Determining Preferences for Activities at the Albanian Adventure Resort

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Abstract

The lack of economic and educational opportunities in rural areas of Albania has led to high levels of urban migration. The Albania Rafting Group (ARG) hopes to develop tourism year round and have the benefits from tourism improve the rural economy. In partnership with the Ministry of Sport and Education, ARG is building an eco-adventure park in the Skrapar region in southern Albania. Our project, through a free listing exercise and survey, identified adventure activities to make the resort an attractive destination. We provided detailed plans for a ropes course and an obstacle course that included information on elements, location, safety, and construction.

Executive Summary:

In the two decades since the transition from communism to capitalism, neither government policies nor private investments have created sustained economic growth in rural areas of Albania. (Konica, 2015). The lack of economic opportunities in rural areas has led to high levels of urban migration in Albania as well as emigration to European countries and beyond (Konica, 2015) These rural economies can be improved through tourism and subsequently the creation of jobs in the region (Vladi, 2014).

The Albania Rafting Group (ARG) is working to increase tourism in the Skrapar region through the creation of an eco-adventure park. An eco-adventure park typically includes environmentally friendly adventure activities in a natural setting. ARG has chosen a former military base as the location of their site, 500m from the beauty of the Osumi Canyons (Carey, 2015). The resort is currently in the first phase of construction on the buildings (Blerina Ago, personal communication, 11/15/2016). ARG is building the reception area, restaurant, and training areas while continuing to plan the activities that will be included in the resort (Blerina Ago, personal communication, 11/1/2016). Our goals for this project were to determine attractive activities for ARGs target market, millenials, as well as plan the elements, location, safety, and construction companies for each activity.

Methods:

Objective 1: Determine and analyze preferences for adventure park activities among millennials.

We conducted a free listing of the Albania project group to

determine possible activities they think of in adventure parks. Free listing is one of several structured interviewing techniques designed to elicit systematic data about a subject matter of interest, eco- adventure parks. In this technique, we received lists of activities our classmates associated with adventure parks. From these lists, we constructed a survey to determine preferences of the top activities from our free list. This survey was distributed to Albanian and international millennials, ARG's target audience. We received 92 responses from non Albanians and 22 responses from Albanians. The results from the survey were used to select possible activities

for the Albanian Adventure Resort.

Objective 2: Assess elements and locations for selected activities.

During our first week, the team visited the site of the Albanian Adventure Resort. At the site we took pictures and noted observations for possible activity locations. Once our activities were chosen to be an obstacle course and ropes course, we researched construction companies. These construction companies led us to our choices for elements in each course and knowledge on necessary locations. From this knowledge, we analyzed maps of the site to determine locations of the courses. We used this information to create a design and plan for each course.

Objective 3: Identify construction companies and safety plans for selected activities.

The team researched each element recommended to determine safety and training methods for the elements. Additional research into overall safety measures and equipment of the courses was also performed. Finally obstacle and ropes course building companies were researched and recommended to ARG.

Findings:

Zip lining, hiking, rock climbing, ropes courses, and animal watching were the five most salient activities from the free listing of American Millennials.

From the free listing we received 117 unique responses. We ranked these responses using salience. Salience is the combination of average rank and frequency, the two pieces of information that can be obtained from a free listing. From our

ranked list of salient activities, we eliminated current ARG activities as well as activities that are not feasible for the site. This modified list had zip lining, hiking, rock climbing, ropes courses, and animal watching as the most salient activities.

Albanians preferred nontraditional adventure park activities found in the region, while non Albanians preferred more traditional adventure park activities.

The survey showed that Albanians ranked traditional adventure park activities, such as zip lining, much lower than

non Albanian respondents did. Albanians top ranked activities were hiking and horseback riding, while non Albanians top ranked activities were zip lining and rock climbing. Although the difference in preferences from Albanians to non Albanians appears significant, the Albanian responses we received varied significantly in their preferences. This is most likely due to the fact that we only received 22 survey responses from Albanians.

People who had been to an adventure resort preferred more traditional adventure park activities than people who had not.

Respondents who had never been to an adventure park often ranked traditional adventure park activities lower than those who had. Respondents who had never been to an adventure park before ranked activities known to them, such as hiking and horseback riding. Respondents who had been to an adventure park, on the other hand, ranked adventure activities such as zip lines and ropes courses higher. This indicated that as people learn more about adventure parks, and begin to experience them, they rank adventure park activities higher.

Less fit people preferred less active activities, while more fit people preferred more active activities.

The physical fitness level of respondents also impacted activity preferences. Those who ranked themselves as less physically fit preferred less active activities, such as animal watching or horseback riding, while those who ranked themselves as very physically fit preferred activities such as zip lining and rock climbing.

Zip lining, hiking, rock climbing, obstacle courses, and ropes courses were the top five activities from our survey.

While a number of factors impacted people's activity preference, our top five activities were chosen based on their prominence in the lists of all respondents. Prominence, similar to salience, combines average rank and frequency for our survey. We ranked the 15 activities included in our survey using this measurement. The top five activities were zip lining, hiking, rock climbing, obstacle courses, and ropes courses.

Survey respondents enjoyed activities with mid to low-level risk.

For our top five activities, respondents often ranked the activities risk levels as moderate risk. The highest concentration for each activities risk level was around the middle of the possible choices. This indicates respondents do not want activities that are too risky, since nearly none of the respondents ranked their favorite activities as extremely risky.

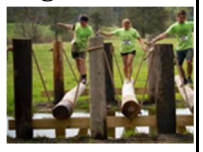
Cultural Activities

The survey also asked participants to tell us how likely they would be to participate in ten cultural activities. Participants were most interested in castle tours, traditional Albanian food sampling, and wine tasting.

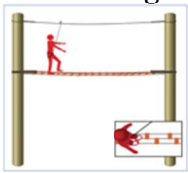
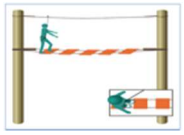
Design/Safety:

In the map below the green shaded area is our proposed location for an obstacle course and the blue shaded area is our proposed location for a ropes course. The obstacle course location was chosen through observation of satellite images of the site and topographical maps. These were used to determine the most open, flat area of the site for the obstacle course. This area had to be away from the buildings under construction so as to not impede daily activities of the resort. Similarly, for the ropes course we analyzed photos of the site to determine the most scenic location. We chose to put the course over the natural beauty of the river.

For our obstacle course we chose 16 elements. We determined these elements through consulting other obstacle courses such as the US military basic training course as well as popular courses in the US such as Muddy Runner. From these courses we combined a list of possible obstacles and evaluated them based on adaptability for different age groups, popularity, difficulty, and variety to choose the top elements for our course. Obstacle courses, regardless of the elements, require some general safety features. Elements should be built on soft material such as wood chips, sand, or rubber chips (Army physical readiness training (PRT) information). The soft material ensures that falling participants are less likely to be injured from hitting the ground. To decrease the likelihood of falls, obstacles should not be run during inclement weather (Army physical readiness training (PRT) information). To ensure the safety of the course, we recommended contacting one of three companies to build the course. We recommended Ropes Course Construction, Technical Outdoor Solutions, and Inside Out Ropes Courses. On the next page is a table showing our proposed obstacle course activities. The numbers at the top indicate their order in our proposed course, and correspond to the numbers in the green shaded area in the map.

1. Tough One 	2. Tough Nut 	3.Tarzan 	4. Confidence Climb 	5.Belly Crawl 	6.High Step Over 	7. Inclined Wall 	8.Swing Stop Jump 
9.Easy Balancer 	10.Reverse Climb 	11. Island Hopper 	12. Funky Monkey 	13. Tire Wash 	14. Balancing Logs 	15.Tunnels 	16.Everest 

In addition to our obstacle course elements above, we chose another 16 elements for our high ropes course. To determine these elements, we created a list of possible elements from ropes course construction companies. From this list we selected our elements based on popularity, difficulty, and a variety of types. For safety, we recommend that Albanian Adventure Resort follows **EN15567**, the most updated version of the regulations on building and operating ropes courses (Nick Moriaty, 2015). These standards include what types of poles, ropes, and carabiners can be used in the creation of a ropes course. A constructor on site will determine the more specific type of safety requirements that the elements must follow. We recommended Ropes Course Construction, JM Adventures, and RCD Aerial Trekking to inspect the location and build the ropes course. Our proposed ropes course elements are in the chart on the next page. The numbers at the top indicate their order in our proposed course and correspond to the numbers in the blue shaded area in the map on the previous page.

1. Rockwall 	2. Alternating Wood Bridge 	3.Burma Loops 	4.Heebie Jeebie 	5.Charlie Chaplin 	6.Tire Traverse 	7. Inclined Log 	8.Zip Line 
9.Hourglass 	10.Cargo Net 	11. Island Hop 	12. Multiline Traverse 	13. Swinging Beams 	14. Teeter Totter Beam 	15.Swinging Steps 	16.Rappel 

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1.0 Introduction

In the two decades since the transition from communism to capitalism, neither government policies nor private investments have created sustained economic growth in rural areas of Albania. Almost one quarter of the Albanian population lives below the poverty line of two US dollars per day ("Rural Poverty Portal"). The lack of economic opportunities in rural areas has led to high levels of urban migration in Albania as well as emigration to European countries and beyond (Konica, 2015). The development of tourism has been shown to create economic growth in rural communities (Đukić, Volić, Tišma, & Jelinčić, 2014; Weinberg, Bellows, & Ekster, 2002). Albania has excellent potential for tourism which can be harnessed to improve rural livelihoods. (Vladi, 2014).

The Albanian government is currently focusing on tourism as a potential source of economic growth and as a sustainable and secure economic investment for the future (Vladi, 2014; Metodijeski & Temelkov, 2014; Zenelaj & Pifti, 2013). Between the years 2008 and 2013 the number of tourists visiting Albania increased from 1.4 million visitors in 2008 to 3.3 million in 2013, a 129% increase (Carey, 2015). The growth of tourism clearly depicts the increasing market for tourist activities in Albania.

Our sponsor, the Albania Rafting Group (ARG), is an adventure tourism company in Albania looking to attract tourists to its eco-adventure resort. This resort is currently being developed on a former military base in the Skrapar region in southern Albania. The resort aims to take advantage of the natural beauty, as seen on the right, and tourism potential of the Osumi Canyons (Blerina Ago, personal communication 11/15/2016). Currently, ARG hosts three seasonal adventure activities in the Skrapar region: white water rafting, hydrospeed, and canyon exploring (Albania rafting group.2015). ARG would like to expand its operations to include year round activities at the resort which will increase the number of visitors to the Skrapar region and catalyze economic development through tourist spending (Carey, 2015).

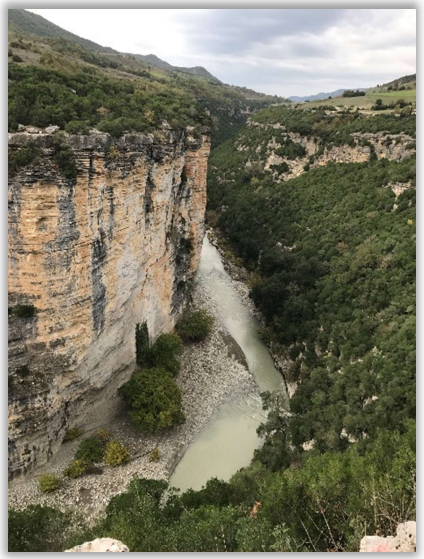


Figure 1: Osumi Canyons

Our goals for this project were to determine attractive activities for ARGs target market, to choose elements and locations for the top two activities, and to identify associated construction companies and safety regulations. To identify activity preferences among the ARGs target population, we conducted a free listing exercise of WPI students in Albania followed by a survey of potential foreign and Albanian tourists.

Figure 2: The Albanian Adventure Resort Architectural Projection (Carey, 2015)

The survey results indicated the top five adventure resort activities were zip lining, hiking, rock climbing, obstacle courses, and ropes courses. To give ourselves more creative and opinion based choices, we focused our project on obstacle and ropes courses. We conducted field visits to the site, photographed key features of the site, and determined the most appropriate locations for a ropes and obstacle course. We chose 16 obstacle course elements and 16 ropes course elements to include in the resort and identified safety requirements for these activities. Finally, we researched ropes and obstacle course construction companies. ARG can use our proposed activities to attract tourists to their exciting adventure park.

2.0 Background

This chapter begins by covering the history of the Albania Rafting Group (ARG), its role in promoting tourism in Albania, and its recent initiative to turn a former military base into an adventure park. To provide context for ARG's initiative, we discuss tourism in Albania and government policies to promote more sustainable tourism. We then examine other examples of ecotourism parks to identify common adventure activities and the broader economic and social benefits that such ecotourism parks have helped foster. Finally, we discuss motivating factors for participation in adventure activities and list some common activities by season.

Albania Rafting Group

In 1985, Zamo Spathara rafted down the Osumi Canyons with nothing but a truck tire and sparked the idea for the Albania Rafting Group. The Albania Rafting Group, now seventeen years old, is the "first tourism and sport organization in Albania, founder of Albanian Rafting Federation, and a member with full rights in the international rafting federation" (Albania rafting group.2015). ARG's mission is to improve Albanian development through sustainable tourism activities such as rafting (Blerina Ago, personal communication, 11/15/2016).

ARG has faced many challenges along the way. Some of these struggles included a lack of funding (Blerina Ago, personal communication, 11/15/2016). According to the Vice President of ARG, Blerina Ago, when the company first started rafting they were given gifts from an Italian company. These

Figure 3: Map of Albania (Google Maps, 2016)

Figure 4: Map of Skrapar (Google Maps, 2016)

included only a few inflatable kayaks and helmets, as seen in figure 5 on the right. While the company is making progress, equipment maintenance is still a challenge. Another notable challenge was the struggle to bring the idea of rafting to Albanians. Many Albanians either didn't believe the photos of the canyons were from Albania or refused to go near the water (Blerina Ago, personal communication, 11/15/2016).

Despite these challenges the company has grown significantly. In 2013 alone the company had 3000 customers and are currently at around 5000 visitors per year. To support these visitors the company hires 35 employees and 17 trained rafting guides. All of these employees are hired full time during the rafting season which lasts between February and October.

During this season, visitors come from around the world to experience the activities provided by the Albania Rafting Group (Blerina Ago, personal communication, 11/15/2016). Most tourists travel from the Balkan region, but there has been a recent increase from France due to Albania's success in the latest Euro Cup. There are also occasional tourists from the rest of Europe, the United States, and parts of Asia (Blerina Ago, personal communication, 11/15/2016).

While visiting the ARG, tourists participate in rafting in the Osumi Canyon as well as on the Vjosa river in Permet (Albania rafting group.2015). In addition to rafting, the company also offers hydrospeed, hiking, and swimming in the canyons of Skrapar/Permet (Albania rafting group.2015).

Figure 5: Inflatable Raft (Buchanan, 2014)

Figure 6: Entrance to Osumi Canyons

Looking to the future, the Albania Rafting Group hopes to expand and create an Adventure Resort. According to the Vice President of ARG, Blerina Ago, when ARG started getting offers from hotels and restaurants to collaborate and encourage tourists to stay longer, she realized tourism could help the entire community. The longer tourists stay, the more money they spend on food and lodging, which benefits the economy of the community. These economic benefits to the community were motivation for ARG to begin planning an expansion (Blerina Ago, personal communication, 11/15/2016).

When planning this expansion, the ARG officials had to decide between the two locations where they were already rafting: Permet and Skrapar. Although Permet would have been a more easily accessible location, ARG chose Skrapar for the natural beauty of the Osumi Canyons (Blerina Ago, personal communication, 11/15/2016). Figure 6 above and figure 7 to the right are images of the Osumi Canyons near the site chosen.

Figure 7: Rafting in the Osumi Canyons
(Osumi canyons in Skrapar, Albania 2015)

Figure 8: ARG Site (Google Maps, 2016)

Figure 9: Future Dorms at AAR

To fund this resort, ARG entered into a public-private partnership with the Ministry of Education and Sport where the government has a 24% stake in the resort (Carey, 2015). ARG chose to align with the Ministry of Education and Sports to emphasize nature conservation and community team building in schools (Carey 2015). ARG wants to help students stay in the region and not move away to Tirana or other countries (Blerina Ago, personal communication, 11/15/2016). To do this they are planning on creating a one week curriculum at the site that will target students in Albania to come to the site and learn about possibilities in environmental protection, history, sports, and leadership (Blerina Ago, personal communication, 11/15/2016).

ARG chose to build its resort on a military base from the Communist Era, about 500m from the canyon. ARG chose to build its resort on a military base from the Communist Era, about 500m from the canyon. To build upon the heritage of the site, ARG is keeping some of the old military buildings as museum artifacts, renovating the current buildings to create reception and dorms for the site, and having military themed activities in the park. The buildings currently being renovated are numbered in the site map on the left. An image of buildings 2 and 3, which will include dorms, can be found in figure 9.

ARG aspires to use this site to expand upon the activities they offer and hopes to include activities such ziplining, kayaking, and mountain biking to account for its continual increase in visitors (Carey, 2015). By increasing activities ARG hopes to create more job opportunities year round and attract more environmentally friendly tourism to

the rural areas of Albania, which aligns with its mission (Carey, 2015).

The Albania Rafting Group has put in motion a three-phase plan to be carried out during the next five years, as shown in figure 10 below.

Phase 1 will include improving the roads to the site, increasing accessibility to the location, creating basic living accommodation, and forming an outline for future plans (Carey, 2015). As part of these improvements the resort is currently renovating its first two buildings, labeled 1 and 4 in figure 8. These buildings, which can be found in figures 11 and 12 on the right, are currently being renovated to keep as much of the original structure as possible. The walls, floors, ceiling, and electricity are complete and the next step is finishing up the interiors. These two buildings will include a reception area, bathrooms, changing areas, storage for luggage, training rooms, restaurant, infirmary, and some beds for tour operators (Blerina Ago, personal communication, 11/15/2016).

Phase	*Timeline*	*Objectives*	*High Season Employees*	*Low Season Employees*
Phase 1	Years 0-1	Road Accessibility Utility connections Basic structures (bathrooms, etc.)	52	31
Phase 2	Years 2-3	Begin guide training programs Begin management/hospitality training Continue to refine infrastructure	72	40
Phase 3	Years 3-5	Complete structural goals Luxury accommodation built Functional vocational training	93	52

Figure 10: Three Phase Plan (Carey, 2015)

Figure 11: Building 1 at ARG Site

Figure 12: Building 4 at ARG Site

Based on current plans the resort will open in 2017, but due to budget constraints ARG will not advertise to international tourists in this first phase (Carey 2015). Instead, so the resort can accommodate the visitors, ARG will mainly encourage students to participate who are willing to camp (Carey 2015). Revenue from these initial tourists will be used to fund further development.

