OBSTACLE COURSE RACING
EVOLUTION OF SPORTS TRAINING
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Midpoint Thesis Proposal
Spring 2014
Executive Summary
PERSONAL INTEREST

LEGEND

PERSONAL INTEREST

THESIS

SPORTS MARKET

SPORTS AUDIENCE

HEALTHY LIFESTYLE

FITNESS INDUSTRY

CONDITIONAL STATEMENT

GROUP TRAINING

OBSTACLE COURSE RACING

DESIGN NEEDS

OPPORTUNITIES
PROFESSIONAL GOALS

After the academy I would like to start off as a ID designer in a corporate setting, working for companies like Nike, Adidas, REI, Husky. These companies are all related to interests that I have outside of Industrial Design.
Although traditional sport activities like cardio and weight training can help you feel more energized, decrease stress and improve your mood. Many Americans still find it hard to integrate these activities into their daily life.

I imagine an environment that breaks this traditional sports paradigm; one that can drastically change the diversity of athletic training, enhance athletic performance, and provide a vehicle to engage participants with a rich social experience before, during and after training sessions.
I started off looking into the sports industry to gauge weather I as an industrial designer can address a need that has been explored yet.
SPORTS MARKET
PARTICIPATION
SPORTS STADIUMS DEMANDS

Global sports market: First thing I noticed was the anticipation of the bigger sporting events that are happening soon and in the near future. The World Cup and Olympics being the main two, it was shown that billions of dollars go into the construction of stadiums and structures that host these events. Previous host countries have lost their investment of these installations after the sporting event occurs due to lack of interest in using the facilities.
US SPORTS MARKET

Although, the demand for sports related structures is an important to notice, I decided to narrow down my investigations by looking at what specifically makes up the sports industry. So I chose to focus on the U.S. market and find out who is involved.

Breakdown:
- Sports Franchises
- Sporting Goods & Apparel
- Professional Leagues
- Amateur Leagues
- Recreational Leagues
- Entertainment
- Sponsors
- Athletes
- Spectators
- Fitness Industry
U.S. SPORTS MARKET MAKES ABOUT 440-470 BILLION YEARLY
SPORTING GOODS & APPAREL

• U.S. sporting equipment sales at retail sporting goods stores are $42.6 billion yearly.

• “Research from the National Sporting Goods Association (NSGA) indicates that tastes in individual sports, exercise and recreation are continually evolving in America.”

Thus, sporting goods companies are constantly searching for the next big product to attract the sports audience.
42 BILLION YEARLY
SPORTS LEAGUES

There is about 46 established professional and amateur sports leagues in the U.S., not counting the numerous amount of unregistered amateur and recreational leagues scattered around the country. To help narrow down my investigation, I focused on professional sports leagues.

- Recreational
- Amateur
- Professional
SPORTS FRANCHISES

I concentrated my investigations on the “Big 4” sports leagues in the U.S. (NFL, MLB, NBA, and NHL)

They bring in up to 26 billion dollars each year, majority of the revenue coming from gate revenue.
SPORTS FRANCHISE REVENUE

- 24% Media Rights
- 30% Sponsors
- 33% Gate Revenues
- 13% Merch

U.S. SPORTS FRANCHISE REVENUE

1. Merchandising
2. Media Rights
3. Sponsors
4. Gate Revenues

Source: PwC Global Sports Market Report
ISSUES

Through my investigation, I noticed an issue surrounding attendance at sporting events. Sport franchises are seeing a significant drop in gate revenue. Fans are starting to become less interested in attending live events. To help solve this issue, some franchises have:

- Construction mini theme parks (family zones, VIP lounges)
- New food selections (sushi, gluten free)
- Buying top talent
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<td>total attendance dropped by 400,000 thousand</td>
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<td>NFL</td>
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<td>17 Million</td>
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<td>NBA</td>
<td>18 Million</td>
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<td>NASCAR</td>
<td>Bristol Motor Speedway seats 160,000 Fans</td>
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WHO’S INVOLVED

My next step was to understand who’s involved with sports and broke that down by examining individuals that participate and individuals that spectator in sports.

Although, participation increased in sports, the lack of attendance in live sporting events is becoming a bigger concern to the sports industry. As we know, this effects the sports franchises revenue, so its important to know why this is occurring.

Indoor gaming activities increased 11%  
Fitness sports increased about 5%  
Outdoor activities increased 6.8%  
Experts say, “participation in many of these sports are rebounding after some decrease in participation in past years.”
NFL: 2007 all time high: 18,137,224 total attendance but in 2012 dropped to its lowest level, 17,391,163.

