

A man wearing a black and white striped referee shirt is pointing his right index finger directly at the viewer. He is standing against a plain, light-colored background. The image is framed by a black border.

**Phase 1 Deliverables Document  
(Team 2)**

***The Floor Guards Project***

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## Overall Scenario

Team 2 has been asked to help resolve a challenge faced by Skate World of Tallahassee. Traditionally, Skate World has employed “floor guards” to referee behavior and safety of roller skaters during its open skate sessions, races, and other skating events. Skate World management has become concerned about the effectiveness of floor guards and the increase in skater accidents that may result. Team 2 has been asked to find ways to improve floor guard performance for Skate World.

## Problem Clarified

When first introduced to Skate World, Team 2 was presented with a problem described as floor guards who did not possess the necessary knowledge skills and attitudes to execute their duty to the level of management satisfaction. After discussion and observations it appears that the problem is a more complex three pronged problem:

- (1) Regardless of floor guard behaviors, skaters choose to engage in unsafe behavior when skating at Skate World.
- (2) Floor Guards (for multiple reasons) do not “guard” the floor as carefully as they should be.
- (3) Skaters get hurt, and bring law suits against Skate World.

In our opinion, resolution of “the floor guard problem” at Skate World, will not occur without dealing with all three of these issues satisfactorily.

## Needs Assessment & Analysis

### Current Situation.

The true Floor Guard “problem” involves more than floor guards. It begins with **customer behavior**. Roller skaters of all ages tend to skate too fast for their own safety. Older skaters underestimate the affects of age on their balance and skating abilities. None are required to sign behavior/legal wavers. Most refuse to wear skating pads. Once skaters build up confidence and ability, many try to evade floor guard warnings about safety.

**Floor guards** are trained to a sufficient level but tend to slacken performance over time. Some floor guards are lacking the confidence to confront skaters, especially adult skaters. As can be expected, some are better than others at floor guarding. Additionally, floor guards’ performance tend to represent a U-shaped curve, as they are highly motivated and alert at the start and end of their shift, but low during the middle of it. Effective use of whistles and voice level is lacking among some guards. Some are distracted by adolescent friends wanting to talk. During races, floor guards are not as diligent in vocally warning

racers to round corners cautiously. They tend to assume that the SME's presence on the floor means they can relax in their race coaching duties. It was also noticed that floor guards are very difficult to spot at times when the rink is in heavy use.

**DJ's** at times play music that is too fast and energizing, thereby causing skaters to skate and behave aggressively. At times they do a poor job using their announcer role to assist floor guards in certain circumstances.

Lastly, the **physical setup of the skating rink**, contributes to the unsafe behaviors of skaters as well as the increased complexity of the skate guards job. Examples would include mixed skating of extremely different skater abilities, and foot traffic of beginner skaters *through* the main skating loop. Like the situation caused by slow vehicles on and interstate, advanced skaters cut and swerve around slow skaters, and often fall in the process. Rule and safety signage around the actual staking area of the rink is minimal. All of the above situations result in skaters being hurt while skating, and law suits being filed against Skate World. During repeated conversations, the client showed significant concern and anxiety over law suits. The above also contribute to her inability to take a vacation due to a concern regarding safe operation of the rink.

### **Desired Situation**

An ideal situation would include skaters that skated slower and were more conscientious about safety. Adult skaters unwilling to wear pads and listen to floor guards would be held legally responsible for their own behaviors.

Floor guards should be consistently attentive to skater behavior and use their voices/whistles with effective authority whenever necessary (including with adult skaters). Floor guards should be visible at all times and recognized as authorities on the skate floor. Floor guards would ideally act as the SME acts in given situations, and say what she wants them to say at the right times (i.e. when coaching racers around corners). All floor guards should exhibit certain "best practices" so that the better floor guards don't get overworked.

DJ's should use music volume and tempo to control skater behaviors. They should also be supporting floor guards with adequate announcements or lighting signals.

Signs should be clearly visible from the skating area of the rink that promote safe behavior and rink rules. Ideally, foot traffic should not be crossing the skate rink perpendicular to the flow of skater traffic, nor should advanced skaters need to cut and weave around slow beginners who block the regular flow of traffic. On the flip side, the rink should not be set up such that skaters are encouraged to go to quickly, because even advanced skaters fall and hurt themselves above certain speeds.

Finally, changes such as the above should redefine the rink into a less likely target for law suits. Furthermore they would also raise the client's confidence in her employees' quality of work, thereby enabling her to take the time off she desires.