In the second to third year of ARGs plan, it will begin phase 2 which will include training guides as well as expanding on the current infrastructure by renovating the other buildings left at the military base (Carey, 2015). These buildings are currently being looked at as dorms and a museum (Blerina Ago, personal communication, 11/15/2016).

The final phase, phase 3, will combine the training aspects of adventure tourism along with luxury and basic accommodations (Carey, 2015). These luxury accommodations, it is hoped, will attract wealthier tourists who will spend more money in the region and enable ARG to maintain a premier adventure park (Carey, 2015). In turn, this will help improve the economy in the region. The Albanian Adventure Resort (AAR) will become a full-fledged training center for adventure tourism guides and a fully functioning, sustainable eco-adventure location that can also host international championships in rafting and kayaking (Carey, 2015).

Tourism in Albania

The ARG's tourism initiatives align with the government's plan to increase tourism in the region. Tourism was highly discouraged during the communist era in Albanian history, since it was seen as a capitalist notion (Gorica, 2010). Once the communist regime fell in the early 1990's, the new government encouraged tourism as a sustainable and secure economic investment for the future (Metodijeski & Temelkov, 2014; Zenelaj & Pifti, 2013). In 2014, $1.159 billion was spent on tourism globally and the Albanian Government has taken initiative to bring a portion into their borders (Metodijeski & Temelkov, 2014; Zenelaj & Pifti, 2013).

With Albania's natural beauty, rich heritage, and vibrant culture, it has excellent tourism potential (Vladi, 2014). The Albanian government has implemented several different strategies to attempt to attract tourism to the Balkan region. To date, there have been three distinct attempts at tourism strategies since the fall of communism which are summarized in in Figure 13 below (Vladi, 2014). The Albanian government's first attempt at a tourism strategy occurred

	Time Period	Goals	Challenges	Positive Outcomes
Strategy 1	1993-2010	Establish a tourism strategy in Albania	Governmental upheaval	Laws establishing priority development areas
Strategy 2	2003-2013	Repositioning Albania's image, prohibiting abusive building	Tasks were too much for operators to handle	Creation of National Agency of Tourism and Albanian Tourism Association
Strategy 3	2007-2013	Increase cultural tourism	Diverse culture within Albania	Cultural marketing strategy prepared

Figure 13: Albanian Tourism Strategies (Vladi, 2014)

between 1993 and 2010. The first strategy was presented in June 1993 when the Ministry of Tourism in Albania was under the Democratic Party's control (Ellul, 1996). The Ministry of Tourism produced a guide to outline the government's commitment to increasing tourism (Ellul, 1996). Increased investment and revenue was sought through the exploitation of Albania's natural resources and the advertising of remote locations (Ellul, 1996). To increase investments, the government offered substantial financial incentives and assistance packages to investors (Ellul, 1996). This first strategy had lofty goals which were difficult to implement due to popular unrest and governmental upheaval as the country transitioned from communism to democracy (Vladi, 2014).

The second strategy stemmed from the limitations and failures of these early initiatives. The initial approach to tourism underestimated the extent to which inadequate infrastructure, such as roads, water works, and management of illegal buildings had hampered tourism (Republic of Albania Council of Ministers, 2008; "Challenges of Sustainable Tourism Development"). Therefore funds were allocated for tourist signs and information offices in an attempt to improve the image of the country (Republic of Albania Council of Ministers, 2008). This led to funding for infrastructural development, including the airport and access roads (Sector strategy on tourism 2007-2013.2008).

Finally, the last tourism strategy focused on increasing funding to preserve natural resources and cultural assets of Albania (Sector strategy on tourism 2007-2013.2008). The four main focuses were history, archaeology, nature, and culture (Sector strategy on tourism 2007-2013.2008). Within the focus of culture, Albania created a plan that is geared towards creating policies that encourage rural families to host tourists (Sector strategy on tourism 2007-2013.2008). Tourism in Albania has rapidly increased from 280 tourists in 1956 over 3.2 million in 2013 (Gorica, 2010; Carey, 2015). From 2008 to 2013, tourism increased by 129% as is illustrated by Figure 14 below.

Studies have shown that the Balkan region as a whole, despite its best efforts, could benefit from a more defined tourism plan to encourage travel to the region (Metodijeski, & Temelkov, 2014). Although an overall strategy plan for the Balkan region is lacking, the municipality of Berat has taken initiative to propose a tourism strategy and action plan (Metodijeski, & Temelkov, 2014; Tourism Action Committee, 2013). One of the ways that Albania has been trying to increase tourism is through the use of eco and community based

Albania	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Tourists	1,419,191	1,855,634	2,417,337	2,932,132	3,513,666	3,255,988
Annual Growth		31%	30%	21%	20%	-7%
Cumulative Change		+31%	+70%	+107%	+148%	+129%

Figure 14: Annual Tourist Growth In Albania (Carey, 2015)

tourism (Ellul, 1996). The Berat Tourism and Strategy Plan is a plan to develop project proposals with communities in the Skrapar region to develop tourism in villages and farms (Metodijeski, & Temelkov, 2014). In the Berat Tourism and Strategy Plan, there is a detailed timeline to improve nature based attractions as well as maintain the cultural landmarks currently in place (Tourism Action Committee, 2013). The Berat action plan includes competitors from other regions in Albania, a strength and weakness analysis into assets and issues, and an overall framework for action (Tourism Action Committee, 2013). Although the Berat Tourism and Strategy Plan is detailed, the implementation is still in process. Looking at examples of eco-adventure parks from other places can give ARG ideas of how to implement a similar type of strategy and action plan in Albania.

Adventure Parks Throughout the World

In other regions of the world there have been successful examples of ecotourism which the Albanian Rafting Group can use as a reference when developing their resort. Ecotourism is defined as the combination of nature and tourism, usually containing four main attributes (Donohoe & Needham, 2006). These four main attributes are a natural setting, conservation and sustainability of the land, education about the cultural traditions, and benefits to the locals (Donohoe & Needham, 2006). Through the understanding of ecotourism the ARG can plan their resort.

One example of a successful eco adventure park can be found in Costa Rica. In Monteverde, Costa Rica, the community was mostly agriculturally based and faced many

Figure 15: Monteverde Skywalk (Haakon S. Krohn, 2011)

economic challenges (Weinberg, Bellows, & Ekster, 2002). The initial situation of the rural community in Costa Rica is similar to the rural community in Albania (“Rural Poverty Portal”). Monteverde is a cloud forest reserve that is also an eco-adventure park. Monteverde’s cloud forest was a place of natural beauty that led to ecotourism (Monteverde costa rica - monteverde cloud forest.). Albania is also a place of great natural beauty which could lead to ecotourism (Vladi, 2014). Between 1989 and 1993 the tourism of the region surrounding Monteverde boomed and new people moved to the region (Weinberg, Bellows, & Ekster, 2002). This type of tourism can encourage more people to move into the Skrapar region of Albania which is a goal of ARG (Blerina Ago, personal communication, 11/15/2016). As the Monteverde Cloud Forest eco-adventure park was built, the community strived to have as little environmental impact as possible (Báez, 2002). The

Activity	*Description*
Hiking	There are several hiking trails throughout the cloud forest and surrounding areas.
Frog Pond	A guided tour through a reserve that teaches visitors about the different frog's history, habitat, and characteristics.
Bat Jungle	Experience a variety of species of bats and learn about their eating and roosting habits as well as structural differences of different species.
Orchid Garden	Educate visitors on the characteristics, growing environment, and threats that orchids face as well as containing over 426 species of Orchids in the garden.
Butterfly Garden	Visitors experience the species of butterflies and learn about their breeding and feeding habits.
San Luis Waterfall	A three hour or forty-five minute hike to a waterfall along marked trails.
Monteverde Cheese Factory	Tours of the dairy farm and explanation of the cheese making process, environmentally friendly waste disposal system, and the community's own history.
Sky Tram/Sky walk	Enjoy suspended bridges and a sky tram to experience the tropical forest canopy where 90% of the organisms of the forest live.
Sky Trek	A ziplining tour through the cloud forest canopy.
Night Tour Hidden Valley	A guided hike with flashlights to observe the nocturnal creatures.
Bajo del Tigre Night Walk	A guided twilight walk along the Bajo del Tigre trail system.
Horseback Riding	Guided horseback riding tours for birdwatching or morning or sunset tours.
Coffee Tour	A tour of the cultural, historical, and gastronomical appreciations for coffee in Costa Rica.

Figure 16: Activities in Monteverde
(Monteverde costa rica - monteverde cloud forest)

more advanced attractions, such as zip lines and suspended bridges, were created purely through manpower (Báez, 2002). The lack of heavy machinery helped protect the environment and kept the site an ecotourism location (Báez, 2002). Additionally the zip line course itself does not use any electric power to keep it running (Báez, 2002). This lack of electricity helps preserve the environment (Báez, 2002). ARG can consider this effect on the environment as they are building its activities. Monteverde also considered environmental preservation while planning paths for hiking trails (Honey & Ebrary Academic Complete, 2008). The trails through the park cover less than 2% of the cloud forest so as to disturb the ecosystem as little as possible (Honey & Ebrary Academic Complete, 2008). ARG can follow similar precautions in protecting the environment while building its activities and planning hiking paths.

The area of Monteverde Cloud Forest Park has transformed into a tourist attraction with activities that are all environmentally friendly, a table of these activities can be found in figure 16 on the left (Monteverde costa rica - monteverde cloud forest).

ARG could also incorporate many of these adventure activities such as ziplining, hiking, and horseback riding tours. Additionally, ARG can learn from Monteverde's community based tourism such as coffee tours and cheese factory tours (Monteverde costa rica- monteverde's cloud forest.). These activities can attract tourists in all weather and ARG could implement similar cultural activities for its region. With all of these activities in the Monteverde region, the popularity of the park has increased and brought numerous tourists and workers to the area (Weinberg, Bellows, & Ekster, 2002).

Quakers originally created the reserve to preserve the environment from the government who was cutting the forest down (Honey & Ebrary Academic Complete, 2008). The US conservation organization also assisted with the purchasing of land in order to preserve it (Honey & Ebrary Academic Complete, 2008). Eventually Monteverde reserve became large enough to have its own local government where they are able to vote on issues of the park (Honey & Ebrary Academic Complete, 2008). This localized government involves the community on decisions such as paving the road to Monteverde which would allow for more tourists (Honey & E brary Academic Complete, 2008). The community continually votes against this since more tourists, and easier accessibility, would be detrimental to the environment there (Honey & Ebrary Academic Complete, 2008). ARG should continue to get the citizens of the region involved as well as consider the effects on the environment that tourism is causing.

Another main focus of the park at Monteverde is providing economic benefit to the community, which is also a main focus of ARG (Honey & Ebrary Academic Complete, 2008;Blerina Ago, personal communication, 11/15/2016). The Santa Elena Cloud Forest Reserve part of Monteverde is an example of the positive community effects of ecotourism (Honey & Ebrary Academic Complete, 2008). Santa Elena is leased and run by a high school which uses the entrance fees to pay for the protection of the reserve as well as improving the quality of education (Honey & Ebrary Academic Complete, 2008). This strategy improves funding for the school allowing students to receive a better education as well as preserving the environment (Honey & Ebrary Academic Complete, 2008). This is similar to ARGs goal of providing additions to school curriculums to improve students education and encourage them to stay in the region (Blerina Ago, personal communication, 11/15/2016). Another organization helping the community around Monteverde is Comité de Artesanías Santa Elena-Monteverde (CASEM) which was created for women to sell handicrafts (Honey & Ebrary Academic Complete, 2008). This organization gave women, who had never had an income before, the opportunity to work (Honey & Ebrary Academic Complete, 2008). The tourism in the region now accounts for 65-70% of the current income of the local community, and improved the economy of the region (Honey & Ebrary Academic Complete, 2008). This positive increase in income for locals of the surrounding community of Monteverde could also occur in the Skrapar region of Albania due to AAR.

Figure 17: Santa Elena Cloud Forest (Yvonne, 2014).

A second example of an eco-adventure park comes from Morocco. The Terres D'Amanar eco adventure park was built as a partnership with the surrounding community (Zimago Communication, 2016). To benefit the community the park hires most of its employees from the surrounding villages (Zimago Communication, 2016). The park contains a number of activities, some of which are shown in table 18 on the right.

ARG could include activities such as trekking, climbing, archery, orienteering and something similar to the Accro Park. ARG can elicit inspiration from the team building activities in this park to create their curriculum for students. Additionally, ARG may consider including craft workshops to accommodate tourists in bad weather.

Beyond activities, ARG can learn from Terres D'Amanar Eco Adventure Park, Morocco effect on the community. The park has been a source of numerous job opportunities for those living in the area (Zimago Communication, 2016). These opportunities mean that more families are remaining in the area as they no longer have to leave for job opportunities (Zimago Communication, 2016). This could benefit Albania as many people who live in rural villages in Albania leave for cities to try and get better jobs ("Rural Poverty Portal"). In addition to providing people the

Activity	**Description**
Craft Workshops	Visitors are offered the chance to meet local craftsmen and try their hands at crafts.
Team Building	The park offers companies the opportunity to come in for facilitated team building activities
Orientering	Visitors participate in a search aided by a map, compass, and riddles.
Kid's Center	The park includes a playground with numerous activities for children over four.
Accro Park	Adventure courses in the forest where visitors can move from one tree to another
Trekking	On foot, bike or horseback visitors will be able to explore the nature around the park.
Climbing	Visitors are given an introductory rock climbing course.
Archery	Visitors are offered the chance to try their hand at archery.

Figure 18: Activities in Morocco (Zimago Communication, 2016)

Figure 19: Terres D'Amanar Rope Bridge (Zimago Communication, 2016)

opportunity to work inside the park, the park buys produce, crafts, and "raw craft material" from the nearby villages (Zimago Communication, 2016). These opportunities for local community members aligns with the ARG's goal of improving the economic situation in the Skrapar region (Blerina Ago, personal communication, 11/15/2016). The park also strongly encourages employees to participate in the management of the park so that the knowledge of park operations can be passed down for generations to come (Zimago Communication, 2016).

The final eco-adventure park we studied, is Bukit Hijau in Malaysia. This park also focuses on reducing negative environmental impact, spreading wealth to community, and attracting tourists through adventure activities (Bukit hijau recreational forest; Hussein). The park is continually looking to improve its environmental impact (Bukit hijau recreational forest). A garden is currently being built to incorporate many varieties of the rare medicinal plants that can be found in the forest (Bukit hijau recreational forest). Additionally, heavy machinery is avoided within the forest because of the detrimental effect the machinery would have to the flora and fauna (Bukit hijau recreational forest). Finally the park has recently been struggling to improve the problem of littering and have increased trash and recycling bins to help decrease the problem (Bukit hijau recreational forest). ARG could consider similar strategies to promote and preserve the plant life indigenous to Albania.

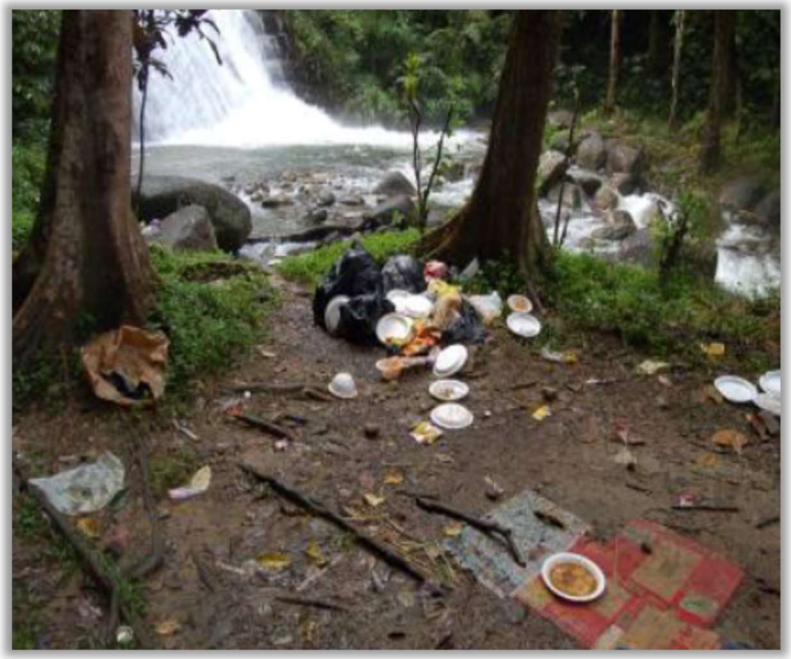


Figure 20: Bukit Hijau Waste (Bukit hijauu recreational forest)

In additional to environmental impact, there has been a focus on economic benefit to the community. The locals have

Figure 21: Canyoneering (Bukit hijau recreational forest)

benefited from the increased tourism revenue as they own shops where tourists are spending their money (Bukit hijau recreational forest). Bukit Hijau is also looking to expand the community prosperity beyond the financial benefits provided by the stores (Bukit hijau recreational forest). Bukit Hijau is planning to increase benefits by expanding activities (Bukit hijau recreational forest). They will include home stays and agritourism activities (Hussein). The ARG could implement a similar home visit program in Skrapar as well as including agricultural activities within the park to benefit the local people.

Bukit Hijau eco-adventure parks also has several activities which attract tourists. These activities can be found in the chart below.

Activities	**Description**
Slacklining	Balancing and performing tricks on a tightrope.
Ziplining	Ziplining through the unique canopy.
Whitewater Tubing	Tubing down a whitewater river to cool off on a hot day.
Canyoneering	Ascending waterfalls using safety ropes.
Hiking	Easy to challenging hikes throughout the forest.

Figure 22: Activities in Bukit Hijau (Bukit hijau recreational forest)

Activities

As shown in the parks above ARG needs activities to attract tourists. To build attractive activities, ARG needs to understand what motivates tourists to participate in adventure activities. From an understanding of these motivations, ARG can look into classifications of activities.

Motivating Factors

When studying what motivates people to participate in adventure activities there are two main types of motivation to be considered, extrinsic or intrinsic motivation (Biddle & Mutrie, 2008). Extrinsic motivation involves external rewards such as prizes or praise from others (Biddle & Mutrie, 2008). Intrinsic motivation comes from within in the absence of these extrinsic rewards (Biddle & Mutrie, 2008). Studies have shown that tourists choose to participate in sport activities primarily due to intrinsic motivation (Kilpatrick, Hebert, & Bartholomew, 2005). Intrinsic motivation can be broken into components, four of which are interest/enjoyment, competence, effort/importance, and pressure/tension (Biddle & Mutrie, 2008). These four components demonstrate the types of factors which comprise intrinsic motivation (Biddle & Mutrie, 2008). These four components are drawn from the Intrinsic Motivation Inventory, and understanding them can help determine how tourists choose their activities (Biddle & Mutrie, 2008).