MLB: Total game attendance is down by 417,192 people in July 2013 compared to July 2012.
Why is this happening?

- Ticket Prices
- Fan Violence
- Digital Experience
- Active Lifestyle
2.7% increase to $27.73 average ticket price, steepest rise in price since 2009

2012-$78.38 a 2.5% increase from 2011

1.7% to $48.48, First time prices has been raise in 3 year
Fan Violence

Fan violence has increased in American professional sports in recent years and continues a factor when families decided to attend a game.

A 2011 study conducted by the National Institutes of Health examining 900 NFL games over 11 years found that domestic violence increased by 10 percent. (huffingtonpost.com)
Digital Experience:

Advancements in digital technology in recent years have made it easier for people to connect with their personal interest mobility.

Mobile media has become one of the most popular ways of viewing sports. Smartphone’s have made it possible for sports fans to now view games, keep track of player statistics and interact with their favorite athlete via social media. No longer do fans have be seated on a couch or bar stool to get full coverage of their sports teams.

83 percent of sports fans say they check social networks while watching games.
Becoming Active

Although the effects of ticket prices, fan violence and digital devices are significant, the most appealing to me was the idea of spectators looking to become more active and truly start living the sports lifestyle.

Studies show that sports leagues in America are now pushing their fans to live a healthier lifestyle. The NBA, NFL are the adopting this movement more than the other with their programs NBA FIT and NFL Play 60 which raises awareness of the importance of staying active.

SECONDARY REASONS:

- High Ticket Prices
- Digital Experience
- Fan Violence
SPECTATORS ARE NOW BECOMING THE ATHLETES. GETTING OFF THE COUCH AND BECOMING MORE ACTIVE.
The sports lifestyle encompasses many things. But, most importantly it’s about living healthy and staying active.
HEALTHY + ACTIVE LIFESTYLE
Becoming Active

This notion of living a healthier and active lifestyle is starting to take off in U.S. People are becoming aware of the obesity problems, healthcare cost and becoming more exposed to the benefits of this lifestyle.

Investigations:

- Obesity
- Healthcare
- Benefits
"More people are running, biking, and exercising in other ways in hundreds of US counties."

according to new research from the Institute for Health Metrics and Evaluation (IHME) - July 10, 2013
Obesity

Obesity rates continue to climb in the U.S. but at a lower percentage than past years. Americans are making a strong stand against obesity. This movement has taken noticed in hundreds of U.S. counties.

“Around the country, you can see huge increases in the percentage of people becoming physically active, which research tells us is certain to have health benefits,” said IHME Director Dr. Christopher Murray
of American population is overweight or obese

68%

CDC

of the American workforce is overweight, obese, or has a chronic health condition

86%

Gallup

of Americans don’t exercise at all.

25%

CDC
Healthcare

This academic has also effects people wallets. Healthcare cost have skyrocketed in recent years and that’s mainly due to obesity related diseases. It’s safe to say once people know it affects their money, they take notice.

“Preventable chronic diseases like diabetes, heart disease, hypertension and osteoporosis account for more than 78% of U.S. health care costs.”
30% of children are obese

The obese pay

42% more in health costs per year

vs.

Average persons pay
Benefits of a Healthy Lifestyle

• Getting active helps:
• Better sleep
• Feel more energized
• Decrease stress
• Improve mood
• Lose or control your weight

Prevents:
• Early Death
• Diabetes
• Chronic disability
Gyms & Personal Trainers

So, how are these individuals achieving this goal of living a healthier more active lifestyle? The overwhelming answer is Gyms and Personal Trainers.

- Americans spent $21.4 billion on health club membership fees and personal training.
- 51.4 million Americans six and older are health clubs members.
- 6.4 million Personal trainer users in the U.S.

Cited: IHRSA’s annual health club consumer study
Conducting Interviews

Therefore, I decided to go out talk with professionals in the fitness industry and members of their facilities.

Gyms Visited:
- 24 Hour Fitness
- Planet Fitness
- Polk Street Boxing

Fitness Meetups:
- November Project SF
- Play Recess SF
- I Play for SF
Talk To:

Gym Managers: Validation of increase of membership every year, especially at the start of the year due to New Year’s resolution goals.

Q: Do you see memberships drop off or increase after the first month of the year?
A: Memberships start to steady off after the January and February of the new year.