## **Possible Solutions**

Following discussion and brainstorming, Team 2 approached Skate World with twenty-one possible solutions for the above three problems. Eleven were selected by the client as plausible from an SME's perspective. **See Appendix A.** From among these Team 2

selected five leading solutions. These were then combined into the following three solutions:

- (1) Create **floor guard shirts** that will increase visibility and authoritative posture of floor guards on duty.
- (2) Create a **job aid to assist DJ** in regulating music tempo during skate sessions as well and in executing behaviors that will assist floor guards.
- (3) Establish a **feedback and motivation system** that will increase the quality and consistency of floor guard performance. This system will also allow Skate World management to reward positive behaviors, correct negative behaviors, and communicate objectively with floor guards.

### Anticipated Timeline

See **Appendix B** for a timeline showing the design, development and delivery schedule for the above solutions.

### Tentative Descriptions of Solution Designs

Team2's three solutions for the "Floor Guard" problem do not include any instructional interventions. As a result, this report will describe in more detail the above three solutions in place of where "instructional materials" would be described. It should be noted that the specific details on each of these items will not ultimately be available until design and development are underway during Phase 2. The descriptions below are tentative:

- (1) **Floor Guard Shirts.** In response to the difficulty observers had in locating floor guards on the dimly lit skate floor, Team 2 proposed floor guard shirts that used some sort of "light-up" mechanism and/or reflective material. It was felt that simply changing colors of the shirts would not suffice. Due to the low lighting in the rink. Furthermore, in the spirit of other authority clothing (i.e. police, staff, etc...) the shirts will be printed with some phrase (i.e. Floor Guard, Staff).
- (2) **DJ Job Aid.** Responding to the clients description of the DJ as "invaluable on Friday nights", and her SME opinion that controlling music tempo was crucial to controlling skaters behavior, our DJ Job Aid aims to encourage both. We envision the job aid being a sturdy, ringed, flip book that clarifies DJ actions/announcements for crucial events such as: skater injuries, races, and other events. The job aid will include instructions on selecting and playing music at the appropriate tempo for skater safety.
- (3) **Feedback/Motivation System.** Due to our conviction that a motivational reward system should not be used without accompanying feedback, this

solution is a union of two originally separate ideas (feedback & motivation). We intend the system to allow all management staff to objectively and quickly record floor guard behavior in a way that simultaneously serves as an incentive tool. (This system aims to take into consideration the clients already hectic work atmosphere by being easy to use and store). We envision the system using a “break-room” whiteboard, in combination with some type of pad/ticket system for record keeping.

### **Anticipated Work Breakdown Structure**

Please see **Appendix C** for a semi-detailed work breakdown structure to be used during Phase 2.

### **Pricing and Cost Projections.**

The solutions discussed below and above are tentative, therefore cost projection need to be considered equally tentative. Cost is very much a factor of subsequent design and development. Initially, the “**Floor Guard Shirt**” solution will be the most costly to implement as it may involve buying new jerseys with lighting attachments and custom stitching. This solution should not pose any additional cost after implemented. We anticipate un-altered referee jerseys will cost in the \$20-30 range each.

The **DJ job** aid will not cost anything beyond than the printing and laminating requirements for the actual job aid. This should cost \$20-30 for quality color printing and lamination. The job aid may cost more to implement *if* it involves using a music selection service that aids in the appropriate tempo of music being selected. This cost is unknown at this time.

The **motivation and feedback system** will cost between \$100-200 dollars as it will include the purchasing of a medium sized white board, and possibly the creation of some tear off pads to be used during feedback times.

The **motivation system** could also cost the client more depending on the forms of motivation she chooses to use with floor guards (ie. Monetary incentives).

**Cost Benefit Analysis:** The benefit of reducing the chances of skaters’ injury due to inadequate floor guards’ policing and instructions to beginner skaters, is a minimization of negative legal repercussions if an injury is ever sustained by skaters. By ensuring that the client has provided all necessary measures to prevent an accident would, her chances of it being found negligent by the court in the event of a lawsuit by injured skaters would be minimized.

## Assumptions Regarding Intended Audience

The above changes are aimed at three audiences. Solutions are created with attention paid to those who would be using them (typically employees) and the audience they would be affecting when implemented (both employees and roller skaters) .

- (1) **Employees** include floor guards, most of whom are high school age individuals. For the most part they are aware of their duties as floor guards, but are not confident in certain areas of behavior. Motivating incentives and corrections need to be appropriate to high school age mentality and emotional development. DJ employees are older in age and competent at their jobs. The importance of their role was not introduced to Team2 until late in Phase 1. Less is known about them and this will have to be explored during Phase 2 as part of solution design.
- (2) **Management.** As users of the motivation and feedback system, management need to be taken into consideration. Their primary characteristics in this regard are that they are highly distracted, very busy, and can not be expected to use any inflexible or complicated systems. As business owners they hold strong opinions about the solutions implemented and thus need to be kept clearly in the communication loop when major decisions are being made.
- (3) **Customers** are the third audience component. We assume they will not exhibit safe behavior without motivation. They span all age groups and temperaments. We assume they will resist, almost subconsciously, a wide variety of performance interventions in an attempt to maximize their pleasure and freedom.

