

SmartShot: “Get in The Game”

Using new technology in sports is not a new trend. Especially in golf where there have been changes to equipment and even the golf ball to try and improve players performance. With this goal in mind, SmartShot was founded in 2018 using satellite-based global positioning to aid golfers in playing the sport they loved.

The Game of Golf

The game of golf was invented in Scotland in the 15th century and brought to the United States in the late 19th century. In its current form, it involves the use of metal clubs to hit a small, hard ball into a cup on each of 18 different holes on a golf course. These holes range in length from 100 yards to 500 yards or more. Each swing a golfer takes is called a stroke and is counted toward their total score. The number of strokes a player takes through their round is the final score. The player with the lowest score is the winner.

Players begin each hole from the tee box. They try to drive the ball into the fairway, hit an approach shot onto the green, and putt the ball into the cup. Along the way, different hazards (ponds, sand traps, high grass) hinder progress and increase the difficulty of a hole (**Exhibit 1**). Each hole is designated either as a par 3, a par 4, or a par 5, where the number indicates the benchmark number of strokes allowed for that hole. For the entire 18 holes on a course, “par” is typically 72 strokes. If they take more than 72 strokes, they are “over par.”

Exhibit 1 – Golf Hole Glossary



A typical golfer uses as many as 14 different clubs during a single round of golf, including several “woods” which are used primarily off the tee called a drive, a series of irons (3-iron through 9-iron) and wedges, and a putter. Each club is used to hit the ball a particular distance. For example, a driver is typically used to hit the ball 200 to 300 yards, a 7-iron is used for 120-

150 yards, and a pitching wedge is used to hit the ball 120 yards or less. Using the same clubs, an expert golfer will hit the ball farther, more accurately, and more consistently than a novice.

There are several critical skills a golfer must learn to achieving a low score. The first is to hit the ball straight. This skill allows the golfer to avoid the various hazards around the course or to keep the ball from going out of bounds. The second skill is to advance the ball the desired distance. This requires that a golfer know two things – the distance to a particular target and how far he can hit the ball with each golf club in his bag. The third critical skill is the ability to putt the ball well. Many golfers can hit the ball straight and long but cannot putt the ball into the cup when on the green.

Green reading is an important avenue for success in developing the putting skill. The influence of a golfer's putting performance is significant as 46 percent of the score is devoted to putting. Therefore, in ensuring a golfer putt well, each read of a green must be correct. To make a correct read golfers consider many variables for each putt. These include: the speed of the green, uphill or downhill putts, the direction of the grain of grass, and many more.

The U.S. Golf Market

Golf in the United States is a popular sport, even during the Covid-19 pandemic. Golf is estimated to reach over 101 million Americans. One out of every three Americans over the age of 6 played golf (on-course or off-course), watched the sport or read about it in 2020. 24.8 million people played on a golf course and another 12.1 million participated exclusively on off-course activities at places like driving ranges, indoor golf simulators or golf entertainment venues like Topgolf and Drive Shack. (NGF, 2021)

The industry has had seven straight years with more than 2 million beginners. In 2020 that number reached a record 3 million new golfers. By comparison, there were 1.5 million beginners in 2011. The key for future growth is retention. The category of young adults (18 to 34-year-olds) is one of the sport's biggest customer age segments with just under 6 million on-course participants and another 5 million off-course participants. There were approximately 6 million female on-course golfers in 2020, which represented an increase of almost 10%. Approximately 24% of on-course golfers are women. Females represent a disproportionately higher percentage of juniors (34%), beginners (36%) and off-course participants (45%) than they do in the overall golf population. (NGF, 2021)

As a result, there were about 502 million rounds of golf played on golf courses through the U.S. in 2020. This reflected an increase of almost 14% over 2019 play despite the impact of coronavirus-related course shutdowns in March and April, when more than half of the 16,000+ courses were temporarily closed.

