



Distance Insights Project

CONCLUSIONS FROM THE DISTANCE INSIGHTS PROJECT:
IMPLICATIONS OF HITTING DISTANCE IN GOLF

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I. OVERVIEW

As the governing bodies overseeing the single set of playing and equipment rules that apply worldwide, the USGA and The R&A are responsible for defining and protecting the essential challenge and character of golf so that it can thrive long into the future. We continuously evolve and modernize the rules to address the many circumstances that arise in a sport that is played outdoors in a natural setting and is much affected by technological innovation and societal change. In doing so, our goal is always to respect and reinforce the core principles that golf is an enjoyable game of skill and challenge played by golfers of all levels under the same rules and on the same courses.

The Rules of Golf state the fundamental principle that “golf is a challenging game in which success should depend on the player’s judgment, skills and abilities.” The Equipment Rules likewise seek to “protect the traditions of the game, to prevent an over-reliance on technological advances rather than on practice and skill, and to preserve skill differentials throughout the game.” An enduring foundation of golf is that success in getting a ball from the tee to the hole in the fewest strokes should depend on using many different skills and judgments, rather than be dominated by only one or a few. In our view, it is essential for this to remain true for play at the diverse golf courses across the world, without the need for them to keep getting longer.

The issue of hitting distance raises vital issues in these respects, as reflected in The R&A and USGA’s 2002 Joint Statement of Principles on distance:

“[A]ny further significant increases in hitting distances at the highest level are undesirable. Whether these increases in distance emanate from advancing equipment technology, greater athleticism of players, improved player coaching, golf course conditioning or a combination of these or other factors, they will have the impact of seriously reducing the challenge of the game. The consequential lengthening or toughening of courses would be costly or impossible and would have a negative effect on increasingly important environmental and ecological issues. Pace of play would be slowed and playing costs would increase.”

Since that time, hitting distances at the highest level have continued to increase. Moreover, as explained below, there has been a continuing trend of increases in hitting distances for more than a century and that upward direction is expected to continue in the future.

Today we are publishing the Distance Insights Project Report (Distance Insights Report or DIR) to provide a comprehensive understanding of the past, present and future impact of distance to support a sustainable future for golf. This paper accompanies the Distance Insights Report and provides our conclusions from this project. Part I below provides an overview that summarizes our conclusions and sets out our intended next steps. Part II then explains in more detail the background and reasons for these conclusions.

A. Summary of Conclusions

The research in the Distance Insights Report shows that hitting distances and the lengths of golf courses have been increasing for more than 100 years. We believe that this continuing cycle of increases is undesirable and detrimental to golf's long-term future, for two main reasons:

First, the inherent strategic challenge presented by many golf courses can be compromised, especially when those courses have not or cannot become long enough to keep up with increases in the hitting distances of the golfers who play from their longest tees:

- Increased hitting distance can lead to a reduction in the variety, length and creativity of shot types needed on such courses and to holes more often being overpowered by distance, as well as to an increased emphasis on the importance of distance at the expense of accuracy and other skills.
- This can begin to undermine the core principle that the challenge of golf is about using a broad range of skills and making risk/reward judgments during a round.
- The result is also that an increasing number of such courses, both widely renowned and less well-known, are at risk of becoming less challenging or ultimately obsolete for those who play from their longest tees – a serious loss for the game.

Second, the overall trend of golf courses becoming longer has its own adverse consequences that ultimately affect golfers at all levels and the game as a whole:

- Expanding existing courses and building longer new ones often requires significant capital investment and higher annual operating costs.
- Overall, the trend towards longer courses puts golf at odds with the growing societal concerns about the use of water, chemicals and other resources, the pressures for development restrictions and alternative land use, and the need to mitigate the long-term effects of a changing climate and natural environment.

In our view, these continuing trends have also helped create an unnecessary degree of emphasis on distance, with a seeming expectation that each new generation of golfers will hit a golf ball farther than before. We believe that a golfer's hitting distance is fundamentally relative to hole length and the distance of those he or she competes against; golf's essential character and skill challenge do not depend on the absolute length of a golf shot or a golf course, and golf does not become a better game each time distances and course lengths increase.