## Learner & Context Analysis

No training solutions will be designed or implemented by Team 2. Certain characteristics of the employees that impact the design of the solutions are listed above in the audience section.

The environment (context) in which the solutions will be implemented is the actual work performance environment (skating rink).

# Appendix A - RANK THE PROBLEMS & SOLUTIONS

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**GOALS** - Which "ISSUE" would you rank as your most critical issue?

- Decrease the accident rate of skaters.**
- Identify ways to standardise and maintain consistent floor guard behaviour.**
- Make Skate World less legally liable.**

Yellow indicates client selected that solution over others.

**SOLUTIONS** – Which would you rank as most useful.

## **Decrease the accident rate of skaters.**

- Erect more safety signs/instruction around skating rink \*\*
- Introduce visible and authoritative floor guard shirts
- Modify foot traffic and/or floor location of beginner skaters \*\*
- Have DJ make regular safety announcements (with assistance of job aid) \*\*
- Standardise and write skater rules / make more visible \*\*
- Have an enforcement schedule plan for skaters' rules
- Introduce a raffle/incentive for safe skating.
- Regulate music tempo
- Use 'reverse peer pressure' techniques for repeat-offender skaters

## **Standardise and maintain consistent floor guard behaviour.**

- Formally train floor guards (produce training materials/program)
- Devise incentive and/or punishment scheme for floor guards
- Introduce quarterly refresher training for floor guards
- Have floor guards review job aid/checklist prior to each session
- Have floor guards use waistband amplifier to attract skaters' attention
- Introduce floor guard communications system (with each other)
- Write down/objectify all floor guard behaviours
- Have floor guards attend confidence training

## **Make Skate World less legally liable**

- Count skaters as they enter the building (turnstile?)
- Make beginner skating lessons compulsory
- Ensure adult skaters sign waiver forms (at least if they turn down pads)
- Obtain legal counsel

\*\* Asterisks also decrease liability



# Appendix C - Work Breakdown Structure

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## Decrease the accident rate of skaters.

### 1. DJ job aid : Have DJ make regular safety announcements (with assistance of job-aid)

#### 1.1 Collect the content (3 hrs : including 1 hr travel time)

- 1.1.1 Interview with the client in order to obtain specific words, phrases, and the tone she wants used by DJ for various events
- 1.1.2 Observation and interview with the DJ in order to identify how he currently he performs the task (making safety announcements)
- 1.1.3 Discuss music selection, music tempo issue. Brainstorm solutions to controlling the music tempo issue.
- 1.1.4 Discuss clients willingness to pay for prototype and final production costs.

#### 1.2 Instructional and learner analysis (4hrs)

- 1.2.1 Transcribe the interview script and/or compile notes from observation/interview
- 1.2.2 Break down and classify the content for each type of event
- 1.2.3 Identify performance objectives for the DJ
- 1.2.4 Identify which format or wording will be most suitable for the DJ

#### 1.3 Design and develop the DJ job-aid ( 10 hrs)

- 1.3.1 Design the layout and sequence of the job aid
- 1.3.2 Develop the content on computer.
- 1.3.3 Create the job-aid (printed pilot test version)

#### 1.4 Pilot test (4 hrs: including 1 hr travel time)

- 1.4.1 Have the DJ try the job-aid
- 1.4.2 Observe skaters in order to examine the effect of the aid
- 1.4.3 Receive feedback from the DJ and the client
- 1.4.4 Interview some of the skaters

#### 1.5 Revise (5 hrs)

- 1.5.1 Identify any problems areas for improvement based on the information gathered from the pilot test
- 1.5.2 Revise the job-aid

#### 1.6 Produce final product (2 hrs)

- 1.6.1 May payment arrangements for final product with client.
- 1.6.2 Produce the final durable version at a copy center, or elsewhere.
- 1.6.3 Quality review the final product for any defects
- 1.6.4 Deliver the job aid to the client.