A 2005 study of college students determined that tourists participate in sports activities primarily due to intrinsic motivations (Kilpatrick, Hebert, & Bartholomew, 2005). The study was designed to see how the students motivation differed between sports and exercise (Kilpatrick,

Hebert, & Bartholomew, 2005). The activities proposed by ARG fall under the heading of sport in this study. The students were given a list of statements drawn from the Exercise Motivation Inventory-2 and asked to rank them on a five point scale which ranged from not true for me to very true for me (Kilpatrick, Hebert, & Bartholomew, 2005). The students primarily participated in sport for affiliation, challenge, excitement and competition, all of which fall under the heading of intrinsic motivation (Kilpatrick, Hebert, & Bartholomew, 2005). Affiliation is defined as connections to the community and was measured through statements such as "I want to spend time with my friends" (Kilpatrick, Hebert, & Bartholomew, 2005). Challenge was defined through statements such as "I participate in sport to give me goals to work towards" and defined as striving towards goals (Kilpatrick, Hebert, & Bartholomew, 2005). Enjoyment was defined as deriving pleasure from the activity and was defined through statements such as "I like doing physical activity" (Kilpatrick, Hebert, & Bartholomew, 2005). Competition was measured through statements such as "Because I like trying to win at physical activities" and defined as striving to win something (Kilpatrick, Hebert, & Bartholomew, 2005). Knowing what motivates tourists to participate in activities will help the ARG to better develop activities that tourists want to do. Including activities with affiliation, challenge, enjoyment, and competition can create more interest in the park from tourists.

Figure 23: Rock Climbing (International Web Post, 2015)

Activity Classification

Since the studies show tourist motivation in terms of challenge and enjoyment among other factors it is also important to categorize activities along similar lines. Sung, Morrison, & O'leary conducted a survey of adventure travel providers in 2000 which separated each possible summer adventure activity into categories based on risk level. The five summer categories based on risk level were soft nature, risk equipped, question marks, hard challenge, and rugged nature (Sung, Morrison, & O'leary, 2000). Figure 24 gives a listing of the different activities found in each risk level of summer adventure activities (Sung, Morrison, & O'leary, 2000).

Soft Nature activities are less strenuous and more closely associated with the natural environment (Sung, Morrison, & O'leary, 2000). Risk Equipped activities contain a certain level of risk and physical challenge (Sung, Morrison, & O'leary, 2000). Question Marks are questionable in their relationship to the category of adventure travel (Sung, Morrison, & O'leary, 2000). Hard Challenges are a higher level of physical activity (Sung, Morrison, & O'leary, 2000). Finally, Rugged Nature is the most physically challenging activities that occur in the natural environment (Sung, Morrison, & O'leary, 2000). These active elements can bring adventurous tourists and social improvements to Albania (Rohnke, 1989).

Soft Nature	Risk Equipped	Question Marks	Hard Challenge	Rugged Nature
Hiking	Paragliding	Four Wheel Drive	Climbing-Rock	Jungle Exploring
Nature Trip	Hang-gliding	Trips	Climbing-Mountain	Safaris
Bird-Watching	Soaring	Motorcycling	Canoeing-Sea	Snorkeling
Walking Tours	Diving-Sky	Skiing-Water	Kayaking-River	Trekking
Bicycling	Spelunking	Hunting	Kayaking-Sea	Rafting
Canoeing-River	Bungee Jumping	Regaining		
Mountain Biking	Windsurfing	Diving-Scuba		
Backpacking	Rappelling			
Camping	Ballooning			
Horseback Riding	Survival &			
Fishing	Wilderness Training			
Orienteering	Sailing			

Figure 24: Summer Activities (Sung, Morrison & O'leary, 2000)

3.0 Methodology

Our project aimed to assist the Albanian Adventure Resort (AAR) by discovering tourists' activity preferences, conducting a feasibility study of activity elements and their locations, and identifying construction companies and safety plans. To accomplish this goal, we have identified three objectives:

- Determine and analyze preferences for adventure park activities among millennials.
- Assess elements and locations for selected activities.
- Identify construction companies and safety plans for selected activities.

Determining and Analyzing Preferences for Adventure Park Activities

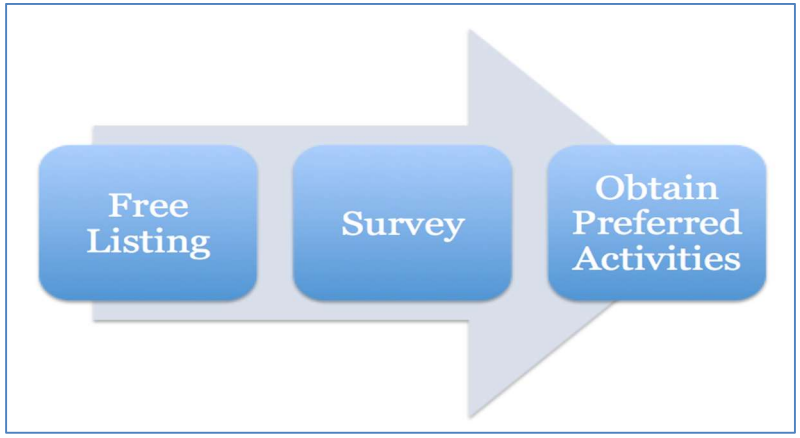


Figure 25: Objective 1 Methods

Free listing

Our first objective was to determine the most attractive activities to millennials, the target market for the adventure resort. We conducted a free listing exercise of WPI students in Albania to get a sense of what activities they think should be included in an adventure resort. Free listing is one of several structured interviewing techniques designed to elicit systematic data about a subject matter of interest, eco-adventure parks. This technique defines the contents and boundaries of the subject being studied, but can also provide insights into how the itemized responses are related (Gravlee, 1998). We asked the WPI students to "List all activities you can think of in an adventure park" and then analyzed the responses by their respective salience and frequency using Visual Anthropac 1.0. Anthropac is a free listing software which calculates frequency, average rank, and salience from the inputted lists. Frequency is how often an activity appears on each list, average rank is the average position of activities on the lists, and salience is a combination of frequency and average rank. Salience is found using the equation below.

$$\frac{\sum_{n=1}^{N} \frac{l_n - p_a}{l_n}}{N}$$

l_n: Number of items on free list n

p_a: Position of activity on free list n (starting from 1 being the top of the list)

N: Number of total free lists

Figure 26: Salience Equation (Gravlee, 1998)

In this equation the numerator is the sum of the inverse average ranks of an activity and the denominator is the total number of lists. For Anthropac to calculate the correct frequency, average rank, and salience, we reworded some activities to ensure they were grouped correctly. This involved fixing spelling errors and grouping similar activities under one name. For example, Cross Country Skiing was grouped together with Nordic Skiing and s'mores was combined with food. Finally, we created a word cloud for frequency of activities as well as bar graphs for average rank and salience of activities. These graphs were used to identify possible activities to include in our survey.

Survey

We conducted a survey to identify adventure activity preferences among Albanian and international millennials. To identify which activities were put in our survey, we used an abbreviated version of our free listing salience list. To create this abbreviated list, we eliminated current ARG activities as well as activities that are not feasible for the site. Current ARG activities, such as rafting, were not included in our survey because we wanted to provide new activity ideas for the AAR. Additionally, activities that were not feasible were removed from the list. Activities such as snowshoeing were eliminated because the region does not receive enough snowfall (Jake, 2015). After narrowing down the possible activities from our free listing, we took the top 10 activities and included them in our survey. We also added 5 activities ARG is currently considering implementing. These were included to provide feedback to ARG on the popularity of the proposed activities. These fifteen activities were added to our survey.

We surveyed WPI students from Worcester Massachusetts, USA as well as Albanians. We contacted WPI students through Facebook posts to WPI specific pages and messages to a group messaging app called Slack. Next we gave a translated survey to Albanians. We direct messaged members of an Albanian youth group called Tamam to fill out our survey and emailed our survey out to numerous Albanian tour operators. In each case we encouraged them to share the survey with others. These Albanians also shared the survey with acquaintances from other countries. Therefore the scope of our respondents increased and the categories became Albanian and non Albanian. This sample of responses is a convenience sample, which was chosen for ease of sampling. We understood this is not a representative sample. This survey was released in Qualtrics and can be found in Appendix B.

The survey began by asking questions about gender, fitness level, and adventure park experience to determine if these variables had an effect on the ranked activities. Then the survey prompted the respondent to rank the activities, chosen from our free listing, based on preference. Respondents answered three opinion questions based on the Likert response scale about their top five choices (Trochim, 2006). We determined these opinion questions through research into what motivates people to participate in activities. This research concluded that the most important motivating factors for participating in activities were fitness, fun, excitement, and challenge (Weinberg & Gould, 2015). We covered fitness level and fun through the beginning questions and ranking of the activities. Then we determined the excitement for the activity by their rank of the excitement level. Challenge was

determined by how respondents ranked perceived challenge. Finally, we asked about risk level to give perspective to which activities are the most risky and therefore need the most safety features. These questions illuminated the reasons behind preference choices. The final question on the survey listed ten possible cultural activities, provided by our sponsor, and asked the students to rank how likely they were to participate in each activity. This provided ARG with further information on their current plans.

Once we obtained the data, we analyzed the results. We compared activity preference based on prominence. Prominence is a variation of salience, as it includes both rank and frequency. Prominence differs from salience in the frequency used. In salience frequency measures how many lists an activity appears on. The structure of our survey meant that the frequency of all the activities would have been the same since all the activities were ranked every time. To avoid this, we changed the frequency to show how often the activity was ranked in participants top five activities. We focused on the top five activities since this is where respondents are most definitive on their opinions (Vannette, 2015). The equation used for prominence is below.

$$\frac{l_n - p_a}{l_n} \cdot \frac{f}{N}$$

l_n = Length of the list being ranked (15)
p_a = Position of the activity on the list
f = Number of times the activity appeared in the top five
N = Total number of responses

Figure 27: Prominence Equation (Gravlee, 1998)

Our survey questions were designed to show what preferences existed based on sub categories such as nationality, adventure park experience, gender, and physical fitness level. First we separated our results into the necessary sub categories: Albanians and non Albanians, males and females, etc. Next we found the average rank of each activity in each sub category. These rankings were directly compared to each other to observe the differences between categories.

The analysis for physical fitness was slightly different. To better understand the impact of physical fitness on activity choice we created a heat map. Heat maps are a visual matrix, where colors are used to represent the individual responses. They are often used to indicate frequency of responses based on multiple variables (Oxford Dictionary, 2016). In our heat map color was used to indicate how frequently people of each fitness level ranked each activity in their top five.

We choose our top activities based on data from all responses; the activities were ranked by prominence, the combination of average rank and frequency. Based on this ranking, we chose to focus on obstacle courses and ropes courses.

We used these top activities to evaluate the level of risk participants prefer in their adventure activities. To accomplish this, we created a heat map. This heat map identified the most frequent risk levels of each activity. ARG can use this knowledge to plan future activities.

The last analysis of our survey was based around our cultural activities. We created graphs showing the mean rank of each activity and used this to determine which activities people were most excited about.

Feasibility Study for Activity Elements and their Locations

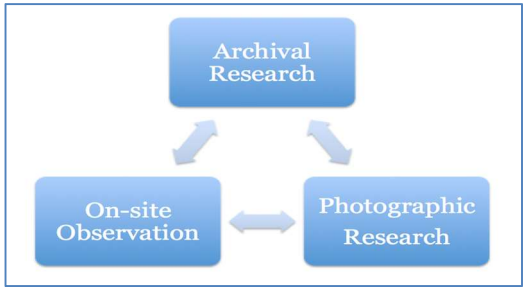


Figure 28: Objective 2 Methods

Our second objective is to determine the elements and locations for our chosen activities, obstacle course and ropes course, within the ARG site. To determine elements and locations we completed a feasibility study which included photographic research, archival research, and on-site observations.

First, we had to decide upon elements for each course. We began by familiarizing ourselves with obstacle course elements. To pursue the military experience theme, we researched terms such as "obstacles in military training". The US Army Physical Readiness Training (PRT) site provided information on many obstacles the US military uses. From this site's list of elements, we chose 10 for the resort. These were chosen through discussion on difficulty level for civilians to complete. Additionally, we ensured there were a variety of types of elements including walking, climbing, swinging, and crawling. To add to the length of the course, we researched top obstacle courses in the US and found Muddy Runner. This led us to many elements which we chose based on their popularity with participants as well as which seemed most interesting to complete. To complete our elements, and ensure a variety of types of elements, we researched more crawling elements from the Ropes Course Construction website. Finally, sizes of the elements as well as general costs of all elements were considered. A chart ranking the importance of each factor in deciding obstacle course elements is below. The more stars a factor has, the more important the factor was in our decision making process.

We followed a similar process for determining ropes course elements. First, we researched ropes course companies in Europe. This led us to Ropes Course Construction, Ropes Course Development (RCD), and JM Adventure. From these companies, we compiled a list of activities they could build for ARG. We narrowed this list down to 16 elements through eliminating elements that were similar to each other. We chose a mix of levels of difficulties so that the majority of participants would be able to complete all the elements. This included modifications for younger and shorter guests. The table below shows the importance of each factor in deciding ropes course elements. The more stars a decision factor has, the more important the factor was in choosing elements for our ropes course.

Factor Importance	*Difficulty Level*	*Popularity*	*Variety*	*Adaptability*	*Length of Course*	*Cost*	*Size of Element*
Obstacle Course	★★★★	★★★★★	★★★★	★★★★★	★★	★	★★
Ropes Course	★★★	★★★★★	★★★★	★★	★★	★	★

Figure 29: Deciding Factors of Elements

After the specific elements were chosen for both obstacle and ropes courses the locations of each course were decided. Research from the US Army PRT site had each of the military obstacles of flat, open ground. From this observation, satellite images of the site and a topographical map were used to determine the most open, flat area of the site for the obstacle course. This area had to be away from the buildings so as to not impede daily activities of the resort. Similarly, for the ropes course we analyzed photos of the site to determine the most scenic location for a ropes course. Additional research into ropes course companies as well as S.T.E.P.S. provided knowledge on trees versus utility poles. This information was used in collaboration with site photos to determine the ropes course location.

Construction and Safety of Proposed Activities

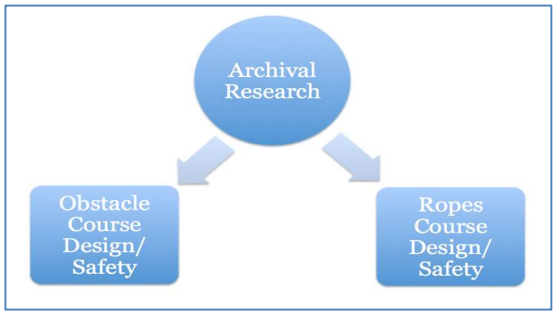


Figure 30: Objective 3 Methods

Once we determined the locations of the selected activities, we identified best practices for designing, building, and maintaining rope and obstacle courses. This involved research into several obstacle course building companies. We researched several companies including Ropes Course Construction, Technical Outdoor Solutions, and Inside Out Ropes Courses. We chose our companies based on their ability to build the elements we chose, offer on-site visits, and complete inspections. The companies also give ranges for the cost of each element. Additionally, the US military PRT provided detailed guides on maintenance of each element. The regulations given by the US military PRT were suggested as safety features to ARG.

Next, we followed similar methods for construction and safety recommendations of the ropes course. We researched ropes course building companies such as Ropes Course Construction, RCD Aerial Trekking, and JM adventure who will survey an area and build a ropes course for ARG. We chose proposed companies from their ability to build the elements we chose, inspect the course, and inspect the site. All of the companies capable of performing on-site visits to the AAR follow the European safety standards for ropes courses. Therefore, we recommended following the European standards for safety of the ropes course. These companies will follow the current European standard for building, training, and safety (Nick Moriaty, 2015). Additionally, these companies provide ranges for their elements cost. All of this information was combined and provided to ARG.

4.0 Findings

The most frequent activities mentioned in the free listing of American Millennials were zip lining, hiking, rock climbing, rafting, and swimming.

Our free list received 13 responses which equated to a 65% response rate. Of these responses, the shortest list of activities we received had only six activities, the longest contained 43, and the average length was 20.9 activities. These responses totaled 281 activities that were combined into 117 unique activities. Many activities were found on several response lists. The more lists an activity appeared on the higher its frequency.

Figure 31 to the right is a word cloud where the more frequent activities are larger words. Therefore activities such as zip lining, hiking, rock climbing, rafting, and swimming were found on the most lists. A chart of exact frequencies can be found in Appendix A. In addition to frequency, average rank on lists must be considered for top chosen activities.

Figure 31: Word Cloud

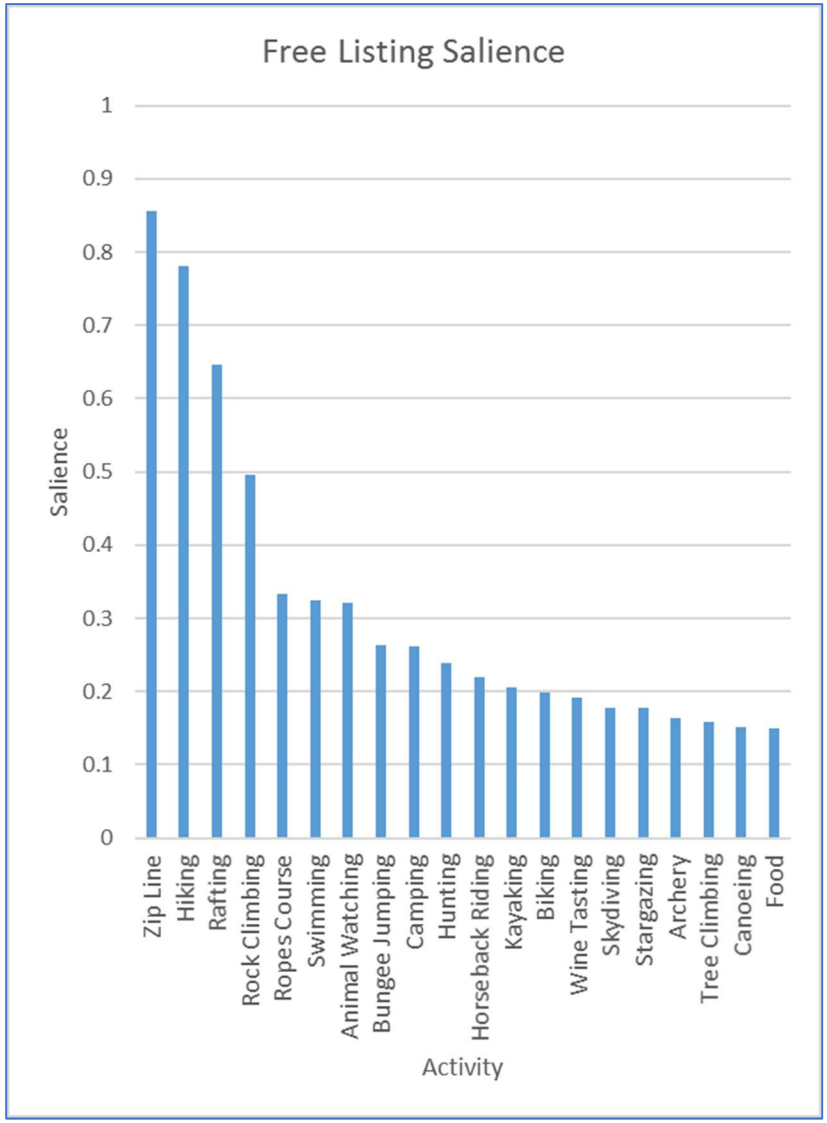


Figure 32: Free Listing Salience

Zip lining, hiking, rock climbing, ropes courses, and animal watching were the five most salient activities from the free listing of American Millennials.