This concept of relative distance has other implications at non-elite levels of play. We believe that many recreational golfers are playing from longer tees than is necessary, which in turn increases the time it takes to play. We have a particular concern that the forward tees at many courses are very long for the hitting distances of many of the golfers who play from them.

In summary, we believe that golf will best thrive over the next decades and beyond if this continuing cycle of ever-increasing hitting distances and golf course lengths is brought to an end. Longer distances, longer courses, playing from longer tees and longer times to play are taking golf in the wrong direction and are not necessary to make golf challenging, enjoyable or sustainable in the future. In reaching this conclusion, our focus is forward-looking with a goal of building on the strengths of the game today while taking steps to alter the direction and impacts of hitting distances in the best interests of its long-term future.

B. Next Steps

Our next steps will be to develop and assess potential future solutions to pursue these objectives, recognizing that this is a complex subject involving many issues, perspectives and interests. We also recognize that this assessment should not focus on player-related factors that contribute to increased distance, such as improved athleticism and swing techniques, for the desire to improve is integral to the game and is to be encouraged. Accordingly, we expect the main topic for research and assessment to be potential changes in the Equipment Rules, along with further inquiry into the effects of course design, conditions and set-up on hitting distance.

With this background in mind, our Equipment Standards teams and Committees will be conducting a broad review of both clubs and balls to understand and assess a full range of options for addressing these issues relating to hitting distance. Without limiting the scope of topics that may be considered, this review is expected to include the following:

1. We will assess the potential use of a Local Rule option that would specify use of clubs and/or balls intended to result in shorter hitting distances. The concept is that equipment meeting a particular set of reduced-distance specifications – for example, a ball that does not travel as far or a club that will not hit a ball as far – might be a defined subset of the overall category of conforming equipment. This could allow committees that conduct golf competitions or oversee individual courses to choose, by Local Rule authorized under the Rules of Golf, whether and when to require that such equipment be used. Such a Local Rule option could be available for use at all levels of play, and golfers playing outside of a competition could also have the option to make this choice for themselves.

2. We will also review the overall conformance specifications for both clubs and balls, including specifications that both directly and indirectly affect hitting distances. The intended purpose of this review is to consider whether any existing specifications should be adjusted or any new specifications should be created to help mitigate the continuing distance increases. It is not currently intended to consider revising the overall specifications in a way that would produce substantial reductions in hitting distances at all levels of the game.

This paper provides notice to equipment manufacturers of this overall area of interest under the Equipment Rulemaking Procedures. This means that we are identifying research topics that have the

potential to lead to an Equipment Rule change but that no proposals are being made today. We invite input from manufacturers and other stakeholders in the golf community concerning potential equipment-based options to help achieve the objectives identified above. To facilitate that input, within 45 days we will publish a more specific set of research topics. It is anticipated that this important step of gathering input will take at least 9-12 months. After the research is completed and comments are evaluated, if we then decide to propose any rule changes, manufacturers will receive notice of these proposed changes (including a proposed implementation plan) and an opportunity to comment under the Equipment Rulemaking Procedures. The time allotted for this step in the process leading up to a final decision on any proposed rule change would depend on the nature of the proposal.

We also intend to pursue several other topics, which will include:

- Reviewing our equipment testing processes, protocols and standards to ensure their effectiveness in relation to distance limits;
- Assessing and providing guidance on how golf course design, agronomy, maintenance and set-up can affect hitting distance; and
- Assessing and providing guidance on the availability of short enough forward tees and the appropriate tee-to-hole playing distances for golfers of all levels.

As we pursue all the steps identified above, we will remain open to input from stakeholders throughout the world of golf, so that any proposals that are ultimately developed will be fully informed.

II. BACKGROUND AND EXPLANATION OF CONCLUSIONS

A. The Long-Term Trend and Future of Hitting Distance Increases

The Distance Insights Report shows that hitting distances have been increasing for more than 100 years.¹ These increases have occurred in two main ways: (1) pronounced upward increases occurring at times of major equipment innovations; and (2) an overall slower but sustained increase over the long term, resulting from various factors including incremental improvements in equipment, golfer athleticism and technique and course conditions that affect distance.