Q: How do you bring more membership into the gym in off seasons?
A: Introduce new activities to the gym, like new group fitness class to attract more customers to our facility.

Q: Why group fitness classes?
A: They are becoming popular amongst our new and existing members, because we offer them as part of the membership.
Personal Trainers:

Q: What kind of clients do you work with?
A: We have clients of all abilities, both athletes and average Joes. Right now, most of the clients we work with are looking to become fit and aren’t coming from an athletic background.
Q: Are you seeing any trends within the fitness industry?
A: Yes, we noticed a trend in electronic wearables that we are suggesting to our clients to help us monitor them and keep them motivated when they aren’t working with us. Also, we are seeing many of our clients are making use of the free group classes we offer and are tending to use that as a means of working-out rather than weight training.

Members:

Men at the gym tend not use the group classes offered, but when asked if they participate in any group training. ½ said yes but outside of the gym, participating in fitness meet-ups and weekend events like intramurals or competitive events.

Women are the primarily users of these classes, the most popular answer was yoga classes. ¼ of them participated in group training meet-ups around the city.
Electronic

The feedback from fitness professionals shows there are two major trends right now in the fitness industry. They are electronic fitness devices and group training classes.
Investigations into Personal Fitness Devices

- 75% own a fitness technology product (up from 61% in 2012)
- Dedicated wearable fitness devices tripled in ownership from 2012 (3%) to 2013 (9%)
- Fitness apps more than doubled in ownership from 2012 (8%) to 2013 (20%)
Meetups

Having seen an interest in group training, I ventured out to take part in some meetup groups around San Francisco. The most appealing was November Project which is a popular group training meetup.

I go to talk with these individuals and got an understanding of why they attend these activities.
November Project is a group training meet-up organization located in a few city around the U.S.

What I did: I attended 4 meet-ups and conducted several informal interviews about why people attended these events?

**ANSWERS:**

- **They were bored with running and working-out in the gym; this was a new engaging way to train.**
- **November Project got them outside of the gym and used elements in the city as training equipment.**
- **Social element involved within these events, working out with others helped motivate them to comeback and push themselves to finish the workout.**
- **Got to meet new people and make friends within the city.**
Summary

Although, gyms, personal trainers and fitness devices provide a way to benefit individuals on achieving their goal of a healthier and active lifestyle, my investigations proved that group training got individuals more engaged with the active lifestyle and provided bonus such as:

- New training atmosphere
- Social experience
- Motivation
Conditional Statement
In recent years there has been a worldwide trend of people wanting to live a healthier and active lifestyle. While professional trainers and health club provide the training needed to achieve this goal, people are looking beyond the traditional gym setting and seeking out a more exciting and engaging atmosphere to truly make a long-lasting change.
FURTHER INVESTIGATION

I decided to investigate group training further to establish a direction that could relate to both my thesis statement and personal interest. My further investigations consist off market, trends, and participation analysis of the group training movement in the past 5 years.
GROUP TRAINING
FURTHER INVESTIGATIONS
Trends

My investigation into this movement shows the most popular group training activities among participants are Yogi, Crossfit, and Obstacle Course Racing.
CROSSFIT
7,000 number of affiliate gyms, up from just 13 in 2005

Cited: Channel Signal

OBSTACLE COURSE RACING
85% increase in “extreme” event participation from 2006 to 2010.

Cited: Channel Signal
Participation Growth (U.S.)

- **Yoga**
- **CrossFit**
- **O.C.R.**

Legend:
- Personal Interest
- Thesis
- Sports Market
- Sports Audience
- Healthy Lifestyle
- Fitness Industry
- Conditional Statement
- Group Training
- Obstacle Course Racing
- Design Needs
- Opportunities
Decision

Each of these trends are showing growth in participation and worthy of investigating deeper. I made the decision to focus on Obstacle Course Racing.

Why?

Obstacle Course Racing is a new movement in sports and it is in its early stages, which creates a lot of opportunity for industrial design.
Thesis Topic

Not only that, but it's different in experience compared to other sports training. Participants are engaged in “true human fitness”, our bodies were built to do these types of events. They tap into our primal instincts from generations of hunting and combat which acquired a lot of running, crawling, climbing, throwing, jumping... the list goes on.
OBSTACLE COURSE RACING
EVOLUTION OF SPORTS TRAINING
1. Obstacle Courses Races were developed by elite athletes that have accomplished the toughest physical challenges.