Salience is the combination of average rank and frequency, the two pieces of information that can be obtained from a free listing. Data from our free listing as well as graphs of frequency and average rank can be found in Appendix A. On the left is a chart showing the top 20 activities sorted by salience. Zip lining, hiking, rafting, rock climbing, and ropes courses were often found throughout our research into adventure park activities (Sung, Morrison, & O'leary, 2000 & Rohnke, 1989).

Once the activities were ordered based on salience, we eliminated current ARG activities as well as activities that are not feasible for the site. For instance we eliminated rafting, swimming, and kayaking since these activities are already offered by ARG. Additionally, we eliminated snowshoeing because the region does not receive enough snow to be a feasible activity (Jake, 2015). From this modified list we chose the top ten activities by salience and added five other activities. These five activities are currently proposed by ARG and planned for the site. Our free listing provided the list of fifteen activities, included below, that was included in our survey.

1.Zip Lining
2.Hiking
3.Rock Climbing
4.Ropes Course
5.Animal Watching
6.Bungee Jumping
7. Horseback Riding
8. Biking
9. Archery
10. Paintball
11. Obstacle Course
12. ATVing
13. Hang gliding
14. Survival Training
15. Yoga

Albanians preferred nontraditional adventure park activities found in the region, while non Albanians preferred more traditional adventure park activities.

Albanian and non Albanian respondents had very different preferences for adventure activities when ranking them in our survey. These preferences were measured by prominence which is a combination of average rank and how frequently the activity was listed in a respondent's top 5 choices. By prominence, Albanian respondent's top activities were hiking, horseback riding, paintball, biking, and survival training. These activities are less common to adventure parks but can be found in Albania. Non Albanian respondent's top ranked activities were zip lining, rock climbing, obstacle courses, ropes courses, and hiking. These activities are more common to adventure parks and are well known (Zimago Communication, 2016; Bukit hijau recreational forest; Hussein; Monteverde costa rica - monteverde cloud forest). Although the difference in preferences from Albanians to non Albanians appears significant, the Albanian responses we received varied significantly in their preferences. This is most likely due to the fact that we only received 22 survey responses from Albanians. Therefore, we cannot draw conclusions about Albanians in general based off of our survey. Figure 33 and 34, depicts the differences between Albanian and non Albanian responses.

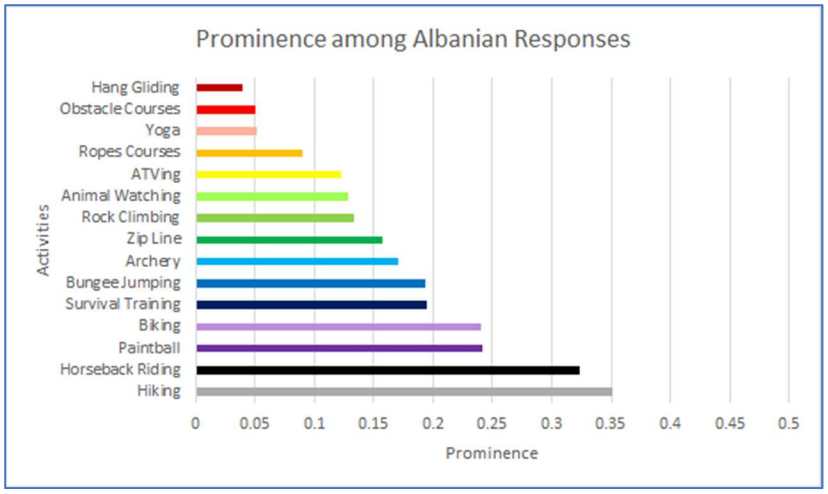


Figure 33: Prominence among Albanian Responses

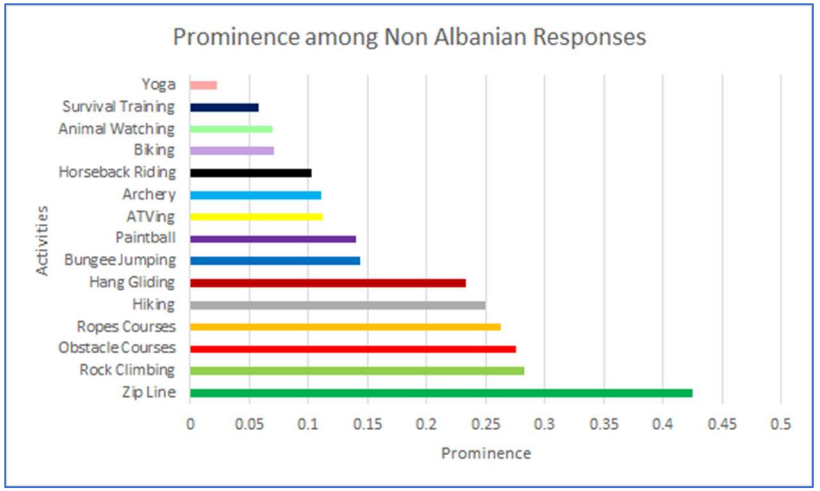


Figure 34: Prominence among non Albanian Responses

People who had been to an adventure resort preferred more traditional adventure park activities than people who had not.

Respondents who had never been to an adventure park before tended towards activities they knew about, such as hiking and horseback riding. Participants who had been to an adventure park chose more common adventure activities, such as zip lining, ropes courses, and obstacle courses (Zimago Communication, 2016; Bukit hijau recreational forest; Hussein; Monteverde costa rica - monteverde cloud forest.). These differences indicate a change in preference depending on a respondent's previous participation in an activity. If a respondent had been to an adventure park before, and therefore participated in more traditional adventure activities, the participant ranked traditional adventure park activities higher. This information can be found in figure 35 below.

The difference in participant's responses based on adventure park experience is important. This indicates that as people learn more about adventure parks, and begin to experience them, they rank adventure activities higher. Although activities such as zip lining, ropes courses, and obstacle courses were ranked lower by those who have never been to an adventure park, they should still be strongly considered for ARGs adventure park.

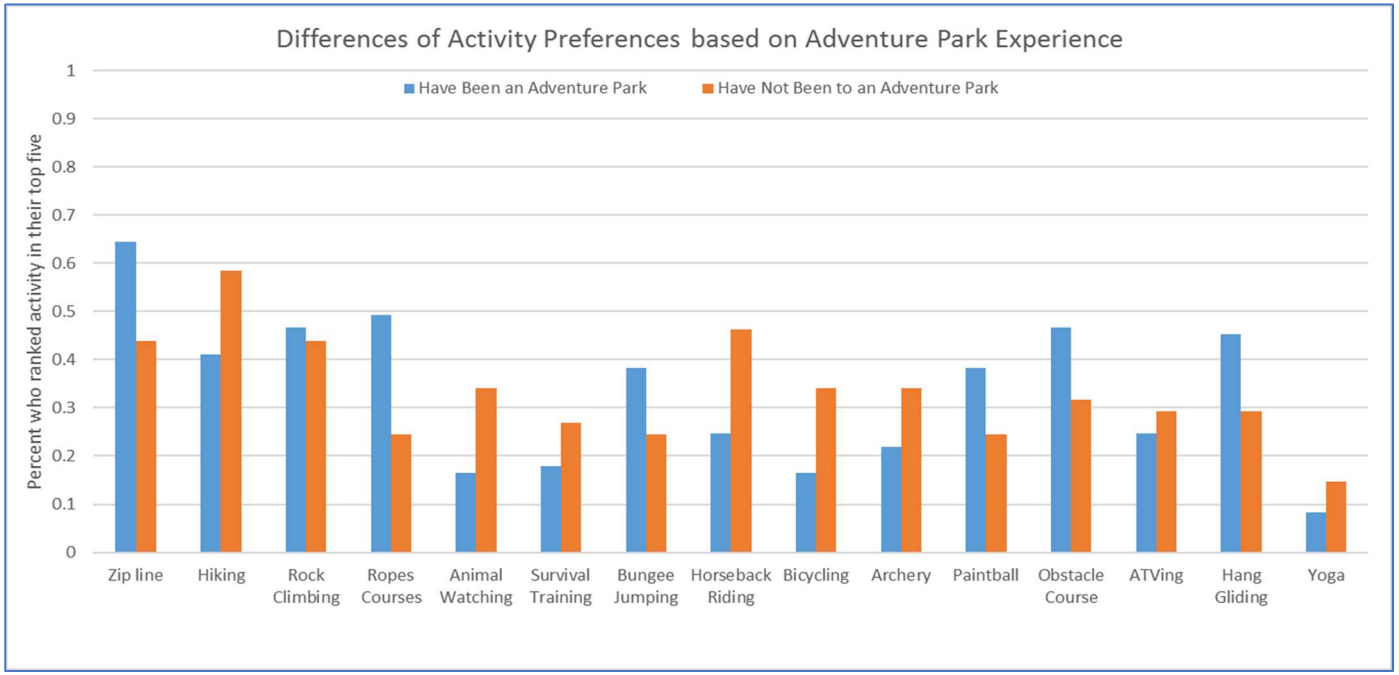


Figure 35: Activity Preferences based on Adventure Park Experience

Less fit people preferred less active activities, while more fit people preferred more active activities.

Similar to people's adventure park experience, respondents self-proclaimed fitness level had an effect on activity preferences. Those who marked themselves as lower fitness levels tended to enjoy activities with less physical exertion such as animal watching and horseback riding. Lower fitness level responses also were less interested in more physical activities such as ropes courses, obstacle course, and hiking. Additionally those who ranked themselves as more active tended to choose more active activities such as rock climbing, zip lining, and hiking. As fitness level increased the more physical activities were more frequently ranked higher, while the less physical activities were ranked lower. This difference can be shown in figure 36 below. This chart compares fitness level to activities ranked as a respondents top five preferences. The more saturated the color the more responses in each category. For example, people who self-reported their fitness level as one, or least fit, placed animal watching and horseback riding in their top five activities more often than any other activities. Additionally those who reported a one fitness level never ranked zip lining, hiking, ropes courses, biking, archery, obstacle courses, or yoga in their top five.

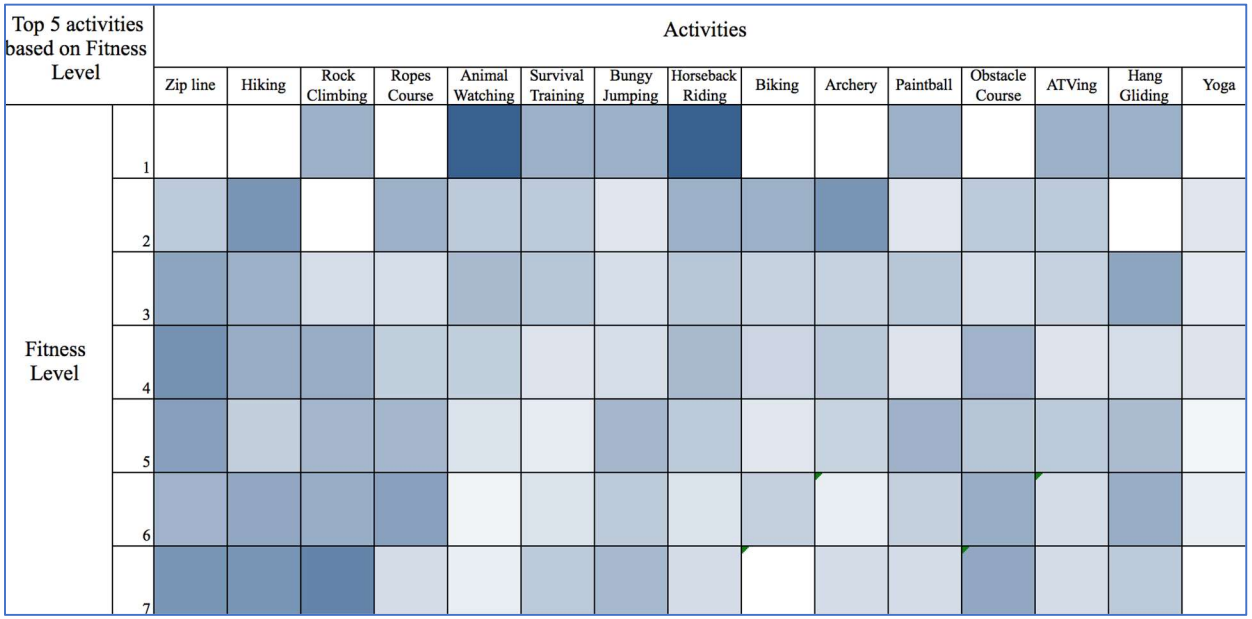


Figure 36: Heat Map of Activities vs Fitness

Gender did not have much of an impact on activity preference.

Next we looked at gender's effect on activities ranked. Many of the activities ranked were similar for each group. There were slight differences with females liking zip lining and horseback riding more while men ranked archery and paintball higher. Although these differences occurred, they were not very significant and many of the other activities were similar.

This data can be found in Figure 37 below. Since men and women did not have many significant differences in activity preferences, ARG will be able to market their park to both genders with the same activities.

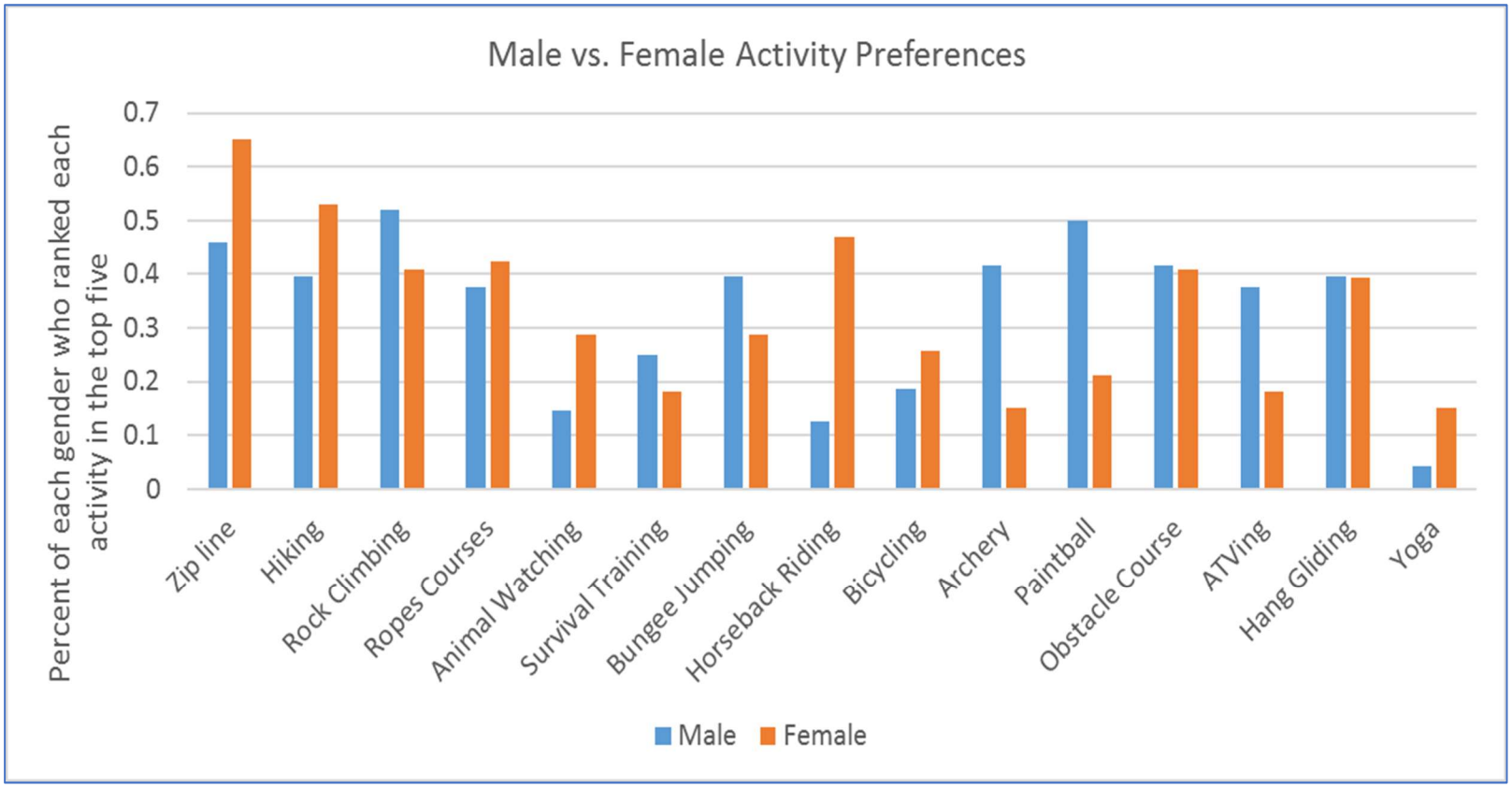


Figure 37: Male vs Female Activity Preferences

Zip lining, hiking, rock climbing, obstacle courses, and ropes courses were the top five activities from our survey.

Although nationality, adventure park experience, and fitness level affected activity choices our overall ranking of activities was based on all responses. We ranked the fifteen activities from our survey based on each activity's prominence. As noted earlier, prominence combines average rank and frequency in the top five ranked activities of respondents. The top five activities are zip lining, hiking, rock climbing, obstacle courses, and ropes course. The graph of prominence can be found in figure 38 below.