This long-term trend is best illustrated by reviewing the driving distances of highly skilled male golfers, which is the player group for which the most information is available. (For convenience, highly skilled amateurs and professionals are referred to as “elite” golfers.) The information from era to era is not always directly comparable because the earlier reports tend to reflect individual distances or estimated average distances, while in the last 40-50 years many data points have been systematically measured each year on the professional tours. The overall record, however, shows clear changes in relative magnitudes that confirm that distance has been increasing for these golfers since 1900:

- **Circa 1900 to Circa 1930.** Hitting distances increased substantially during this period, following the widespread adoption of the new rubber-core ball.² Contemporary reports indicate that before

the new ball was used, typical driving distances for elite golfers were in the general range of 160-200 yards (with their long drives reportedly as long as 200-220 yards), whereas by the 1930s elite golfer driving distances typically ranged between 220-260 yards (with their long drives reportedly as long as 270-290 yards).³

- **Circa 1930 to mid-1990s.** Hitting distances increased at a slower rate during these decades, in which improvements in equipment were more incremental.⁴ By 1995, the longest 20 hitters on the PGA TOUR (the only tour then measuring distance) were driving an average of 278 yards, with an average tour driving distance of 263 yards.⁵
- **Mid-1990s to 2003.** Larger hitting distance increases occurred during this time of cutting-edge innovations in both club design (such as oversized titanium drivers, spring-like effect and increased moment of inertia) and ball design (especially non-wound, multi-layer balls).⁶ By 2003, the driving distance of the 20 longest hitters from both the European Tour and the PGA TOUR averaged 303 yards, with an average driving distance for both tours combined of 286 yards.⁷
- **2003 to 2019.** By the end of 2019, the average drive of the 20 longest hitters from both the European Tour and PGA TOUR had increased to 310 yards, with the average driving distance for both tours combined increasing to 294 yards.⁸ After essentially no increase for the first 10 years, since 2013 these distances have increased at the rate of about one yard per year, with the average of the Top 20 increasing by eight yards and the average for all players on both tours increasing by seven yards.⁹

Although historical information is less available about other groups of golfers, the Distance Insights Report shows that their driving distances have also increased over the long term.¹⁰ For example, in 1930 elite female golfers reportedly had typical driving distances of 175-225 yards, while today the average player on the LPGA Tour drives the ball more than 250 yards and the top 20 longest hitters average more than 270 yards.¹¹ The driving distances of non-elite golfers (for convenience, this group is referred to as “recreational” golfers) have also increased over the long term: today’s average drive distances for recreational men are in the range of 185-240 yards¹² as compared to a typical range of 130-180 yards around 1930, and today’s average drive distances for recreational women are in the range of 145-160 yards as compared to a typical range of 100-150 yards around 1930.¹³ Finally, while the historical information focuses on driving distance, it is recognized that hitting distances have increased with other clubs as well.

We believe that hitting distance increases, especially for elite amateur and professional golfers, are likely to continue in the future based on the same factors that, in combination, have contributed to these past distance increases:

Equipment innovation. Notwithstanding the Equipment Rule specifications that seek to limit hitting distance, we believe that there is potential for further increases to occur within the existing rules, such as by using longer shafts, and that club and ball design will continue to evolve in conjunction with improved swing and fitting techniques to generate more hitting distance. Overall, manufacturers continue to

innovate to seek more distance from clubs and balls, as reflected in the many distance-related patents that continue to be filed.

Player improvements. It is expected that players will continue to pursue and achieve improvements in various ways that will result in further distance:

- Many golfers, as with athletes in other sports, will continue to focus on strength, flexibility and overall health and fitness to improve their performance and help generate more distance. The potential also exists for further improvement in human physical capabilities through continuing advances in science and medicine.
- Such improved athleticism together with revised swing techniques has helped lead to higher swing and ball speeds that in turn lead to more distance, and there is room for this to continue. As an example of what is possible, competitors in long-drive contests are able, with today's conforming equipment, to generate swing speeds in excess of 145 mph, ball speeds in excess of 215 mph and driving distances in excess of 400 yards.¹⁴
- More generally, launch monitors and advanced technology provide instant feedback to golfers of all levels to help optimize distance-related swing parameters such as swing speed, launch angle, spin rate and ball speed. Also, as in many sports, the increasing use of data analytics is affecting golfer strategies, with players concluding that it can be an optimal strategy to drive a ball as far as possible even at the expense of accuracy.