Golfers can be segmented in many ways. One basis is frequency of play which has the following characteristics:

- Avid Golfers – approximately 25% of all golfers are considered “avid” golfers and play 25 rounds or more per year. Avid Golfers have played a lot of golf. They frequently play in tournaments, including those with cash rewards. They typically have a membership to their favorite golf course, and regularly take lesson from their club pro.
- Core Golfers – another 50% are considered “core” golfers and play from 8 to 24 rounds per year. Core Golfers want to get better at the game, with the goal of improving their score. The score is seen as a path to respect. The better the score, the more respect from their colleagues. They tend to watch golf frequently if they are not playing it and have favorites whom they would love to emulate.
- Occasional Golfers – the remaining 25% are considered “occasional” golfers who play less than 8 rounds annually. Avid Golfers are often referred to as “hacks” by the other segments. They love to have fun on the course, but since they play infrequently and don’t have time for training or lessons, they “hack” the ground with their swing. Avid Golfers are interested in the social aspect of golfing over their final score.

Another basis for segmentation is expertise level measured by the golfer’s handicap. A handicap is a historical average of how many strokes a golfer takes, relative to par, for an entire round. For example, a golfer with a “5” handicap averaged 5 strokes above par, while a golfer with a “20” handicap averaged 20 strokes over par. Unfortunately, only about 20% of U.S. golfers maintain an official handicap, with the average handicap being “20”. The 80% of golfers who do not maintain an official handicap tend to be less avid and less accomplished than those who do. The unofficial handicap for these golfers exceeds “25.”

A third way to segment golfers is to base it on the courses they play on – public versus private. About 80% of golfers play on public courses, which require a daily greens fee. The remaining 20% belong to private courses which typically require a one-time initiation fee and a yearly membership fee. Golfers who play on public courses tend to play multiple courses over a year, while golfers who belong to a private course tend to play it almost exclusively.

There were more than 16,100 golf courses in the U.S. at the end of 2020. The game remains highly accessible with 75% of the facilities open to the public (2,500 municipal courses and 7,900 daily fee courses). (NGF, 2021)

- Municipal and lower-end public courses (6,600) – Charge between \$20 and \$50 per round. They tend to attract all levels of golfers but especially those with higher handicaps (Occasional Golfers). They attract golfers in large numbers having to turn away golfers during periods of peak demand.
- High-end public courses (3,800) – charge between \$50 and \$100 per round and offer more of a challenge than municipal courses. They attract more avid and accomplished golfers. They also experience heavy use during peak playing periods.
- Resort courses (2,000) – while open to the public, give preference to those staying at the resort. They charge fees between \$100 to \$200. Many of the golfers play these courses only while on vacation or at a conference at the resort.

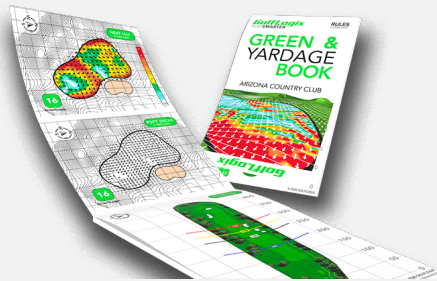
- Private courses (3,700) – The quality of these courses is very high, and members are charged accordingly. Initiation fees run between \$20,000 to \$100,000 and annual membership fees start at \$5,000 per year. These courses have 300 to 500 members.

Golf-Tech and Competition

The global golf equipment market size was valued at USD 6.51 billion in 2018. Golf Tech is a subset of the golf equipment market. The golfer has a wide range of “tech” competing for their disposable income toward the sport. This includes new clubs, golf balls, clothing, golf shoes and other products vying to help improve their game.

Distance and green reading solutions are currently offered in both low-tech and high-tech formats. The most widely used tools to determine distance to the green are yardage markers – colored plastic or concrete plates embedded in the center of the fairway at distances of 100, 150, and 200 yards from the center of the green. Nearly all golf courses use some form of a marker. Golf courses may also mark distances on course sprinkler heads. There are as many as 10-12 sprinklers per hole which can provide golfers with more points of reference. Typically, a golfer will pace off the distance between a yardage marker or sprinkler head to their ball to estimate the distance to the green. Almost all courses have yardage books that are diagrams of each hole on the course indicating the distances to and from various landmarks (**Exhibit 2**).