2. They set out to change the way the world perceived obstacle course racing.

3. Unlike triathlons and typical marathons, obstacle course racing demands more from your athlete abilities.
1. Obstacle Courses Races were developed by elite athletes that have accomplished the toughest physical challenges.

2. They set out to change the way the world perceived obstacle course racing.

3. Unlike triathlons and 5K/marathons, to succeed in OCR, one must possess total athleticism, absolute discipline, and mental toughness.

4. Cross a Spartan Warrior finish line.
OCR Market

The potential of the obstacle course industry and connection it has to my personal interest in construction and sport made me want to pursue it as my thesis topic.

I started my investigation studying the “Big 3” Tough Mudder, Spartan Race and Warrior Dash, these companies started the revolution and evolution of this industry.
01 TOUGH MUDDER
1.3 MILLION PARTICIPANTS TO DATE
10-15K PEOPLE PER EVENT

02 SPARTAN RACE
YOU’LL KNOW AT THE FINISH LINE
91 EVENTS TO DATE
300,429 PARTICIPANTS TO DATE

03 WARRIOR DASH
1,194 RACERS IN 2007
150,000 IN 2010
700,000 IN 2011
OCR Market

Obstacle course racing events started becoming public in 1987 with the Tough Guy Run held in the U.K. Since then the industry has feel off until, the development of the “Big 3”
They became so popular in recent years and continue to pop up everywhere around the U.S. and International Countries.

2009 to 2010 Creation of the Big 3

2014 98 Companies Total in US
Beginner Races

I broke down these multiple events in means of difficulty. First being the beginner races which attracts participants that want to have a fun time and enjoy a lite fitness session outdoors with a few obstacles thrown in.

Whats involved:
- Less Competitive
- Require less training
- 5k in length
- 10 or less obstacles
Advanced Races

Next, are the advanced courses which majority of these races fall under. They are more competitive than the beginner races but, have an emphasis on teamwork to get through and around obstacles. They attract a diverse group of people, ranging from average Joes and Janes to elite athletes.

Whats involved:

• Competitive
• Teamwork aspect
• 10-12k in length
• 25 or less obstacles
Elite Races

Last, I investigated the small circuit of elite races within the industry. The most popular out of the few are Spartan Death Race and Goruck Series. These races are setup for top tier athletes that have to qualify in order to participate.

Whats involved:
• Very Competitive
• Top Tier Athletes only
• 24-48hrs to complete
• 10% passing rate
Benefits of participating:

- Raising Money
- Social Experience
- Entertaining
- Physically Challenging
- Mentally Rewarding
Issues in the industry:

- Saturation of events
- Registration cost
- Event location
- Level of challenge
- Injuries & Safety
ATTENDING AN EVENT

I wanted a better understanding of what really went on at these events and who are the people participating in them. So I got to spectate a Tough Mudder event at Diablo Grande outside of Oakland.

What I Conducted:
- Observations
- Interviews
- networking
Environment

My first observation was taking note of the surroundings in which this event took place. I got the chance to talk to an event coordinator that gave some insight to what they look for in choosing a location. I learned that these locations should also serve as an nature obstacle itself and as a backdrop for the racers to appreciate the beauty of nature.

Enough space for:

• Whole course
• Parking
• Community grounds
• Sponsors tents
• Food & Retail
Obstacles

Moving on, I was able to walk the course and observe the many obstacles, 25 in total ranging from natural to man made.

The most noticeable was the extreme obstacles which were the arctic enema and electronic eel. These extreme obstacles are specific to Tough Mudder and support their brand image of uniqueness amongst other events.

1. Berlin Walls
2. Electroshock Therapy
3. Kiss of Mud
4. Funky Monkey
5. Everest
6. Walk the Plank
7. Twinkle Toes
8. Electric eel
9. King of the Mountain
10. Hold your Wood
11. Cage Crawl
12. Phoenix
13. Log Jammin
14. Glory Blades
15. Cliffhanger
16. Pyramid Scheme
17. Pole Dancer
18. Underwater Tunnels
19. Boa Constrictor
20. Hangin Tough
21. Ladder to Hell
22. Island Hopping
23. Balls to the Wall
24. Dirty Ballerina
25. Lumberjacked
Social Experience

Last, I observed the social experience that existing before, during and after the event. Tough Mudder tries to involve both participants and spectators in their events in order to create a team that can support each other through the course. They inspire racers to help one and other to overcome obstacles in a pre-race speech.

Spectators play a part as well, they are able to walk the course and follow family, friends and cheer them on though the challenges.