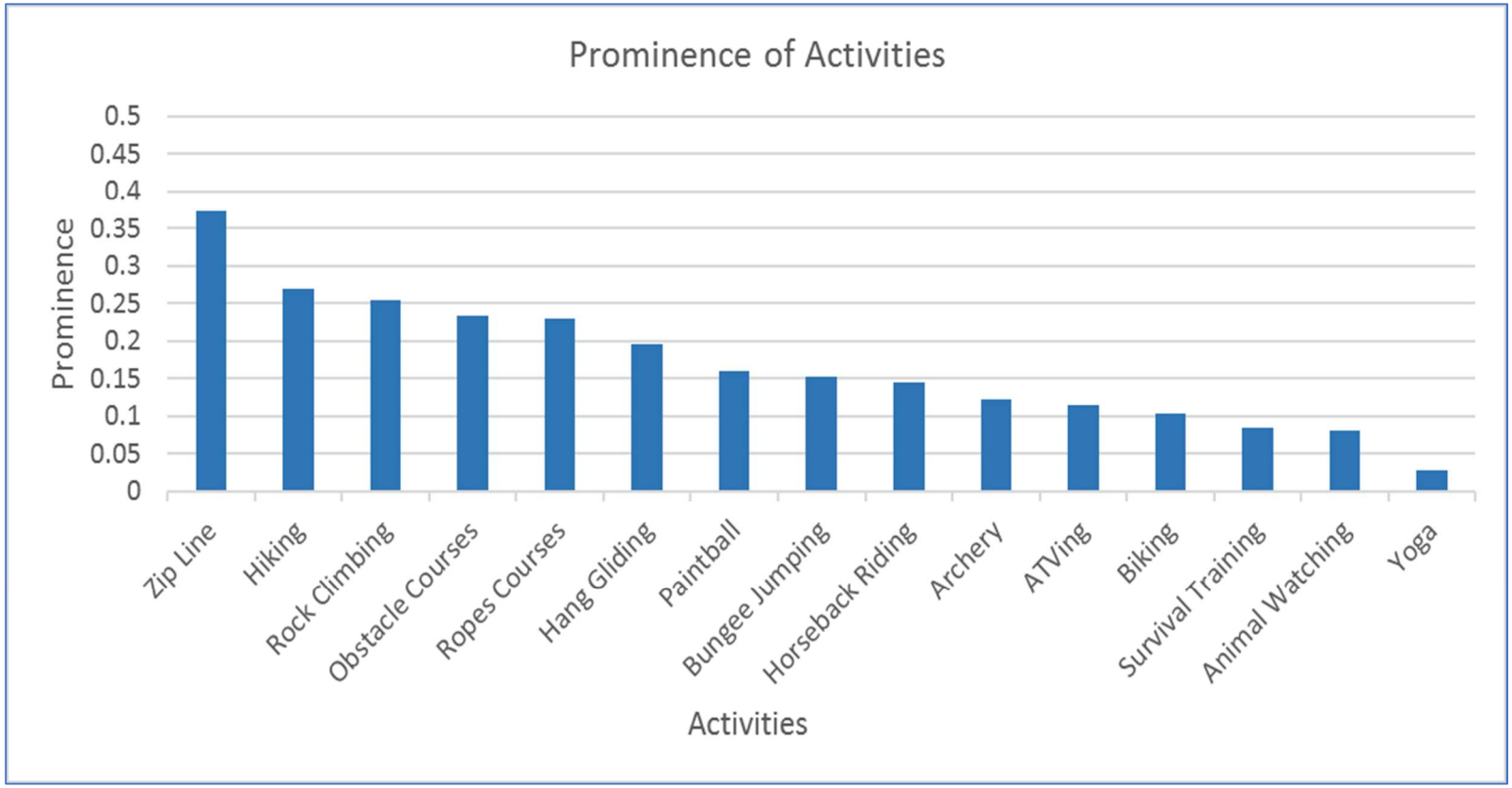


Figure 38: Prominence of Activities

Survey respondents enjoyed activities with mid to low-level risk.

For our top five activities, hiking, rock climbing, obstacle courses, zip lines, and ropes courses, survey participants ranked risk levels around middle risky. As shown in the heat map below, the darkest boxes, and therefore highest concentration of responses, are found within the range of 2-4. This represents low to mid-level risk. Additionally, since there were almost no respondents who ranked their top activities as high level risk, this indicates that respondents do not like activities with high levels of risk. Therefore, when choosing additional activities for the AAR, ARG should not consider activities that include high levels of risk.

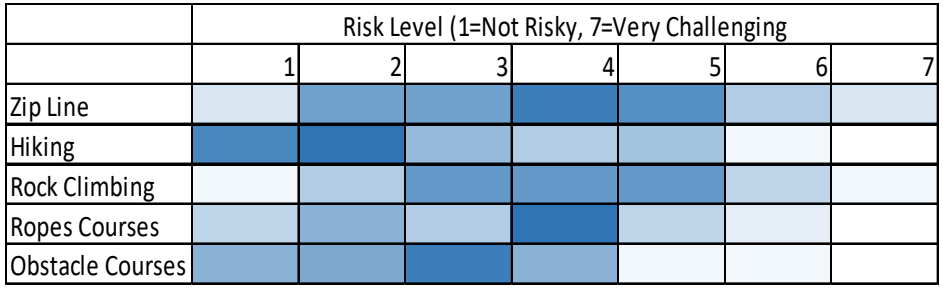


Figure 39: Heat Map of Risk of Top 5 Activities

Cultural Activities

Our final question on our survey addressed cultural activities. Our survey asked about cultural activities since ARG is looking to increase the stays of tourists through their resort and these activities can provide additional day trips for tourists. Cultural activities also involve the community more in the park and allow economic befits to go directly to the community. ARG provided us with a list of 10 possible cultural activities for the region. We received 114 responses for the ranking of cultural activities. From these responses, castle tours, traditional Albanian food sampling, and winery tours were ranked highest. This is shown in the figure 40 below.

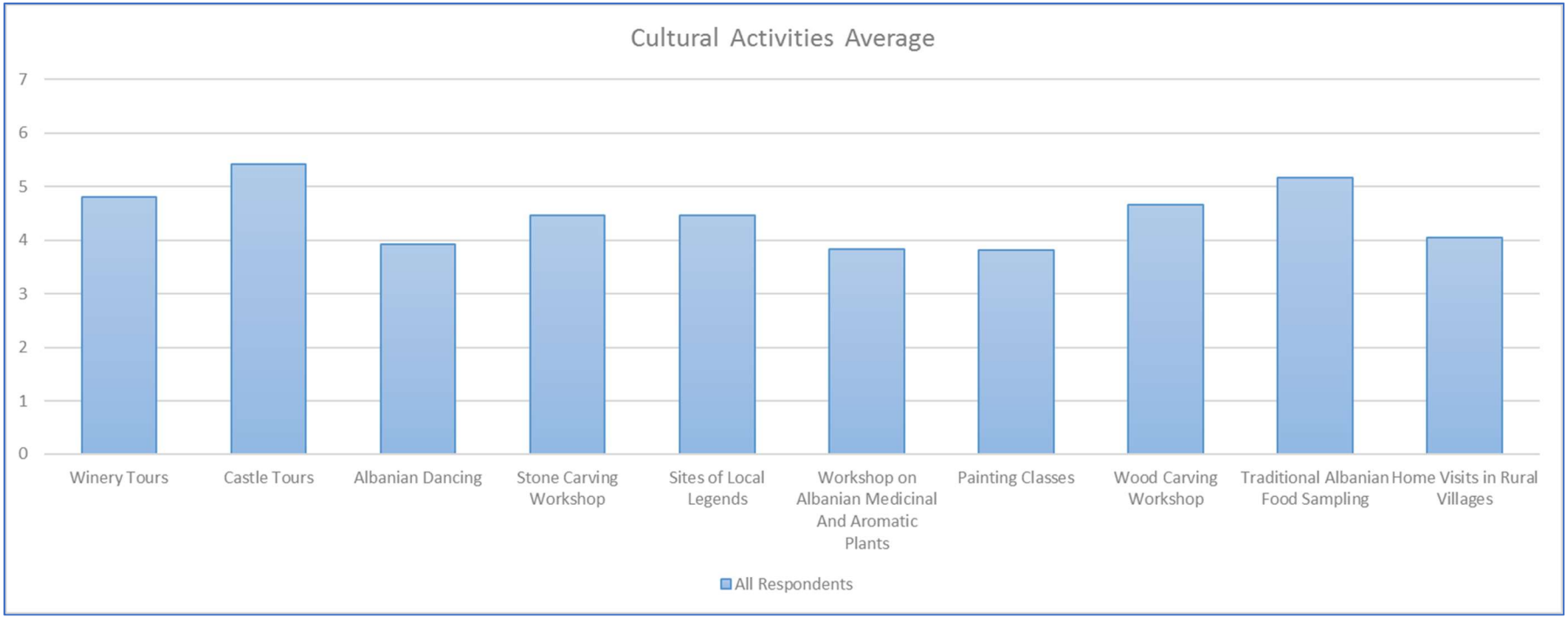


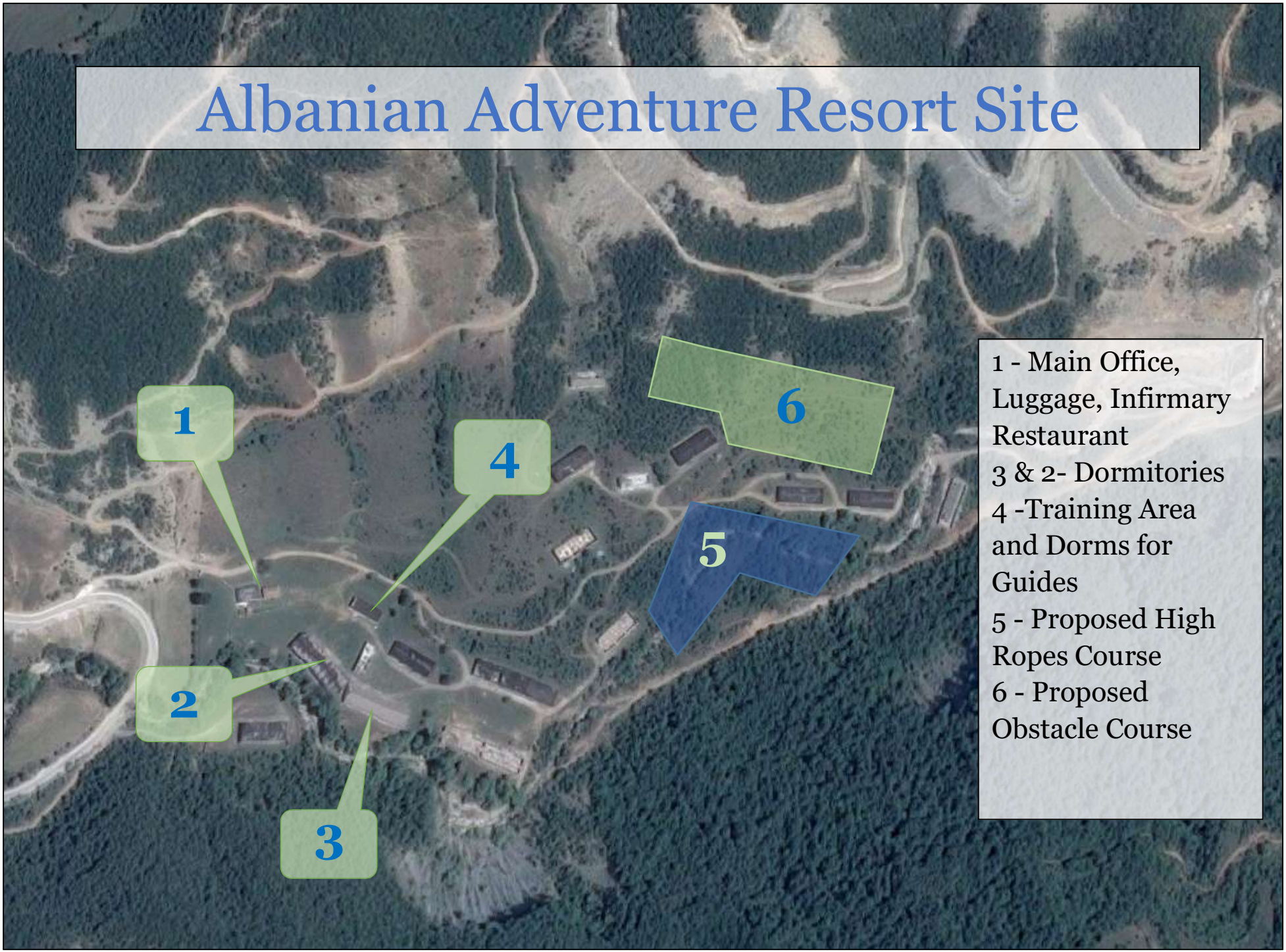
Figure 40: Cultural Activities

5.0 Design and Safety

Based on the results of our survey we determined the top three activities, zip lining, hiking, and rock climbing. Implementing these activities involves a number decisions related to safety. These decisions include location, building materials, and safety certifications. These choices should involve a qualified company to implement the activities. There are several of these companies throughout Europe which can be solicited to create zip lines, hiking trails, and rock climbing courses up to international standards.

While we recommend that ARG look into implementing all of the top five activities into the park, we focus our discussion in this chapter on ropes and obstacle courses. These activities provided us more room for creative and opinion based choices and suggestions. In this section, we cover location, element choice, safety, and cost. This section also offers some suggestions on professional builders who could come in to construct the course.

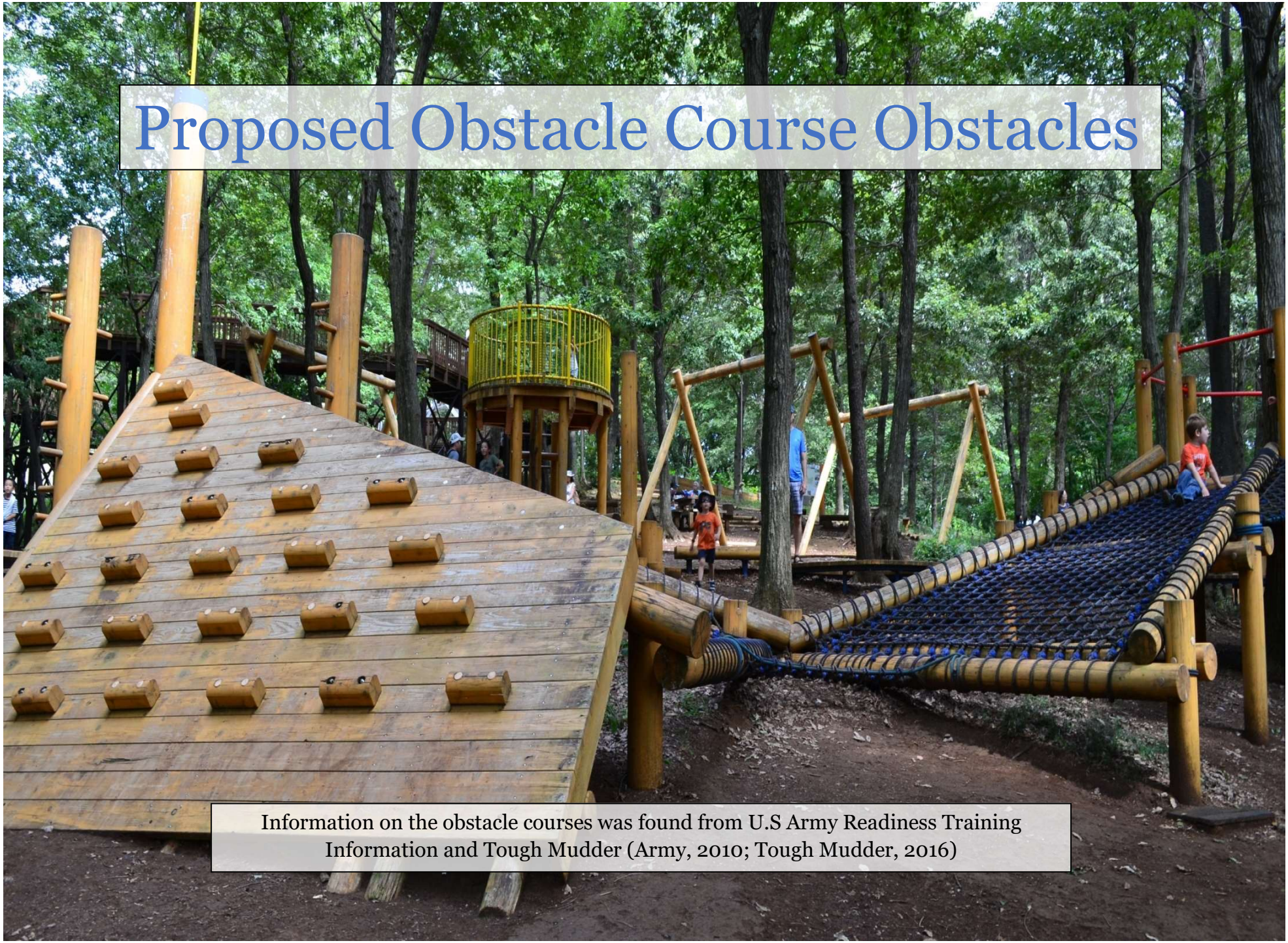
Albanian Adventure Resort Site



1 - Main Office, Luggage, Infirmary Restaurant
3 & 2- Dormitories
4 -Training Area and Dorms for Guides
5 - Proposed High Ropes Course
6 - Proposed Obstacle Course

Location of Obstacle Course and High Ropes Course

Proposed Obstacle Course Obstacles



Information on the obstacle courses was found from U.S Army Readiness Training Information and Tough Mudder (Army, 2010; Tough Mudder, 2016)

Location

An important step with the obstacle course planning was determining a feasible location that doesn't interfere with ARG's plans to develop the site. After speaking with our sponsor, we learned that ARG's property extends beyond the buildings to an open field with no reuse plans. We were unable to visit this part of the site, and so do not have pictures of this area. To gain knowledge about this area we looked for maps online. After looking at a topography map of the site, we learned that this spot was also relatively flat. From satellite images, we were able to determine that there were no large trees. Since the elements we chose required open space and relatively flat ground, this spot would be the optimal location for the obstacle course.

Obstacles

We decided on what elements would go into the obstacle course. Doing this required compiling a list of every element we discovered in our research. A big contributor to this list was the US Army Physical Readiness Training (PRT) program, where they provided over 25 elements that are used in Army Basic Training. We also consulted obstacle design companies, such as Ropes Course Construction (RCC), and successful obstacle courses in the US, such as Muddy Runner and Warrior Dash. Since we were looking for a variety, we organized our list of potential elements into climbing, crawling, walking, and swinging elements. From there we assigned each element a perceived degree of difficulty. This eliminated many of the military and Muddy Runner obstacles that require a lot of training to complete. Thus we selected a set of elements based on two factors, a variety of physical activities and a mix of difficulty levels. These factors were chosen because our survey showed that people with different fitness levels enjoyed activities with different levels of challenge. The variety of difficulty levels can be used to attract a broader audience with different fitness levels.