### 2. Floor shirt : Introduce visible and authoritative floor guard shirts

#### 2.1 Draft design plan (10hrs)

- 2.1.1 Find good practices of other skate rinks to benchmark
  - 2.1.2 Brainstorm different shirt ideas
  - 2.1.3 Print or draw up some prototype ideas.
- 2.2 Needs assessment of the floor guards and the client (3 hrs including travel time)**
- 2.2.1 Have a group interview the floor guards and the client
  - 2.2.2 Collect information regarding their preferences
  - 2.2.3 Identify budget of the client
  - 2.2.4 Ask client about how she wants to pay for prototyping design costs. (Pay for one and have it modified, or make all selections from pictures, and then pay for a full set)
  - 2.2.5 Ask client how she wants to payment for final products.
- 2.3 Market research (20 hrs including travel times)**
- 2.3.1 Identify contact information of available vendors
  - 2.3.2 Identify range of designs, materials, and prices
  - 2.3.3 Select a vendor
  - 2.3.4 Create a printed sample of options, prices, and samples. OR
  - 2.3.5 Order a sample and modify it into a prototype.
- 2.4 Mock-up (3 hrs including travel time)**
- 2.4.1 Have the floor guards try on t-shirts
  - 2.4.2 Receive feedback from the client and the floor guards
  - 2.4.3 Observe reactions of skaters
- 2.5 Revise shirts (if needed)**
- 2.6 Final product (2hrs)**
- 2.6.1 May payment arrangements with vendor.
  - 2.6.2 Order the final product remaining shirts.
  - 2.6.3 Deliver final shirts to client.

**Standardise and maintain consistent floor guard behaviour.**

### **3. Quarterly feedback session.**

- 3.1 Call/meet with Nicole (30min; 1hr incl travel)**
  - 3.3.1 Create exhaustive list of FG behaviors to feedback.
  - 3.3.2 Ask what ways she would prefer to do feedback.
  - 3.3.4 Ask what seems to have worked or not.
  - 3.3.5 Ask why she has or hasn't consistently given feedback.
- 3.2 Meet with FG's (45min; 1hr incl travel)**
  - 3.2.1 Discuss how they most prefer feedback done.
  - 3.2.2 Discuss ways she gives feedback they dislike.
- 3.3 Select ideal feedback method. (2hrs)**
  - 3.3.1 Meet as a team (phone, wiki, in class)
  - 3.3.2 List out all potential methods.
  - 3.3.3 List out pro's & con's of each.
  - 3.3.4 Select ideal feedback strategy.

- 3.3.5 Select ideal feedback schedule.
- 3.4 Bring in consultant for formative feedback. (30min)**
  - 3.4.1 Meet with consultant. (phone/email/wiki/in class)
  - 3.4.2 Share changes with team.
  - 3.4.3 Implement any necessary changes.
- 3.5 Create physical feedback tool(s).**
  - 3.5.1 Create actual feedback products.
    - 3.5.1.x Handouts/tokens/tear-off pads? (2hrs)
    - 3.5.1.y Meeting checklists? (1hr)
    - 3.5.1.z Feedback product instructions. (30min)
  - 3.5.2 Create actual tool usage schedule. (if necessary)
    - 3.5.2.x Whiteboard system ?
      - 3.5.2.x.1 Buy whiteboard (3hrs)
      - 3.5.2.x.2 Modify whiteboard. (2hrs)
    - 3.5.2.y Simple folder system
- 3.6 Meet with client to sign-off on deliverable. (1 hr incl travel)**
  - 3.6.1 Schedule meeting with client
  - 3.6.2 Meet with client.
  - 3.6.3 Deliver document to client.
- 3.7 Hand over feedback product to Phase 3 for evaluation dev.**

#### **4. Devise incentive/punishment program.**

- 4.1 . Meet with Floor Guards. (45min; 1 hr incl travel)**
  - 4.1.1 Talk to floor guards about what will/won't motivate.
  - 4.1.2 Ask about hindrances motivation won't affect.
  - 4.1.3 Ask what kind of motivation system they might design.
- 4.2 Generate a list of possible incentives/demerit systems. (1 hr)**
- 4.3 Call/meet with Nicole (30min, 1 hr incl travel)**
  - 4.3.1 Create exhaustive list of FG behaviours to feedback.
  - 4.3.2 Ask what has worked/not worked in the past.
  - 4.3.3 Discuss what she can afford/ will consider.
- 4.4 Select most ideal motivation system. (2hr team meeting)**
  - 4.4.1 Inquire if incentive plan can dovetail with feedback plan.
  - 4.4.2 List pro's and con's of each system.
  - 4.4.3 Select most ideal system.
- 4.5 Create physical incentive documents (1 week?)**
- 4.6 Meet with client to sign-off on deliverable. (30min; 1 hr incl travel)**
  - 4.6.1 Schedule meeting with client
  - 4.6.2 Meet with client.
  - 4.6.3 Deliver document to client.
- 4.7 Hand over feedback product to Phase 3 for evaluation dev.**