Course Conditions. The effects on hitting distance from course conditions can vary from region to region and course to course because of differences in turf, climate and the natural environment and because it is up to each committee overseeing the course to decide on the overall approach to agronomic conditions and course set-up. But one increasingly important practice that we believe is likely to be used at even more courses in the future is for maintained turf areas to become drier and firmer as a result of the reduced use of water and nutrients.¹⁵ This continuing trend may help contribute to hitting distance increases at such courses.

In summary, we believe that the upward trend in hitting distances will continue based on these several factors working in combination. Learning, science and technology continue to accelerate to previously unachievable levels across countless human endeavours. This is affecting many sports, and golf is no exception. The next innovations or technological breakthroughs – in equipment, playing strategy, swing technique or human capabilities – are hard to predict with specificity, but history and experience teach that they will happen and that distance increases will continue, as has been happening for the last 120 years.

This project's focus on the long term has also highlighted that distance increases ultimately have real consequences over time whether they occur incrementally or in periods of larger increases. For example, as reflected in the Distance Insights Report, from 1980 to 2019 the average annual rate of increase in driving distance on the PGA TOUR (the only tour with data going back that far) was about one

yard, and from 2003 to 2019 the average annual rate of increase on that tour and the European Tour combined was about 0.5 yards.¹⁶ As a simple illustration of what such rates of increase can mean over time, if hitting distances for elite male golfers were to continue to increase at an average of 0.5-1 yard per year the cumulative effect would be substantial: a 300-yard drive today would increase to between 312.5-325 yards in 25 years and 325-350 yards in 50 years. We are not predicting any specific amount of increase, but simply illustrating that the cumulative long-term increases in hitting distances, rather than year-to-year changes, are what matter for the future of the game.

We believe that the continuing trend of increased hitting distance is leading to two undesirable outcomes over time: (1) an altered skill challenge for the longest hitting golfers when playing the same length courses as in the past; and (2) many golf courses continuing to become longer to offset the increased distance. Parts B and C below, respectively, discuss the implications of these two outcomes.

B. The Impacts of Hitting Distance Increases at Golf Courses that Do Not Become Longer

An essential part of the challenge of golf derives from players having to display a broad range of skills to get a ball from tee to green and into the hole. The sport's 30,000 courses worldwide collectively offer golfers a remarkable diversity of playing experiences, with wide variations in layout, terrain, wind and weather, turf conditions, fairway width, rough height, bunker sand and design, and putting green design and speed. The unifying principle is that success should depend on a golfer's skill and judgment in choosing among 14 different clubs for tee shots, long and short approach shots, bunker shots, pitching, chipping, putting and a wide variety of recovery shots. This involves many elements of skill, such as hitting distance, distance control, accuracy, shape of shot, trajectory, spin, bounce and roll, and how to play from all types of lies. The player needs to use his or her imagination and judgment in making constant strategic choices about which type of shot to play among many options that differ in style, difficulty and risk/reward potential. Being challenged to display this wide range of skills is part of golf's essential character, giving players of very different sets of abilities and relative strengths and weaknesses a chance to compete and succeed.

The playing length of the holes in relation to the player's hitting distance is a central underpinning of this fundamental challenge. For more than a century, almost all full-length golf courses have provided a mix of holes with pars of 3, 4 or 5 on which a player typically may reach the green from the tee in one, two or three well-played shots, respectively, and then try to hole out in two putts or less. Courses have holes of varying lengths for each level of par such that it may be relatively easier or harder for a golfer to reach a green in regulation with well-played strokes, and there are variations such as potentially drivable par 4s and reachable par 5s. These well-established guideposts for hole length challenge the player to exhibit many skills in using most or all of 14 clubs to play all types of shots from many distances and conditions – including playing holes long enough to test the ability to drive the ball far and accurately and to use various clubs for longer approach shots.