Order

We chose this order of elements to spread out the most difficult obstacles. Additionally, we choose to intermix the types of obstacles. In this ordering, no obstacle is of the same type as the obstacle immediately before or after.

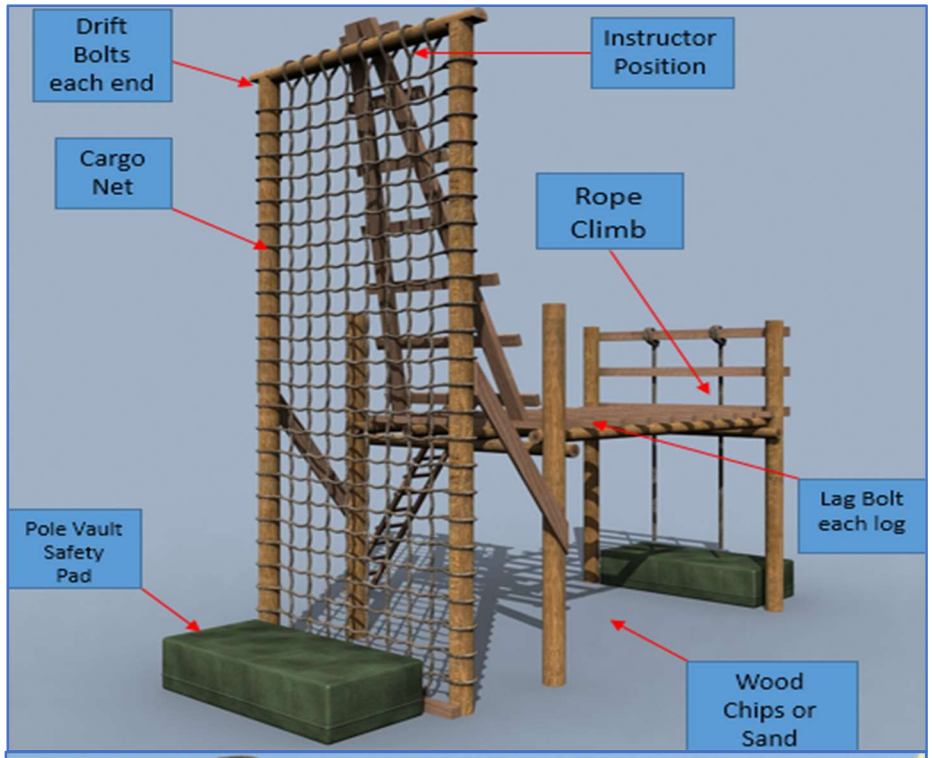
Figure 41: AAR Site with Obstacle Course (Google Maps, 2016)

Figure 42: Topographical Map with Obstacle Course (Google Maps, 2016)

1. Tough One

Type: Climb
Military: Yes
Ages: All ages, with a smaller scale for kids
Difficulty: Medium
Time: 5 Minutes

This obstacle is a US military training obstacle where participants scale a rope, walk across beams, climb a wooden ladder to the summit of the cargo net, and descend a cargo net to the ground. Traditionally, the first rope climb is 13 ft and the cargo net is 33ft, but this can be scaled down to fit the audience. To keep this obstacle safe, instructors must inspect the obstacle daily for rips, tears, or worn surfaces. Ladder rungs should never exceed 36 inches and sufficient padding should be below the cargo net in case of falls. The instructor should demonstrate the course before participants engage, and an instructor should be harnessed in at the top of the cargo net to assist people over the top if necessary.



2. Tough Nut

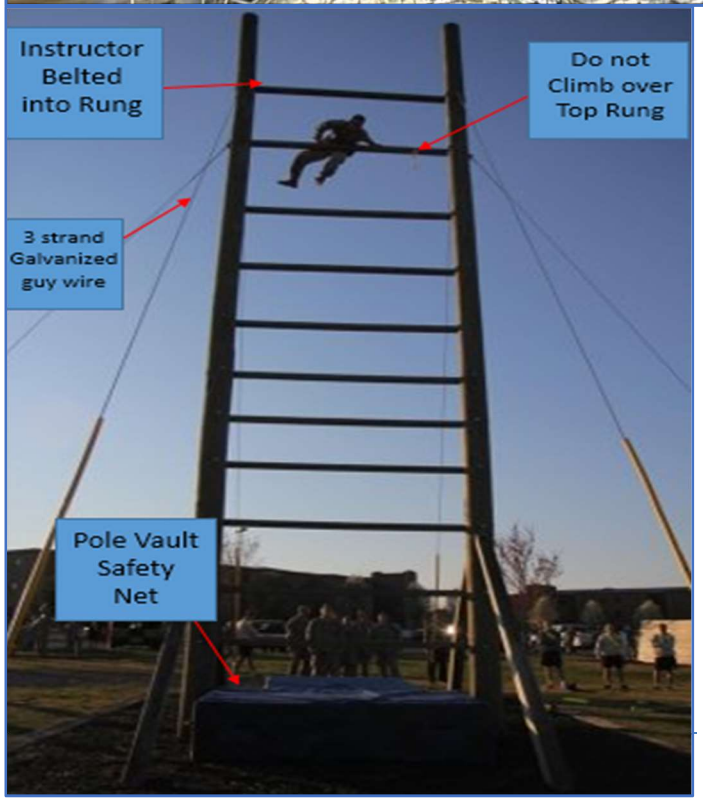
Type: Walk
Military: Yes
Ages: All ages, with a smaller scale for kids
Difficulty: Easy
Time: 2 minutes

Participants walk through the crisscrossed wooden beams stepping on the intersections. There are usually 7 rows, or X's, to step through. An instructor for this course should check the obstacle for sharp edges or splinters as well as demonstrate the obstacle to participants.

3. Tarzan

Type: Swing
Military: No
Ages: All ages, with a smaller scale for kids
Difficulty: Medium
Time: 10 minutes

In this obstacle participants swing from one rope to another to traverse a pit of some sort, usually filled with water. Ropes can be closer together and lower to the ground for easier participation. To keep this obstacle safe an instructor must inspect the rope for fraying. This obstacle shouldn't be attempted when wet.



4. Confidence Climb

Type: Climb
Military: Yes
Ages: Older Ages (height requirement)
Difficulty: Hard
Time: Takes 5 minutes

This military obstacle consists of a participant climbing up a large ladder, over the second to top rung, and down the ladder on the other side. Rungs on the ladder are further apart to create challenge, but can be moved closer to fit the appropriate audience of the park. This obstacle could be made smaller for young children. To insure the obstacles safety, an instructor must inspect the course for breaks, splinters, and worn/unsecure surfaces. Safety padding must be placed at the bottom of the ladder to break a possible fall. An instructor must be placed at the top of the ladder to assist the participant over the top; this instructor must be secure to the tower to prevent falling. Additionally safety measures could be taken to attach secure participants to the ladder to prevent their falling to the ground.

5. Belly Crawl

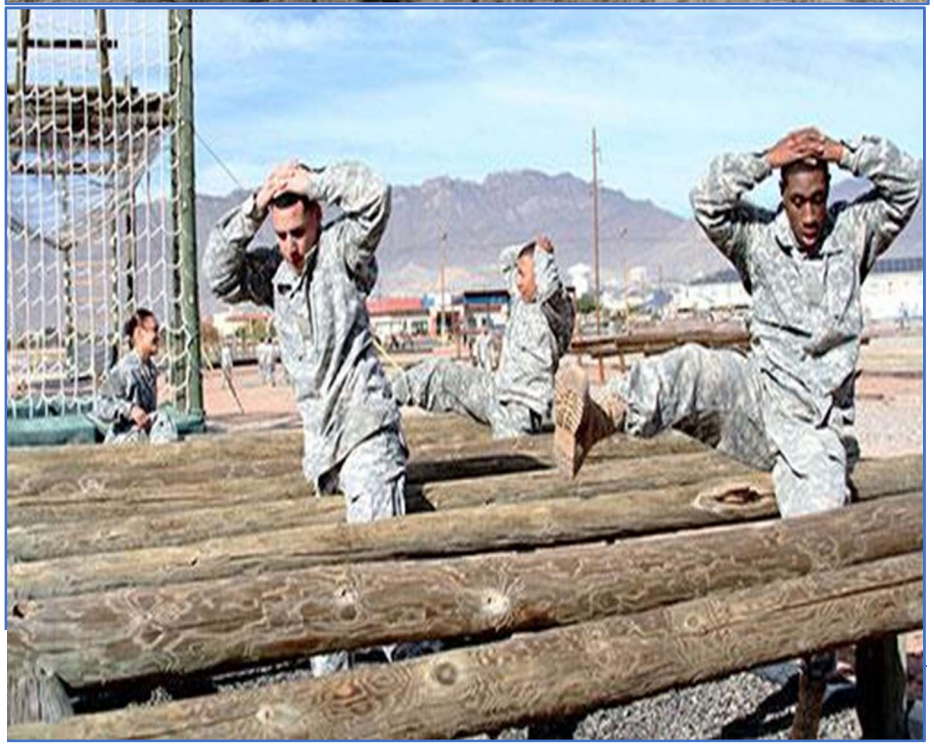
Type: Crawl
Military: Yes
Ages: All ages
Difficulty: Easy
Time: 2 minutes

In this military obstacle, wires are set up around 16 inches above the ground of sand or sawdust. Participants crawl under the wire on their stomachs. Participants of all ages can complete this obstacle, and the length of this obstacle can be adjusted for different age groups. To keep this obstacle safe, an instructor must ensure the ground is sand or sawdust and lacks sharp objects. Additionally the direction participants crawl should be changed periodically to maintain level crawling surfaces.

6. High Step Over

Type: Walk
Military: Yes
Ages: All ages, with a smaller scale for kids
Difficulty: Easy
Time: 2 minutes

In this military obstacle, participants step over raised logs by either alternating legs or using the same leg. This obstacle could vary based on how the participant chooses to climb over each log. Additionally the log height could be adjusted for different age groups. To maintain the safety of the obstacle, an instructor must ensure the wood is splinter and nail free and participants are spaced apart well enough not to hit each other.



7. Inclining Wall

Type: Climb
Military: Yes
Ages: All age, with a smaller scale for kids
Difficulty: Medium
Time: 5 minutes

This military obstacle has participants use a rope to climb up an inclined wall, navigate over the top, and climb down the ladder on the other side. This obstacle could be made in a smaller scale with a different angle of the incline to make it accessible to younger children. To keep this obstacle safe, an instructor must ensure the rope is not withered or frayed and the wood is lacking splinters or nails. It may be necessary for the instructor to demonstrate the obstacle.

8. Swing Stop Jump

Type: Swing
Military: Yes
Ages: Older ages
Difficulty: Hard
Time: 10 minutes

In this military obstacle, a participant grabs a rope and swings forward to the log they attempt to clear. This obstacle can be adjusted for difficulty by changing the height of the logs participants must clear. An instructor may need to demonstrate this obstacle for participants. For safety, the instructor must inspect the log for nails and splinters and the ground underneath should be sand or sawdust. Additionally, the vertical poles may need padding in case of flailing participants. This obstacle should not be completed when wet or slippery.

9. Easy Balancer

Type: Walk
Military: Yes
Ages: All ages
Difficulty: Easy
Time: 1 minute

This military obstacle has participants walk up one side of the inclined beam and down the other. This obstacle can be completed by participants of all ages. The wood surface of this obstacle should be splinter free and can be modified to give added traction. The ground below the obstacle should be made out of soft material to minimize impact in case of a fall. The obstacle should be inspected daily.

10. Reverse Climb

Type: Climb
Military: Yes
Ages: All age, with a smaller scale for kids
Difficulty: Medium
Time: 5 minutes

In this military obstacle participants climb up the underside of the ladder, go over the top and climb down the other side. This obstacle can be smaller for younger ages. The ground under the side of the obstacle participants climb up should be able to absorb impact from a fall. The ladder itself should be free of sharp edges and splinters. Support beams should be padded, and spotters should be used.

11. Island Hopper

Type: Walk
Military: Yes
Ages: All ages, with a smaller scale for kids
Difficulty: Medium
Time: 5 minutes

In this obstacle participants walk, or hop, from stump to stump to cross a predetermined area. Distances between stumps can be adjusted for younger audiences. For safety, the course should be inspected to ensure that it is free of sharp edges and that the wooden stumps are not slippery. It may be necessary to occasionally re-rough the tops of the stumps for safety.

12. Funky Monkey

Type: Swing
Military: No
Ages: Older ages
Difficulty: Hard
Time: 10 minutes

In this obstacle participants climb a set of monkey bars which incline up to a peak and then decline to the other side. The width of this obstacle can be varied to determine the challenge level. The obstacle should be built so that there are no sharp edges or splinters on the hand grips. The area under the obstacle should be made of a material which will absorb impact to minimize the damage from falls. The obstacle should be regularly inspected for sharp edges and damage.

13. Tire Wash

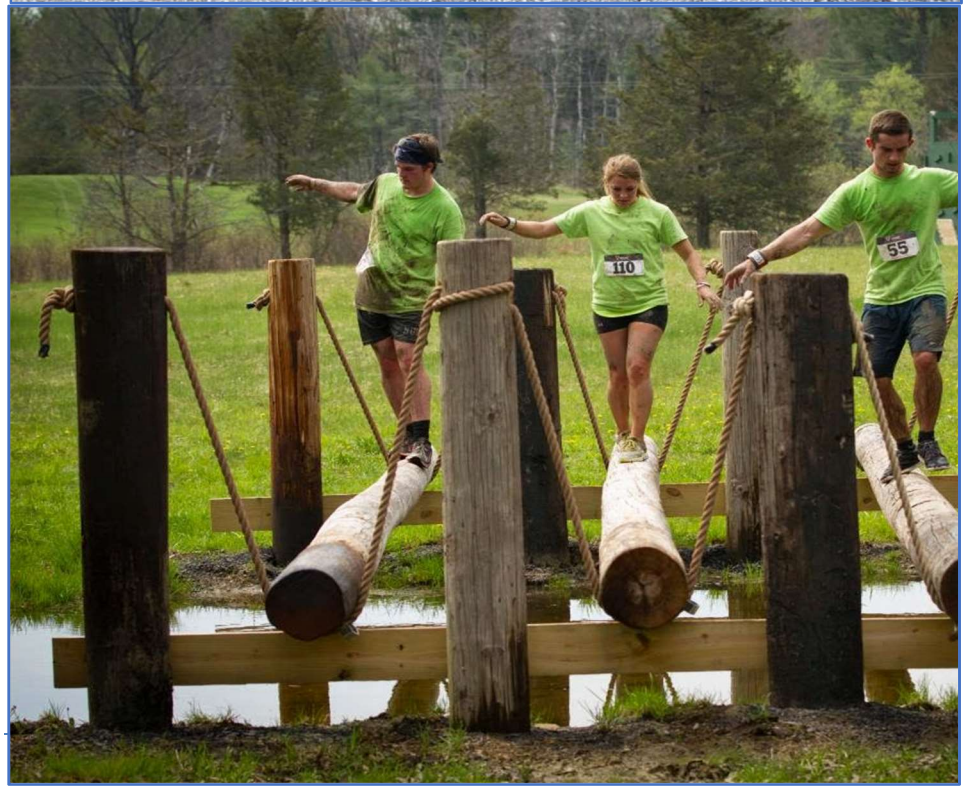
Type: Crawl
Military: No
Ages: All ages
Difficulty: Easy
Time: 1 minute

In this obstacle two rows of tires are set up with enough space between for participants to crawl through. This obstacle could be completed by participants of all ages. To keep this obstacle safe the materials used in the construction of the structure supporting the tires must be of an appropriate strength to support the weight. The obstacle should also be regularly inspected for rot, sharp edges, and debris.

14. Balancing Logs

Type: Walk
Military: No
Ages: All ages
Difficulty: Medium
Time: 1 minute

In this obstacle participants walk across a beam. A smaller version of this obstacle could be created for younger participants. The obstacle should be inspected daily. The wooden surface of the beam should be free of sharp edges and not slippery. The surface under the obstacle should be designed to minimize the impact of a fall.



15. Tunnels

Type: Crawl
Military: No
Ages: All ages
Difficulty: Easy
Time: 1 minute

In this obstacle, participants crawl through a tube of variable diameters and lengths. These tubes are usually at least partially buried underground for better stability. For safety these obstacles should be inspected regularly for structural integrity. Due to the size and ease of these obstacles they are appropriate for participants of all ages.

16. Everest

Type: Climb
Military: No
Ages: Older ages
Difficulty: Medium
Time: 5 minutes

In this obstacle from Tough Mudder races, participants run and jump to reach the top of a quarter pipe. This pipe is usually 15ft tall, 35 ft wide, and made from 35 tops of plywood. The element could be scaled to ensure that it is appropriate for the intended audience. This element could be good for teamwork as participants often have to help others over the top of the wall. For safety the element must be constructed in a way that minimizes rough edges, both at the seams of the plywood and at the top of the wall. The element should also be inspected daily for rips, holes, and sharp edges.

Safety Features

Obstacle courses, regardless of the elements, require some general safety features. Elements are recommended to be built on soft material such as wood chips, sand, or rubber chips (Army physical readiness training (PRT) information). The soft material ensures that falling participants are less likely to be injured from hitting the ground. To decrease the likelihood of falls, obstacles should not be run during inclement weather (Army physical readiness training (PRT) information). Additionally, all obstacles that have dangerous parts should have extra padding underneath the element and a trained supervisor to help the participants (Army physical readiness training (PRT) information). If the supervisor is assisting participants off the ground, the supervisor should be strapped to the obstacle for their own safety (Army physical readiness training (PRT) information). Finally, before use, a licensed worker should inspect all material for rips, tears, or worn out surfaces (Army physical readiness training (PRT) information).

Contractors and Possible Cost

We chose our companies based on their ability to build the elements we chose, offer on-site visits, and complete inspections.

Ropes Course Construction is a company that specializes in the field of obstacle course construction. They are current members of the European Ropes Course Administration and their associates are licensed to inspect, and build, obstacle courses of this nature (About RCC). Located in the United Kingdom (UK), this company could build an obstacle course within the price range of £35,000-95,000 (About RCC). This estimate comes off of a course that was built with similar length, materials, and elements that we would suggest implementing (About RCC).