Exhibit 2 – Yardage Books and Green Reading



The Golf-Tech industry has evolved to provide higher tech solutions to improve golfer performance. Some golfers use optical or laser rangefinders to estimate distances. More recently, GPS-based solutions became available in the marketplace including cart-mounted systems and app-based solutions. To make these solutions work, either golfers needed to map the course from their app, or each course would have to have the course mapped for them. Early entrants into this space include:

- Golf Pad
- GolfShot
- Golf GPS
- SkyDroid

There is not a dominant player in the industry. They all rely on GPS for determining distances. None of the available apps helped track the performance of the golfer. These solutions did not measure how many shots per club they were taking during a round, distance per club, putts per round or other key metrics that would help a golfer improve their game.

Course Management

The person responsible for running the golf-related activities at a course is the golf professional. At smaller courses, they might be assisted by several part-time employees or volunteers, while at larger courses they would be assisted by one or two assistant pros and several full-time employees. They are responsible for scheduling tee times, collecting greens fees, renting clubs and carts, and selling merchandise. Peak golf times happen from early morning through mid-afternoon on Friday, Saturday, and Sunday.

A key activity for the pro shop personnel is managing the pace of play on the course. Golf is played in foursomes, with a new group of four players beginning play every 10 to 12 minutes. Without delays, a foursome should be able to play an entire round of golf in about four hours. However, rounds of five to six hours are increasingly common on many public courses, especially on weekends. The reasons for this are many. The difficulty of the course, the inexperience of the golfers, an unfamiliarity with the course, and a congestion of tee times all contribute to delays. In one survey, 70% of public-course golfers reported slow play as their number-one complaint.

SmartShot Solutions

SmartShot's ***gCaddie*** is a complete game (golf) improvement app (**Exhibit 3**). The app provides accurate GPS distances, in-round pro-level stat tracking, approach view and Putt Line™ feature. From tee to green, SmartShot has designed their *gCaddie* app to provide golfers with the information they need to reduce strokes and "Play Smarter!"

Golf Courses can have the gCaddie installed on their golf carts with member data shared with the golf pro to guide training and performance improvement needs. Non-Member player data is available to participating courses for managing events and outings.

Golfers can find GPS distances to any point on the fairway, green, and every hazard or layup in between. The Putt Line shows the optimal aimpoint and how the ball will break. ED Bird's-eye Maps show approach challenges and how greens will behave. Golfers can also keep pro-level scores and stats for themselves and everyone else in their playing partners. Benefits for both golfers and courses include:

- **Affordability** – The system is affordable for all types of courses.
- **Better golf** – By knowing the exact distance to the green, and how the greens are sloped, golfers are more likely to choose the appropriate club or make a better read leading to lower scores.

- **Smart Club Selection** – SmartShot eliminates the need to pace off distances on the course to understand yardage or green conditions which can cause delays on the course.
- **Ease of installation** – The system requires no effort on the part of course personnel and does not interfere with course operations.
- **Performance and History** – Captures golfer data on distance per club, accuracy, number of putts and so on for every round a golfer plays.
- **Teaching aid** – Course Pros can evaluate golfer’s ability and progress by analyzing performance statistics.

Exhibit 3 – App Features

Distance to a location (GPS)

Green Readings (3D Maps)

Scoring & Pro Level Stats



Product Development Considerations

SmartShot has learned through recent market research that golfers may not want to bring their phone with them on the course hoping to “cut the cord” while playing. To offer more discrete mobility, SmartShot is considering developing a partnership with a top GPS product manufacturer to customize a smartwatch with the *gCaddie* app pre-installed. The *gWatch* (**Exhibit 4**) could be an Apple Watch replacement for golfers, with emails, texts and alerts when paired up with their smartphone. The *gWatch*, with customizable watch faces, help create the only smart watch a golfer will ever need. SmartShot is considering making *gCaddie* available for download into a players Apple Watch through the Apple App Store.

Exhibit 4 – SmartShot Watch App



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- **Performance and History** – Captures golfer data on shot distance, accuracy, number of putts and so on for every round a golfer plays.
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The Challenge

Golf Pro and co-founder, Hana Smart, proposed launching SmartShot by targeting golf courses. She wanted to offer them course mapping services, a bundle of gWatch GPS devices and free access for members to their gCaddie app for a monthly fee. However, marketing director Eddie Eagle, preferred a big direct-to-consumer launch for the gCaddie and gWatch products. Co-founder and Chief Technology Officer, Miko Moni, felt SmartShot should pursue both channels. They need your advice on the best approach to launch their new firm.