This intrinsic relationship between hitting distance, hole length and the skill and challenge of the game applies at all levels of play. The use of multiple teeing areas allows each course to serve a broad range of golfers who can play the course according to their own abilities, including how far they can hit a ball. Such golfers can play even the most challenging championship-level courses and have essentially the same playing experience and challenge of playing a diverse set of shot types on a course of appropriate length for them.

There is a straightforward relationship between hitting distance and course playing length: when overall distance increases significantly while playing length does not, the nature of the challenge presented to golfers playing from a given set of tees is necessarily affected. Those who do not play from the very back tees can usually respond if desired by playing from another set of tees on the course. This option is not available, however, to the golfers who already play from those longest tees. Golf's overall long-term response to this has been to build longer courses and to lengthen and modify existing courses to correspond to and offset the increasing distance. But for various reasons – such as economic or regulatory constraints, the unavailability of more land or a desire to preserve a course's design features – many courses have not become materially longer in response to hitting distance increases or are not able to keep doing so. Furthermore, even courses that try to respond to or anticipate more distance increases often find that their efforts are not enough to keep up with the longest hitters.

Thus, for golfers who play from the longest tees, the inherent strategic challenge presented by such a course and its individual holes can eventually be compromised:

- When hole playing length gets relatively shorter, golfers are more often able to play higher-lofted approach shots or to use shorter clubs off the tee, which can make it easier to reach a green in regulation or to hit a fairway than was once the case.
- Bunkers, doglegs, elevation changes or other features intended to create strategic obstacles on holes may be more easily avoided or become out of play, reducing the need for creative recovery shots and risk/reward choices.
- Overall, the increased hitting distance with a driver may allow some holes to be effectively overpowered, rewarding an emphasis on sheer distance at the expense of accuracy and other longstanding skills.

These effects will vary from hole to hole, and for some holes the longer hitting distances may bring new obstacles into play or create different risk/reward choices. But the overall effect of decreasing the relative length of all holes on a course is, over time, to reduce the need to play certain types of shots that were once required. Whether this results in an advantage for longer hitters or simply changes how all players are able to play from the back tees, the overriding point is that continuing increases in hitting distance on golf courses that do not keep up can eventually lead towards a different and less multi-dimensional game. We believe that no matter how far one can hit a ball or what tees are played, a broad and balanced set of playing skills should remain the primary determinant of success in golf.

Identifying these concerns is not at all to question that hitting distance is a valued skill in golf. At all levels of the game, how far a player can hit a ball will always be an important factor in determining success. The issue is whether the skill of hitting distance is on a path to overshadowing other important skills in golf – as suggested, for example, by tour data indicating that, even with the continuing increases in course lengths, driving distance may be becoming more important to success than in the past.¹⁷ It is ultimately up to those who run competitions and oversee golf courses to decide on hole lengths, par and other set-up parameters that affect playing difficulty, scoring and the skills needed to succeed on a particular course. Our role as governing bodies is not to make those individual decisions, but rather to make sure that committees have a full range of options available without the need for golf courses to keep getting longer.

Increasing distance can ultimately have a serious effect on where golf is played in elite male competitions, and the game is already seeing this begin to play out. It is unfortunate that courses that once held the highest-level competitions are no longer doing so because they are not considered long enough. More pressing for the future, many more of the most renowned golf courses around the world face a similar risk because it may not be practical for them to get much longer. Such courses may try to retain their challenge by adjusting other course conditions, but this can only go so far given a course's nature and design integrity and, in any event, such changes eventually can still be outmatched by increasing hitting distance.

The trend towards needing longer courses for high-level amateur and professional competitions has been strong and continuing. The Distance Insights Report shows that playing lengths in many such events throughout the world have increased by hundreds of yards in the last decades and that men's amateur and professional tournaments are now regularly played at 7000 yards or more.¹⁸ Even with these increases, such playing lengths may sometimes still be too short for today's best male golfers. Moreover, a golf course's ability to handle a premier event today does not necessarily mean that it will remain able to do so in the future.