Head Office Phone Number: 01886 821 102
Email: missioncontrol@tpgrps.com

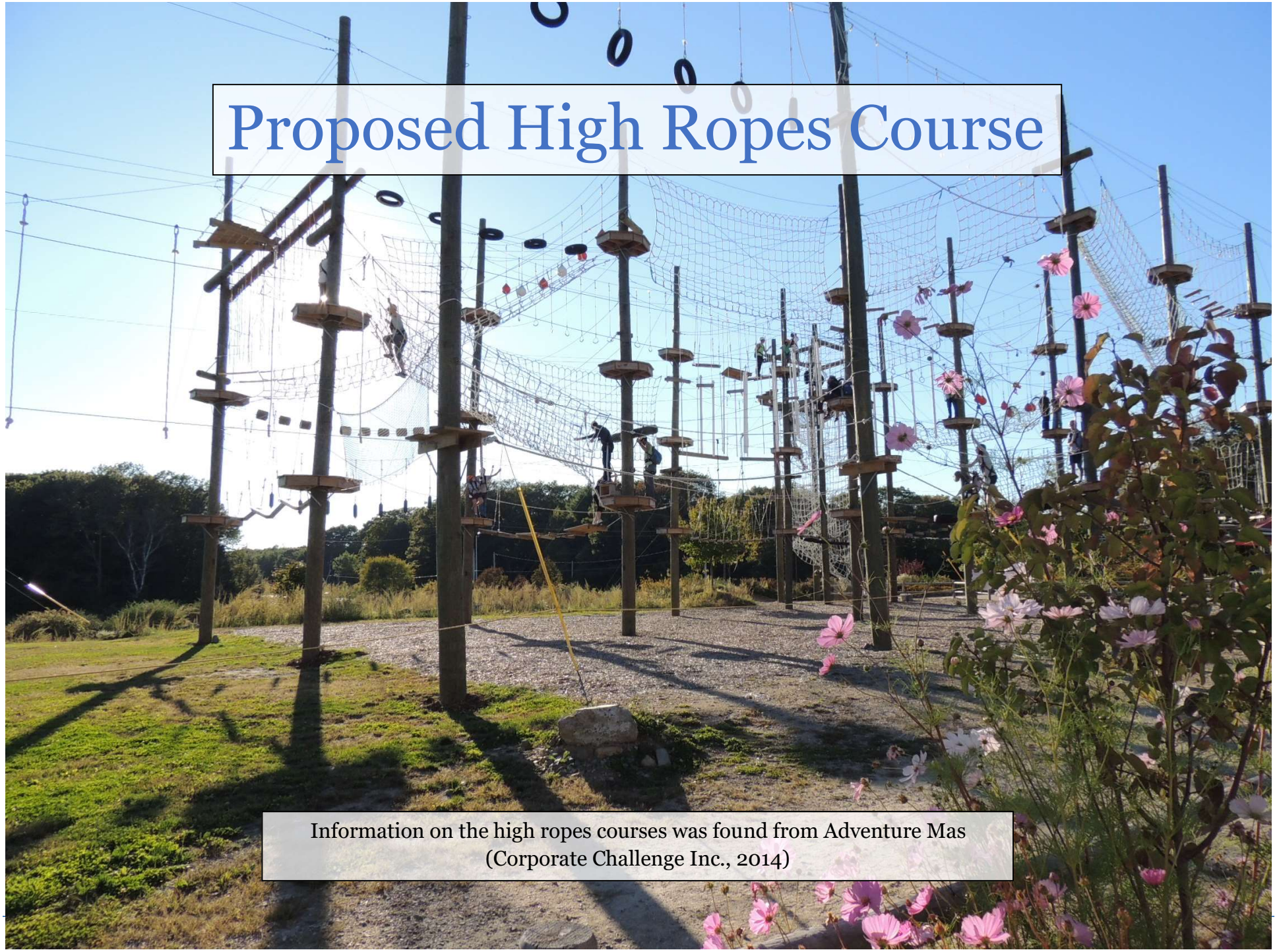
A second company that could build these obstacles is Technical Outdoor Solutions. This company, also located in the UK, builds obstacle courses and trains guides for the course (Assault courses). Like with the last company, Technical Outdoor Solutions specializes with building “Military Assault Courses” (Assault courses). This category of obstacle courses is similar to our suggested military elements (Assault courses). Additionally, this company inspects the obstacles to meet the European Ropes Course Standards (Assault courses).

Head Office Phone Number: 01768 863 368
Email: Info@technicaloutdoorsolutions.co.uk

Lastly, a company worth looking into is Inside Out Ropes Courses. Like the two previous companies, this one also builds ropes courses and assault courses (About inside out ropes course). Inside Out is a member of the European Ropes Course Association and builds their elements within the associations standards (About inside out ropes course). Additionally, the course will be properly inspected after construction and 6 months after use (About inside out ropes course). Inside Out offers complimentary site visits that will help them get a better understanding of the land they are working with (About inside out ropes course).

Director Craig Ross: 44 (0) 7944 364 300
Email: Info@InsideOutropescourses.co.uk

Proposed High Ropes Course



Information on the high ropes courses was found from Adventure Mas (Corporate Challenge Inc., 2014)

Location

The location we proposed for the high ropes course is over a river that ARG uses to teach youth how to kayak and raft. The river also provides a beautiful surrounding area while moving through the ropes course. Observations of the surrounding site also showed that the existing trees are not suitable for ropes courses since they were not tall or sturdy enough to hold elements. Since the trees are not an option for the ropes course, ARG must use utility poles for the ropes course. These utility poles will be installed along the river.

Figure 43: Satellite Image of the River at AAR Site (Google Maps, 2016)

Obstacles

We visited several ropes course websites and compiled a list of possible elements for our ropes course. From this list, we chose our favorites based on personal preference as well as perceived difficulty levels. We chose unique elements that had varying difficulty levels. These elements were chosen since our survey showed that people of different fitness levels enjoyed activities with different levels of challenge. The majority of these obstacles were of medium difficulty and therefore suited to our target audience. Additionally, these elements could be modified for a younger audience. Our recommended course also includes rock climbing and zip lining because they were among the top activities chosen in our survey.

Figure 44: Tree by the River at AAR Site

Order

The high ropes course starts with a rock climb because of its popularity in our survey and its ability to bring participants up to the first level of the course. From there, we choose a variety of bridges. In ordering our obstacles we made sure that the ropes course did not transition from easy obstacles directly into hard obstacles. Additionally, based on our experiences with ropes courses, we ordered the obstacles by their perceived excitement levels. Finally, we chose a traditional belay element as the finale to the course.

1. Rock Climb

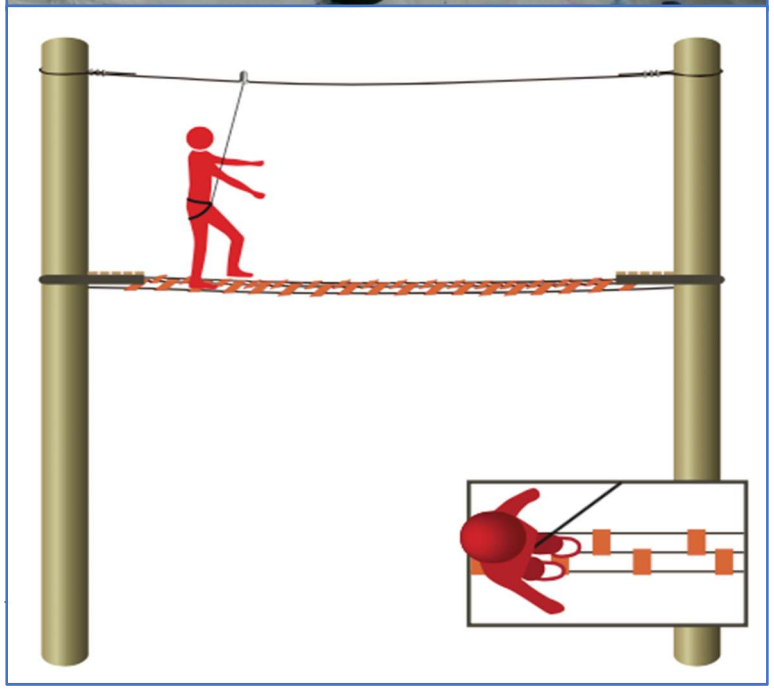
Type: Climb
Safety Precautions: Belay System
Age: All ages
Difficulty: Varying
Time: 5-10 minutes

In this obstacle, the goal is to reach the top of the rock-climbing wall. The rock wall element moves participants from one level of the course to a higher level. The height is dependent on how high the next level of the ropes course is. The rocks on the wall can be adjusted prior to use to change the difficulty of the climb.

2. Alternating Wood Bridge

Type: Bridge Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Easy
Time: 2-5 minutes

In this obstacle, participants walk across alternating wood planks to reach the other side. Ropes hold the alternating bridge together. The spacing of the alternating wood bridge can be adjusted to smaller increments if needed for smaller children.



3. Burma Loops

Type: Ropes Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Medium
Time: 2-5 minutes

In this obstacle, participants walk through large loops suspended by cables. The length of the loops and the spacing from loop to loop can be adjusted for smaller participants.

4. Heebie Jeebie

Type: Foot Cable
Safety Precautions: Belay System
Age: All ages
Difficulty: Medium
Time: 2-5 minutes

In this obstacle, participants walk on a foot cable with two crisscrossing ropes as hand holds. The objective is to reach the other side by switching hand ropes at the point of crisscross. The height of the hand ropes can be adjusted to lower heights.

5. Charlie Chaplin

Type: Foot Cable
Safety Precautions: Belay System
Age: Older ages
Difficulty: Hard
Time: 2-5 minutes

In this obstacle, participants walk on two foot cables. There are two ways to approach this obstacle. The first is cross without the use of handholds, relying on balance to cross. The other approach is to use the belay system as a rope to help steady and guide the participant across. The design is simple as the element contains only the belay safety system and the two foot cables. This element is not recommended for younger and smaller children as it may be too difficult.

6. Tire Traverse

Type: Tire Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Medium
Time: 2-5 minutes

In this obstacle, tires are suspended in the air by a cable. The participants traverse the tires to reach the next obstacle. The tire size and distance between tires can be modified to create different challenge levels appropriate for different age groups.

7. Inclined Log

Type: Log Bridges
Safety Precautions: Belay System
Age: All ages
Difficulty: Medium
Time: 2-5 minutes

In this obstacle, logs are placed on an incline between two of the vertical poles. The participants walk up the log or logs. The difficulty of this obstacle is dependent on how much of an incline the logs are placed at. The more inclined the log, the more difficult the obstacle. To make this obstacle suitable for children, the logs should be placed at a slight incline.

8. Zip Line

Type: Zip Line
Safety Precautions: Belay System
Age: All ages
Difficulty: Easy
Time: 1 minute

In this obstacle, the participant uses a zip line to move to the next section of the course. The belay system keeps the participant safe from falling and the zip line is a single wire from one side to the other.

9. Hourglass

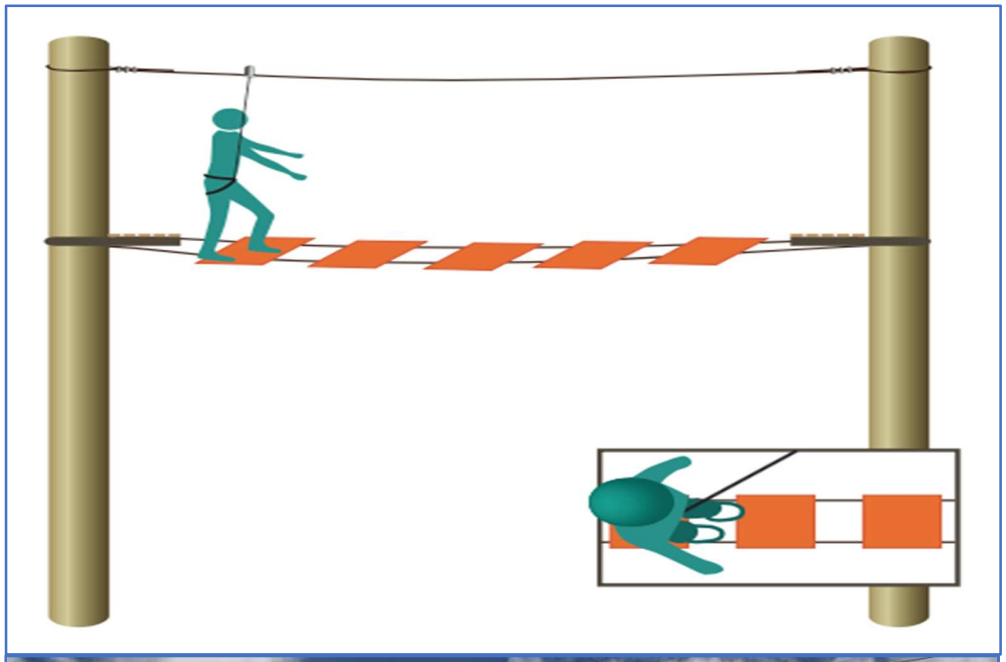
Type: Rope Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Medium
Time: 2-5 minutes

In this obstacle, the objective is to cross on two ropes. The layout is such that there are two ropes for your feet and one hand rope in the middle. The middle rope is used as a handrail which starts high and ends at the level of the feet rope. The height of the hand rope can be adjusted for shorter heights and younger participants.

10. Full Cargo Net

Type: Rope Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Easy
Time: 2-5 minutes

In this element, the participants' task is to cross a cargo net. Participants move horizontally across the cargo net to get to the next platform. The belay system is positioned behind them so that it does not get in the way of crossing the bridge.



11. Island Hop

Type: Bridge Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Medium
Time: 2-5 minutes

In this obstacle, the participants jump from island to island until they reach the end. Each island is held together by two wires. The spacing and size of each island can be changed to determine the difficulty of the obstacle. Larger distances between jumps would make it harder and smaller distances would be better for younger adventure seekers.

12. Multi-Line Traverse

Type: Rope Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Medium
Time: 2-5 minutes

In this obstacle, participants will be given a cable to walk on to get to the other side. Ropes of various lengths will be dangling from above to assist the participants with their balance. Longer dangling ropes can be used to allow younger participants to reach the ropes and complete the obstacle.

13. Swinging Beams

Type: Bridge Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Easy
Time: 2-5 minutes

In this element, participants will walk across swinging beams. The beams are customizable in their length. Greater distances between beams are more challenging, but smaller spaces can be used for younger participants.

14. Teeter-Totter Beam

Type: Bridge Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Easy
Time: 1-3 minutes

In this obstacle, participants will maneuver across a beam. When force is applied to either side of the beam it will rise and fall, like a teeter totter. Participants will not have handrails to use and will have to balance as the beam moves.

15. Swinging Steps

Type: Bridge Cross
Safety Precautions: Belay System
Age: All ages
Difficulty: Medium
Time: 2-5 minutes

In this element, participants will walk across swinging beams shaped like traditional swing. This obstacle can increase difficulty by spacing the swings further apart. To decrease difficulty for younger participants, this obstacle can increase the number of swings and move them closer together.

16. Rappel

Type: Rappel
Safety Precautions: Belay System
Age: All ages
Difficulty: Easy
Time: 1-2 minutes

In this obstacle, participants will rappel back down to the ground. This obstacle marks the end of the high ropes course. Proper belay equipment will be used to drop participants off a tower. This drop will give participants plenty of excitement while not being too challenging.

Safety

Safety of participants is a very important aspect to the success of the high ropes course. To create a safe ropes course we needed to ensure that it would be built correctly by a professional ropes course builder and include proper gear (T. Scott Cook, personal communication, 9/23/2016).

It is recommended that the Albanian Adventure Resort go through and follow the United Kingdom Ropes Course Guide. This guide, in association with the European Ropes Course Association (ERCA), has created a manual for building, maintaining, and operating ropes courses that follow EN15567 (ERCA, 2017).

It is important that Albanian Adventure Resort follows EN15567, the most updated version of the regulations on building and operating ropes courses (Nick Moriaty, 2015). EN15567 highlights many safety aspects that every ropes course must follow. Compliance with the EN15567 is not a legal requirement for the ropes course, but it is important to follow the standard of the industry (Nick Moriaty, 2015). Industry standards include regulations on what type of poles can be used as well as which carabiners are allowed for the belay systems of the ropes course (Nick Moriaty, 2015). The ropes course we have recommended above follows a static belay system or an individual safety system (Nick Moriaty, 2015). A contractor on site will determine the more specific type of safety requirements that the elements must follow.

Alongside the European Standards (EN15567), there are the American Standards (ANSI Z-359) which do include more strict guidelines in strength of cables and personal safety requirements (Professional Ropes Course Association, 2014). Although there are different standards, it is recommended that ARG follow the European Standards as contractors in Europe will be following EN15567.

Training a ropes course instructor is also a very necessary action for a high ropes course (Nick Moriaty, 2015). The ERCA trains ropes course instructors to focus mainly on safety of many different obstacles that a ropes course may have (ERCA, 2017).

Possible Contractors and Costs

Each company requires an onsite visit to determine the ideal place for the high ropes course and to determine an accurate estimate on price (About RCC; JM Adventure, 2015; rouge-media.com, 2015). We choose the following companies based on their ability to build the elements we chose, offer on-site visits, and complete inspections.

Ropes Course Construction is a UK based company that offers up to 60 different elements. This contractor offers a full ERCA Type A inspection as well as removable bottom sections and instructor access systems (About RCC). The possible price range for this contractor can vary from £10,000 to £100,000 depending on the number of elements in the ropes course (About RCC).

Email: missioncontrol@tpgrps.com
Head Office Telephone: +44 01886 821102

JM Adventure Ltd. is a UK based company that offers a continuous wire system that follows EN15567 (JM Adventure, 2015). They offer two heights, one for low level courses and one for high level courses. The price per element for the obstacle course is about £6,500 (JM Adventure, 2015).

Email: Info@jmadventure.com
Head Office Telephone: +44 01929 475691

RCD Aerial Trekking is UK based company that breaks down the construction into two stages (rouge-media.com, 2015). The first is to outline designs and a course layout while the second is to supply structural calculations and construction (rouge-media.com, 2015). For their steel cable system, the prices range from £5,500 to £6,500 per element (rouge-media.com, 2015).