The environment at the end of the race is community oriented. Tough Mudder provides food, beverages for sale and throws mini concerts for the Tough Mudder community.

What I noticed:
Spectators were limited to areas in which the can interact with racers
The community environment lacked in many ways at the end of the event, for example:
Not enough seating, racers went back to their cars
There was a price for everything.
Racers end up paying over hundred dollars to participate and are charged additional fees for storage, food, family and friends spectating. They wanted a better deal out of it, or at least one that can be as unique as the course itself.
In addition to observing, I had the chance to converse with racers at the finish line to get their feedback on the event. I created personas based on the individuals I interviewed from the Tough Mudder, which helps understand who my target users will be.
**PROXIMO**

- Comes to these events for fun and entertainment
- Runs these events with friends
- Doesn’t enjoy the running portion of these events, but enjoys the obstacles
- Competes against the group he came with
- Not focused on the physical training aspect
- Looks forward to the after party
COMMODUS

• Looks forward to these events, sets it as a goal
• Uses these events for training proposes, but mostly as confidence booster
• Comes with a group of people (friends and family)
• Only attends these events when they are near home or 2-4 times a year
• Enjoys the physical and mental challenges of the obstacles
• Doesn’t enjoy the running portion of these events
• Uses these events as bragging rights
MAXIMUS

- Crossfitter or athlete
- Enjoys the extreme nature of some obstacles
- Uses these events to test his or hers athletic abilities
- Loves the competitive nature
- Competes against themselves and other racers
- Attends 4 to 6 of these events each year
- Willing to travel to compete in different events
- Comes by themselves or with a group of athletes around the same ability
Networking

- CEO – information regarding the future of this industry and internship opportunities within the company

- Event MC – Further insight into what types of people come out to these events.

- Events Staff – Their experiences setting up and operating the events. Possibilities to volunteer in the next event.
Sean Corvelle
Tough Mudder MC
Stakeholders

I need to consider the stakeholders involved with obstacle course racing. This will give me a reference to off of when continuing into my research stage.

- Participants
- OCR Companies
- Manufactures
- Sponsors
- Publications
- Sporting Goods Companies
- Contractors
- Sports Franchises
- Health Clubs
LEGEND

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DESIGN NEEDS

OPPORTUNITIES

DESIGN NEEDS
Needs

Primary Needs:
1. Developing a new platform for these races, creating more flexibility for where these companies can host their events.
2. Innovation of obstacles to bring back and attract new participants
3. Engaging the social experience seen at these events in a new innovated approach

Secondary Needs:
4. Develop training environment for use by personal trainers to attract this new audience.
5. Design safer obstacles to limit injury on the course and lower insurance cost for future events.
6. Design innovated equipment to help racers accomplish these challenges quicker and with less risk of injury.
OPPORTUNITIES

Looking forward, I see opportunities that can make a strong impact on the obstacle course racing industry.

1) Modularity
2) New Challenges
3) Audience Participation
Opportunity 1

If there was a less expensive, more efficient and flexible system or method of constructing an obstacle course race event, then companies within the sports industry could expand business opportunities into existing stadiums and arenas around the country.
If obstacles were able to replicate extreme sport experience, then new dynamic obstacle course racing could surprise and evoke a sense of fear in racers upon arriving at a challenge.
If there was a way to enhance the audiences interaction with participants that allows them to become more active throughout the length of the event, then this could introduce new structures within sports that invites the audience to play a major role in the outcome of any given challenge.
NEXT STEPS

• 3 on1 Research Prep
• Tough Mudder, Lake Tahoe
• Tough Mudder, Volunteer
• OCR Bootcamps
• Continue Networking:
  o Contractors with Tough Mudder
  o Racer Blogs & Publications
  o AT&T Park SF
Conclusion
**SUMMER 2014**

- Summer Session
  - 3on1 research prep
  - Tough Mudder Event
  - OCR Bootcamp
  - Networking

**FALL 2014**

- Research Phase
  - Select user group
  - Materials & Manufacturing
  - Further research
  - User testing & feedback
SPRING 2015

Design Phase
- Concept Development
- Design Ideation
- User feedback
- Mock up Models

FALL 2015

Implementation Phase
- Prototyping
- User feedback
- Final Model
- Final process book
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<th>Name</th>
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<tr>
<td>Sean Bulter</td>
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<td>Laura McCloskey</td>
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<td>Anthony Matesi</td>
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<td>Micheal Mark</td>
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BIBLIOGRAPHY


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