This issue extends not only to the courses worldwide that desire to host high-level competitions among male amateurs and professionals, but also to other courses played by golfers of non-elite skill who can hit a golf ball a long distance. Many courses cannot or will not expand to 7000 yards or beyond, leading to concern that they may eventually lose the ability to present a full challenge for the longer-hitting golfers. For a course of, say, 6000 to 6500 yards, the issue is not about hosting elite male events, but about potentially losing the ability to attract and keep golfers who may come to perceive the course as too short from the longest tees. Even if not widely known or used for premier tournaments, such courses can be highly valued by local golfers and communities and are at risk from increasing hitting distances.

C. The Impacts of the Continuing Trend towards Longer Golf Courses

The Distance Insights Report shows that golf course lengths – meaning the total length from a course's longest tees – have been increasing overall since 1900.¹⁹ While various factors have played a

part in this, the main reason has been to respond to increases in hitting distances, as illustrated by the large increases in course lengths after the new rubber-core ball came into widespread use in the 1900s.²⁰ This trend can be illustrated by reviewing the historical evolution of U.S. golf course lengths (the set of courses about which there are the most data) during these approximate periods:

- **Circa 1900 to Circa 1930s.** Around 1900, the average and median lengths of 18-hole courses were in the range of 5400-5500 yards, with the 90th percentile course length at about 6100 yards. In the next three decades, average course lengths increased at a rate of more than 20 yards per year. By the 1930s, average and median course lengths were about 6200-6300 yards, with the 90th percentile course length at about 6600 yards.²¹
- **Circa 1930s to Circa 1990s.** Average course lengths increased at a rate of more than six yards per year in these decades. By the 1990s, average and median course lengths were about 6600-6700 yards, with the 90th percentile course length at about 7100 yards.²²
- **Circa 1990s to Circa 2010s.** Average course lengths continued to grow at an overall rate of about five yards per year. By the 2010s, average and median course lengths were about 6700-6800 yards, with the 90th percentile course length at about 7200 yards.²³

We believe that this overall trend towards longer courses is likely to continue if hitting distances continue to increase. Of course, some courses around the world have not lengthened materially and may not perceive a need or may be unable to do so in the future. Overall, however, the ongoing hitting distance increases are continuing to create pressure for many courses to become longer. In recent years, after a decline in course construction following the global recession of 2008, there has been a continuing emphasis on length for both new courses and course renovations. For example, a study of new courses that opened in the U.S. from 2011-2016 showed that the 48 courses reviewed had an average 18-hole length of more than 6,900 yards (substantially higher than the overall average of course lengths in the 2010s), with a maximum length of 7,492 yards.²⁴ A review of very recent or ongoing course renovation projects likewise illustrated the continuation of the lengthening trend, identifying 11 course projects from 2018-2020 that are adding 100-600 yards in length and several courses that will have a total length above 7500 yards.²⁵ More generally, in a recent survey about one-third of course operators indicated that in the last five years they had moved tee boxes to lengthen the course and/or modified bunkers in response to shot distances.²⁶ As these examples suggest, if hitting distances continue to increase, we believe that many courses will continue to get longer in an effort to appeal to a full range of golfers.

The overall land to support an 18-hole golf course – sometimes called its “footprint,” including playing areas, practice facilities, native areas requiring maintenance, ponds and lakes, roads and paths, and clubhouse and maintenance facilities – has also grown substantially over time.²⁷ For example, courses built between 1900 and 1980 occupy on average around 150 acres, whereas courses opened after 1980 occupy on average more than 205 acres.²⁸ This has been driven both by increasing course length and, especially in recent decades, by other factors such as safety and liability concerns, the expansion of practice facilities and the integration of golf courses into real estate developments. Because

today's longer courses typically require a lot more land than courses built a century earlier, older courses more often need to expand property boundaries to accommodate increases in course length or expansion of practice areas.

