

Marketing Requirements Document (MRD) “Smarter Basketball”

A smart basketball backboard and hoop

1. Introduction

Every basketball fan can turn on a professional game and see a screen covered in statistics and analysis on the way every player plays. Why should the average consumer be excluded from this? Smarter Basketball will provide the every-day basketball player with training, stat-tracking, and analysis that normally they could only dream of. The design challenge will be providing enough features to make the product worth it, while also making sure the product is simple and easy-to-use for any type of user.

To do this it will require:

- Physical backboard/hoop with sensors built in
- An app/program on a user's device to share feedback and statistics

App interface will include following features:

- Keep detailed stats and track user's growth over-time
- Immediate quick review of the workout/shootout (percentage, miss, etc....)
- Recorded footage for players' review
- Share this data with the user and provide feedback on their game
- Reviews and recommendations from professional basketball coach and players' community

Physical unit with features includes:

- Tactile and motion sensing to track the ball
- Camera sets to record and track users' movements

2. Revenue or Cost Focus

This product has a revenue focus. The market will be home-users who can afford high-end technology and want to improve their game. We do not wish to compete with existing technology in the NBA (Spalding for example), instead we want to create a new market for amateur users who wish to improve their game and learn more about basketball techniques.

3. Desire to Innovate

This product does not innovate the game of basketball, it innovates a user's experience within the game of basketball. This is a new invention (a similar product is [Dribbleup](#) which is a basketball with tracking, not the hoop/backboard).

There have been devices of technology integrated with the basketball itself and there have been services that improve the training experience. But we are hoping to combine some of the existing technology and adding more features including shooting form correction, shooting percentage stats etc.

4. Length of Time Horizon

a. Design schedule detail

Activity	Time Frame
Design Research	February 2021
User & Domain Analysis (U&DA) Complete	Late February
Development of Requirements and Context Scenarios	March 2021 (first half)
Development of Framework and Design Language	March 2021 (second half)
Form & Behavior Specification (F&BS)	Late March
Detailed Design Development	April 2021
Delivery of final design and presentation	Late April 2021

5. Understanding of the Problem

Quarantine has transformed almost every aspect of our lives. People find new ways to embrace the challenge and discover new tools and new products to improve their experience at home. As sports fans, we decided to challenge the existing technology for home basketball training experience.

With our fully integrated “Smarter Basketball” device, anyone is able to set this up in your personal training area, back yard, and home courts. The customer will be able to choose the level of needs for their personal training aspects (ball handling, shooting, cardio, etc.). And with the built-in camera sets on the backboard, motion and tactile sensors will track your shooting progress and record your shooting forms to help you push your limit. You will also be able to consult with professional basketball coaches and connect with other basketball users for feedback directly from your mobile application.

6. Willingness to Invest

This product targets amateur basketball enthusiasts who are willing to invest a lot into improving their game. This means that the stakeholders will need to invest in an advanced and sturdy design. Since the technology is pre-existing that will save on costs, but we will be taking that technology and building it into a new device. The construction of the device will need to be able to harbor the technology while also looking refined.

Things that we would have to focus on investing in are the basketball, backboard, camera, and motion sensors. To receive a higher quality basketball and the backboard that is similar to NBA standard, the cost would increase. The cost will also vary depending on the effectiveness of the motion sensor connected to the camera on the backboard.

7. Risk Factors

Although the market competition has remained relatively low and we believe that our product has a distinct advantage, the market demand is still in the air. Possible risks including overwhelming features have been planned with ambition. We are unsure if it would be better to focus on a specific feature or service instead of developing a comprehensive product.

There are a few risk factors that can potentially make a big impact on the product itself. The quality of the ball itself is a risk because we plan on having this ball to be similar to the NBA standard when it comes to the bounciness, the weight, and the texture. If one of those aren't as good, then it can potentially mess up the users experience just as the durability of the ball. Also, since we plan on having the camera/sensor installed into the backboard, we would need to make sure they are waterproof.