the industry is. Yet, if these circumstances change considerably, this may no longer be the case, hence a long-term study of the industry would also be beneficial. This would also further our understanding of stakeholder collaboration on a long-term basis.

A study exploring and comparing the collaborative levels on an international level may also be beneficial to our understanding of stakeholder collaboration, perhaps between Europe, a more established industry, and the US, in which the industry is clearly in its infancy. Finally, a study utilising Rogers's Diffusion of Innovations theory (2003) would be highly beneficial in an effort to further understand the important role knowledge transfers have on innovations and the management of these. This theory has yet to be applied to the adventure tourism literature and has seldom been applied to tourism. Yet, it would seem critical in light of the findings of this paper.

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