This continuing trend towards longer and larger courses has economic and other sustainability consequences for golf. The economic effects are straightforward. The cost of construction for both new and renovated courses increases as course length increases.²⁹ For example, data indicate that incremental construction costs for a significant increase in a course's length can be as much as hundreds of thousands of dollars (not counting the cost of any land acquisition). A longer course also typically means higher annual operating costs, including for labour, irrigation, chemicals and equipment to maintain expanded fairway, rough and teeing areas.³⁰ Moreover, the use of these critical resources by golf courses is affected in many regions both by strong inflationary cost pressures that are expected to continue and possibly escalate in the future and by growing concerns about resource scarcity and availability.³¹

Increasing course lengths also have broader potential effects on long-term sustainability. The sport of golf is recognizing the need to adapt to escalating environmental and natural resource concerns, climate change and associated regulatory activities, such as a need to address the following issues:

- **Water and chemicals.** With the United Nations predicting that the world's water supply will fall 40% short of projected demand by 2030 and with regulatory efforts to limit water consumption and preserve water quality, many golf courses are under increasing pressure to reduce their use of water, nutrients, herbicides, pesticides and fungicides.³²
- **Land use.** Accelerating population growth and urbanization in many regions is contributing to rising land values and increasing efforts to use open spaces, leading to golf course closures where planners and developers see a better use for the land. And in some places, these land use pressures on golf courses are exacerbated by environmental challenges such as desertification, sea-level rise and coastal erosion.³³
- **Wildlife and habitat protection.** Pressure to protect threatened species and their habitats is growing in many regions, presenting both a challenge and an opportunity for golf courses. Well-managed courses have proven to be exemplary stewards of wildlife and pollinator habitat, which can be accomplished in various ways, including by converting maintained turf where the game is currently played into out-of-play areas.³⁴
- **Energy.** The issues associated with fossil fuel consumption are well known, and the amount of fuel and lubricants used by maintenance vehicles and equipment at a golf course can be reduced by shrinking the total acreage of maintained turf.

The increasing length and size of golf courses is certainly only one of many factors that contribute to these economic and environmental challenges, and course operators are increasingly looking at many solutions such as reducing the acreage used for fairways, rough and other maintained turf. Nonetheless, course length is an important part of this because, all other things being equal, a longer course costs

more to build and maintain and uses more land and resources. A continuation of the trend towards longer courses would be inconsistent with the need to help course operators manage costs and for the entire sport to adapt to the long-term environmental pressures and realities that will increasingly affect how courses use land and resources and how they are perceived by local communities.

D. Broader Impacts from the Emphasis on Longer Hitting Distance

Even beyond the specific issues discussed above, the long-term cycle of hitting distance and course length increases has helped to create a degree of emphasis on distance that we believe is unnecessary and ultimately at odds with golf's long-term best interests. We have observed that there seems to be an expectation among many that each new generation of golfers will necessarily hit a golf ball farther than before, with a corresponding mindset among some that golf becomes an inherently better sport the farther that all golfers can hit the ball and the longer the courses that they play. We believe that such perspectives miss the point that distance in golf is fundamentally a relative concept.

As discussed above, golf is about using a broad and balanced set of skills and judgments to get a ball from the tee to the hole in the fewest strokes on holes of varying designs, pars and lengths. The game's essential character and test of skill do not depend on the absolute length of a golf shot or a golf course; the relative relationship between hitting distance and hole length is what matters most. Continuing increases in overall hitting distances will not make golf a better game as a whole. For example, while it is remarkable that long-drive competitors can hit a ball as much as 400+ yards, golf would not be a better sport if anything close to that became a norm for play or if course lengths increased to match it. Similarly, the fact that male golfers on average can hit the ball farther than female golfers does not make the game of golf played by men inherently better than the game played by women.

This concept of relative distance has broader implications for the non-elite game. We have identified a concern that many recreational golfers are playing from longer tees than is necessary relative to their hitting distances, in two respects:

- **Forward tees.** At many courses, the most forward tees are very long relative to the hitting distances of many golfers who typically use them. For example, the average and median lengths of the forward tees at U.S. courses are in the range of 5200-5300 yards.³⁵ As a result, many golfers using these tees may have little chance to reach various greens in regulation even with their longest and best drives and approach shots, and therefore are not offered the same type of playing experience as others on the same hole.
- **Choice of tees.** More generally, we believe that many other golfers are playing from tees that are longer than necessary relative to their hitting distances, either because they choose to do so or because courses specify or recommend use of those tees. The result is that such golfers may repeatedly need to hit their longer clubs on approach shots, making it harder to get a good score and taking a longer time to play a round.