Email: info@rcd.co.uk
Head Office Telephone: +44 07788 590971

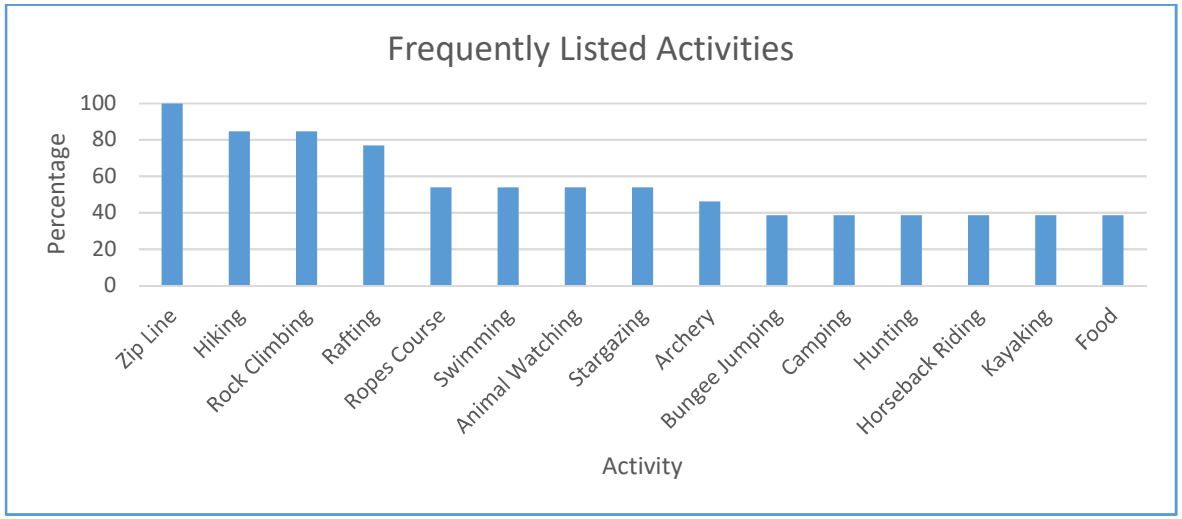
Appendix

Appendix A: Activity Freelisting

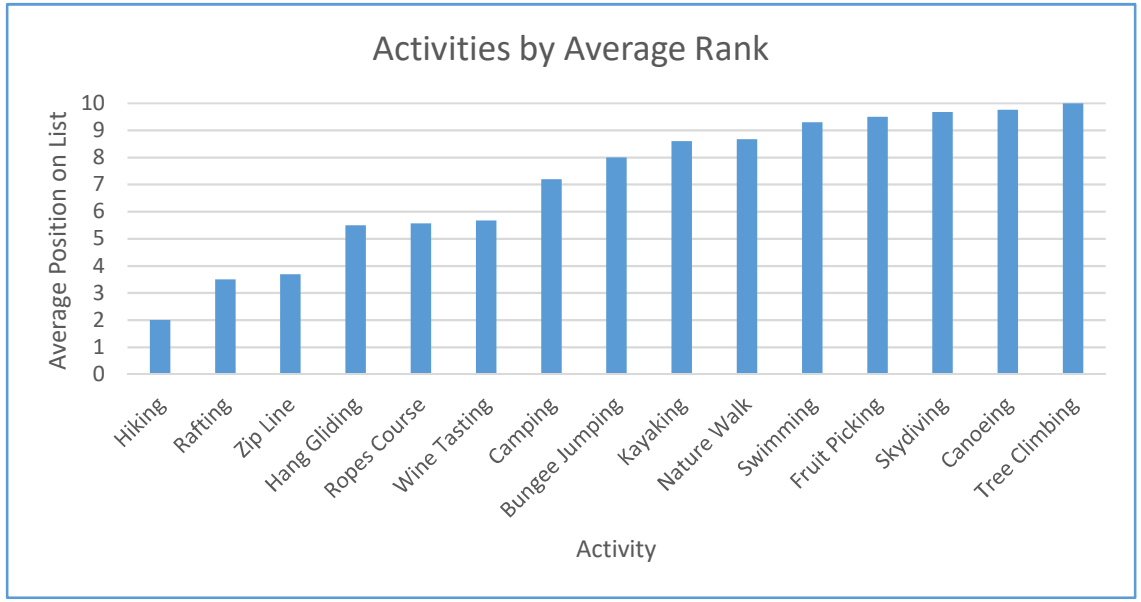
- All Responses with Salience

Swimming	0.324	Night Hikes	0.081	Segways	0.043	Team Building Exercises	0.018
Animal Watching	0.321	Canyon Exploring	0.077	Flower Collecting	0.041	Ice Skating	0.018
Bungee Jumping	0.263	Alpine Slide	0.07	Tunnels	0.041	Woodsman Competition	0.016
Camping	0.262	Sailing	0.069	Painting	0.038	Hockey	0.016
Hunting	0.238	Meditation	0.068	Sledding	0.038	Scottish Games	0.015
Horseback Riding	0.219	Paddleboat	0.067	Snowboarding	0.038	Dog Sledding	0.014
Kayaking	0.206	Carving	0.067	Mini Golf	0.037	Karaoke	0.013
Biking	0.198	Scuba Diving	0.065	Scavenger Hunts	0.037	Education	0.013
Wine Tasting	0.191	Water Slide	0.064	Zumba	0.037	Axe Throwing	0.013
Skydiving	0.177	Bridges	0.064	Water Skiing	0.036	Ice Climbing	0.01
Stargazing	0.177	Snorkeling	0.063	Guided Mediation Hike	0.035	Tours	0.01
Archery	0.164	Fishing	0.062	Wakeboarding	0.034	Campfires	0.01
Tree Climbing	0.158	Mountain Running	0.061	Tubing	0.034	Ice Sculpting	0.008
Canoeing	0.152	Bouldering	0.058	Frisbee	0.033	Sleigh Rides	0.007
Food	0.15	Rope Making	0.057	Tag	0.033	Igloo Building	0.006
Nature Walk	0.149	Dancing	0.056	Polar Plunges	0.032	Jewelry Making	0.006
Donkey Riding	0.132	Fire Making	0.055	Windsurfing	0.032	Orienteering	0.005
Alpine Skiing	0.13	Cliff Jumping	0.055	Marco Polo	0.031	Sleeping	0.004
Yoga	0.126	Wilderness Survival	0.054	Taxidermy	0.03	Snowmobiling	0.004
ATVing	0.119	Parasailing	0.053	Shooting	0.03	Dude Ranching	0.003
Obstacle Course	0.119	Geocaching	0.051	Surfing	0.03	Competitions	0.003
Hang Gliding	0.111	Wingsuit	0.051	Fire Breathing	0.029	Hot Dog Eating Contest	0.002
Fruit Picking	0.107	Mountain Boarding	0.05	Bonfires	0.028		
Hide N Seek	0.104	Paintball	0.05	Croquet	0.027		
Paragliding	0.1	Rollerblading	0.049	Playground	0.024		

- Top 15 Activities with Highest Frequency



- Top 15 Activities by Average Rank



Appendix B: Survey

Survey Questions to WPI students, Tamam students, and Tour Operators

1. What language would you prefer the survey in? Çfarë gjuhe do të preferonit sondazh?

- English
- Shqip (If answered, survey would deliver Albanian-translated survey)

2. Are you Albanian? A jeni shqiptar?

- Yes / Po
- No / Jo

3. Gender? Gjinia?

- Male / Mashkull
- Female / Femër

4. Have you ever been to an Adventure Park? A keni qenë ndonjëherë në një park aventurë?

- Yes / Po
- No / Jo

5. What do you think your personal fitness level is? (1= Unfit, 7= Very Fit)

Cili mendoni se është niveli juaj personal i fitnesit? (1= i papërdorshëmit, 7= i aftë)

6. Please rank these activities in order of preference with 1 as the activity you most like to do and 15 as the activity you would least like to do.

Ju lutem vlerësoni këto aktivitete në mënyrë të preferencës me 1 si aktiviteti që do të më donte për të bërë dhe 15 si aktiviteti që do të paktën të donte për të bërë.

- Zip Line
- Hiking / Eksursion
- Rock Climbing / Kacavjerrje
- Ropes Course / Lojra me Litarë
- Animal Watching / Të vëzhgojnë Kafshët
- Survival Training / Kurse të Mbijetesës
- Bungee Jumping / Hedhje nga lartësitë
- Horseback Riding / Kalërim
- Biking / Çiklizëm
- Archery / Harkëtari
- Paintball
- Obstacle Course / Lojrame Pengesa
- ATVing / Motorra me 4 rrota
- Hang Gliding
- Yoga

Questions 7, 8 and 9 were only answered using the respondent's top five preferred activities based on the above question:

7. Please rank the activities excitement level. (1=Not Exciting, 7=Very Exciting)

Ju lutem vlerësoni nivelin e emocioneve të aktiviteteve (1=Nuk është emocionues, 7=Shumë emocionues)

8. Please rank how risky you believe the activity is. (1= Not Risky, 7= Very Risky)

Ju lutem vlerësoni se sa i rrezikshëm ju besoni se është aktiviteti (1=Jo I rrezikshëm, 7=Shumë i rrezikshëm)

9. Please rank how challenging the activity may be. (1= Not Challenging, 7= Very Challenging)

Ju lutem vlerësoni se sa sfidues mund të jetë aktiviteti (1=Nuk është i vështirë, 7=Shumë i vështirë)

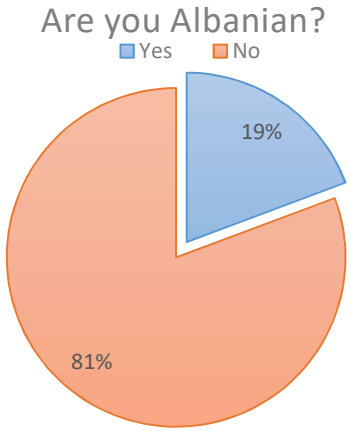
10. How likely are you to participate in this activity? (1= Will not Participate, 7= Excited to Participate)

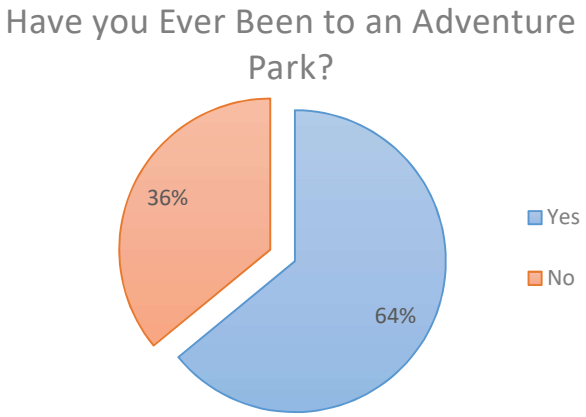
Sa mundësi keni të merrni pjesë në këtë aktivitet? (1= nuk do të marrim pjesë, 7= shumë i ngazëllyer për të marrë pjesë)

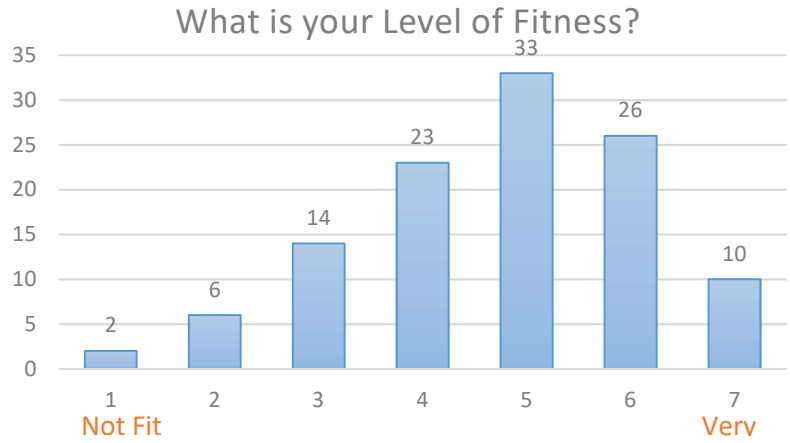
- Winery Tours / Vizit në kantinë
- Castle Tours / Vizitë në kala
- Albanian Dancing / Performanca folklorike
- Stone Carving Workshops / Workshop për gdhëndien e gurit
- Sites of Local Legends / Vizitë në sitet e legjendave
- Workshop on Albanian Medicinal and Aromatic Plants / Workshop mbi bimët mjekësore dhe aromatike shqiptare
- Painting Classes / Pikturë klasë
- Wood Carving Workshop / Workshop I gdhendjes së drurit
- Tours to Sample Traditional Albanian Food Products / Toure të ekspozimit të produkteve ushqimore tradicionale shqiptare
- Home Visits in Rural Villages / Vizitë në shtëpitë e fshatrave

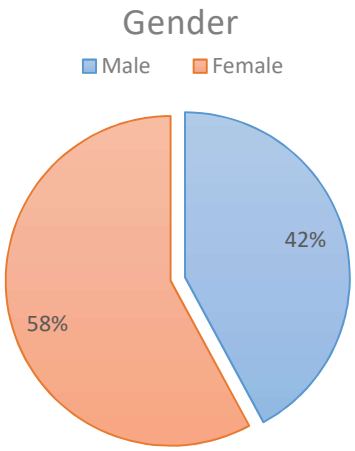
Appendix C: Survey Graphs

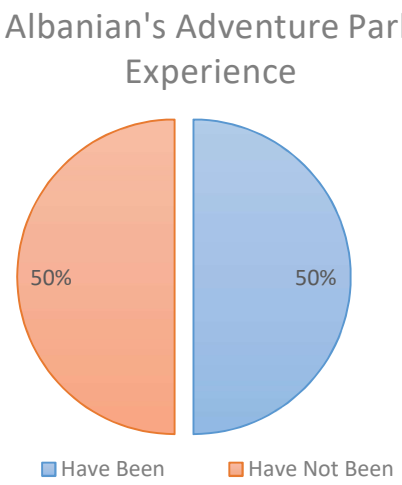
- Breakdown of our Respondents

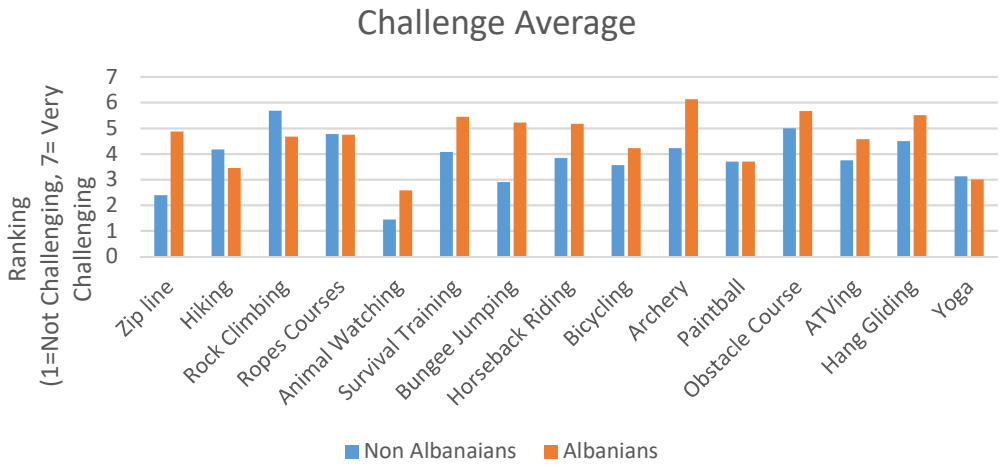


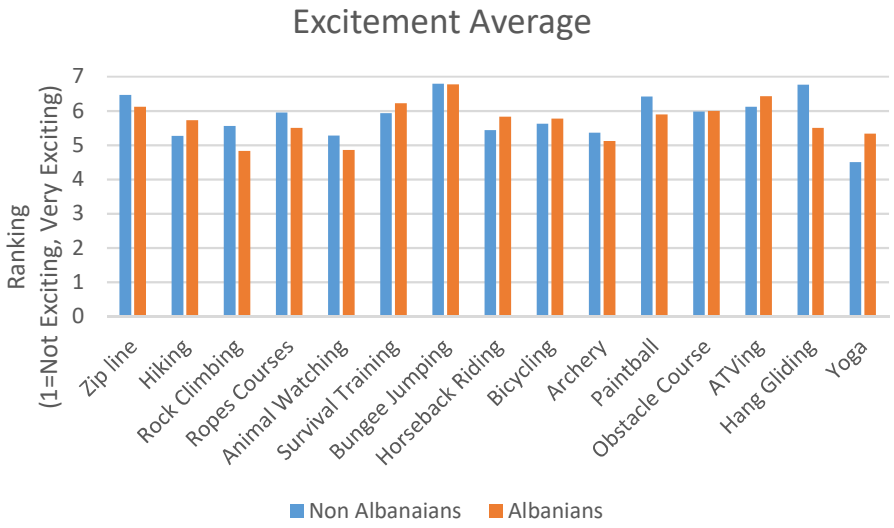


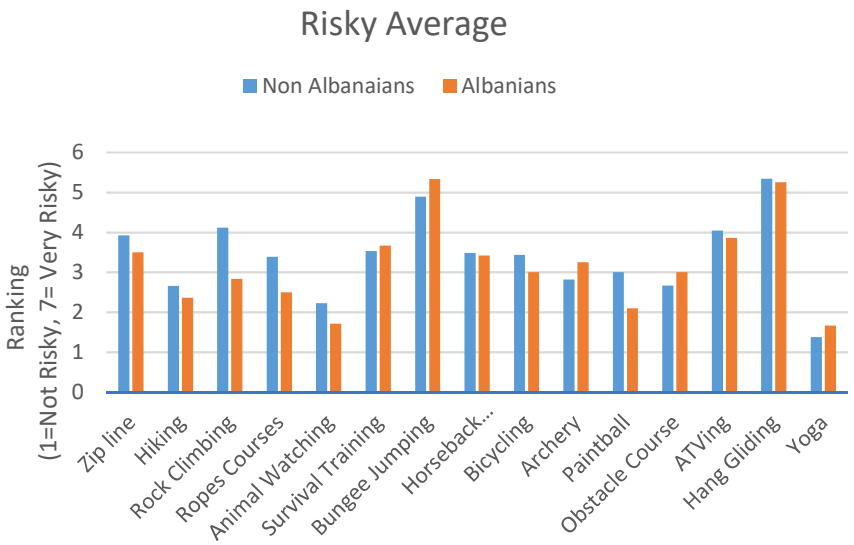



Gender
Male
Female
42%
58%


Albanian's Adventure Park Experience
50%
50%
Have Been
Have Not Been


Challenge Average
Ranking (1=Not Challenging, 7= Very Challenging)
0
1
2
3
4
5
6
7
Zip line
Hiking
Rock Climbing
Ropes Courses
Animal Watching
Survival Training
Bungee Jumping
Horseback Riding
Bicycling
Archery
Paintball
Obstacle Course
ATVing
Hang Gliding
Yoga
Non Albanaians
Albanians


Excitement Average
Ranking
(1=Not Exciting, Very Exciting)
7
6
5
4
3
2
1
0
Zip line
Hiking
Rock Climbing
Ropes Courses
Animal Watching
Survival Training
Bungee Jumping
Horseback Riding
Bicycling
Archery
Paintball
Obstacle Course
ATVing
Hang Gliding
Yoga
Non Albanaians
Albanians


Risky Average
Non Albanaians
Albanians
Ranking
(1=Not Risky, 7= Very Risky)
6
5
4
3
2
1
0
Zip line
Hiking
Rock Climbing
Ropes Courses
Animal Watching
Survival Training
Bungee Jumping
Horseback...
Bicycling
Archery
Paintball
Obstacle Course
ATVing
Hang Gliding
Yoga

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