We plan to review both of these topics and to provide information and guidance on the appropriate relative playing length for golfers of all hitting distances and skill levels.

Finally, as just noted, one other consequence of increased hitting distances and longer tees is that it takes longer to play a round. The time it takes to play is a significant issue for golf at all levels, and longer courses are longer to walk and take longer to play. Studies indicate that every 100 yards in additional course length can add at least 1-1.5 minutes in time to play, with potentially more additional time depending on the nature of the course and factors such as the distance from each green to the next tee and the direction players must walk in getting to those next tees.³⁶ Even such incremental effects on pace of play can matter in our current era when so many people feel seriously pressed for time. Moreover, over time, these pace of play effects become more significant as course length increases become cumulatively larger, as with the 500- and 1000-yard course length increases over the long term.

E. Concluding Thoughts

For all the reasons stated above, we believe that it is time to break the cycle of increasingly longer hitting distances and golf courses and to work to build a long-term future that reinforces golf's essential challenge and enhances the viability of both existing courses and courses yet to be built. In reaching this conclusion, we recognize that some have the view that the governing bodies might have done more in addressing the implications of the continuing increases in hitting distances and course lengths. There are always uncertainties about the future, and an inherent part of our role is to incorporate the lessons of experience, continue to monitor and assess ongoing developments, and develop consensus on issues that should be addressed. Our views have evolved as events have unfolded and new information has become available, just as they may evolve in the future, and we believe that it is never too late to do the right thing for the future of the game. By stepping back to take this long-term view in the Distance Insights Project, we believe that we are in position to address this set of issues from all perspectives and to search for effective long-term solutions. Accordingly, we intend to pursue the next steps outlined in Part I.B above.

¹ DIR at 6-17

² DIR at 20

³ DIR at 7 (Table 1)

⁴ DIR at 21-22

⁵ DIR at 9

⁶ DIR at 24-33

⁷ DIR at 10-11

⁸ DIR at 11

⁹ DIR at 11

¹⁰ DIR at 6-17

¹¹ DIR at 12

¹² DIR at 16 (Figure 11)

¹³ DIR at 7 (Table 1) and 18

¹⁴ DIR at 15 (Figure 10) and 34

¹⁵ DIR at 37

¹⁶ DIR at 8 and 12 (Figure 6)

¹⁷ DIR at 54-57

¹⁸ DIR at 41-44 and 47 (Figure 41)

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- ¹⁹ DIR at 38-40
²⁰ DIR at 39 and 46
²¹ DIR at 39 (Figure 32)
²² DIR at 39 (Figure 32)
²³ DIR at 39 (Figure 32)
²⁴ DIR at 40-41
²⁵ DIR at 40
²⁶ DIR at 83
²⁷ DIR at 59-60 (Table 4)
²⁸ DIR at 60
²⁹ DIR at 63
³⁰ DIR at 64-65
³¹ DIR at 65-67
³² DIR at 66-67
³³ DIR at 67
³⁴ DIR at 67
³⁵ DIR at 49-50
³⁶ DIR at 67

About the USGA

The USGA is a nonprofit organization that celebrates, serves and advances the game of golf. Founded in 1894, we conduct many of golf's premier professional and amateur championships, including the U.S. Open and U.S. Women's Open. With The R&A, we govern the sport via a global set of playing, equipment, handicapping and amateur status rules. The USGA campus in Liberty Corner, New Jersey, is home to the Association's Research and Test Center, where science and innovation are fueling a healthy and sustainable game for the future. The campus is also home to the USGA Golf Museum, where we honor the game by curating the world's most comprehensive archive of golf artifacts. To learn more, visit [usga.org](https://www.usga.org).

About The R&A

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The R&A is aiming to invest £200 million in developing golf over the next decade and supports the growth of the sport internationally, including the development and management of sustainable golf facilities. For more information, visit www.randa.org.