

Safety Concerns


On and Off the Course

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Past President EIGCA

by **CASPAR**



Agenda

- Introduction Caspar Grauballe
- Why Safety Matters
- Safety Risks
- Factors Influencing Safety
- Why Now
- Typical Shot Distances and Safety Zones
- Course Length and Area
- Solutions
- Driving Range
- Summery
- Questions

Caspar Grauballe

Education

- 1994 - 2000 BSc, MSc in Landscape Architecture, University of Copenhagen

Work

- 1997 - 2012 2012 Hawtree Ltd.
- 2012 - Golf Course Architecture by Caspar

Afiliations

- 2000 - Danish Landscape Architects
- 2004 - European Institute of Golf Course Architects (EIGCA)
- 2023-2025 President EIGCA
- 2005 - FSGA



**Askersund
Ballybunion
Black Water Links
Djursholm
Elisefarm
Falkenberg
Flommens
Greve
Hedeland
Hofgårds**

**Hong Kong
Hunstanton
Isaberg
Kjekstad
Lahinch
Losby
Oslo
Portmore
Rougemont le Chateau
Royal Aberdeen**

**Royal Birkdale
Royal Waterloo
Simon's
Stratford on Avon
The Island
Torekov
Toronto
Trump International
Scotland
Vallda**

**Varberg
Yarra Yarra**



Why Safety Matters

Protecting Lives and Preventing Injuries

Reducing Risks On and Off the Golf Course

Ensure an Enjoyable Playing Experience

Ensure good relations with the non-golfers



Safety Risks and Golf Courses

Worldwide

1. Cart related accidents
2. Slips, trips, and falls
3. Machinery – greenkeepers, staff
4. **Errant balls – struck property or person**

All relevant to Norway

Top 3 – often due to sloping ground





Typical Safety Factors

Overlapping fairways and narrow corridors

Short distances between green and next tee

Blind shots and poor visibility

Roads, Paths or houses too close to play zones

Sunlight and wind direction can increase risk

Elevation Changes

Bunker placement

A 100% safe golf course
does **NOT** exist

- But we can make it, so an accident is unlikely to happen

Why are golf courses experiencing more safety concerns in recent years

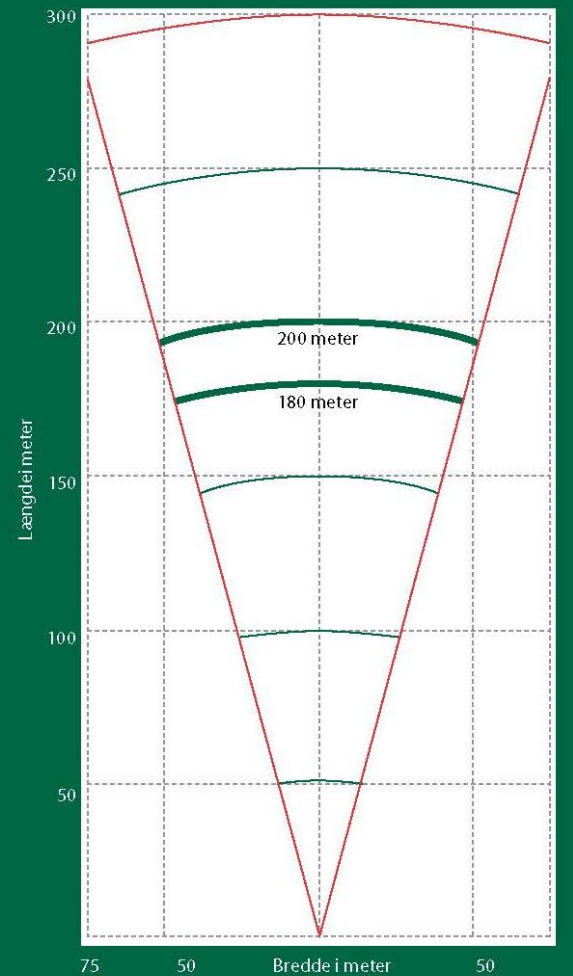
- Increased Participation – a lot of new golfers especially young long hitting males
- Longer hitting equipment – balls and drivers
- More carts are being used – few golf courses have been designed for cart use
- More wet weather – more slips and falls
- Compact courses and the close proximity to neighbors and roads
- Stableford – leads to a very aggressive course management strategy

Typical Shot Distances

- 
- DB World Tour ave.: 270 m
 - Elite men: 250–270 m (300+)
 - Average men: 160–220 m (average 195 m)
 - LET Average: 225 m
 - Average Women: 110-180 m (average 135 m)

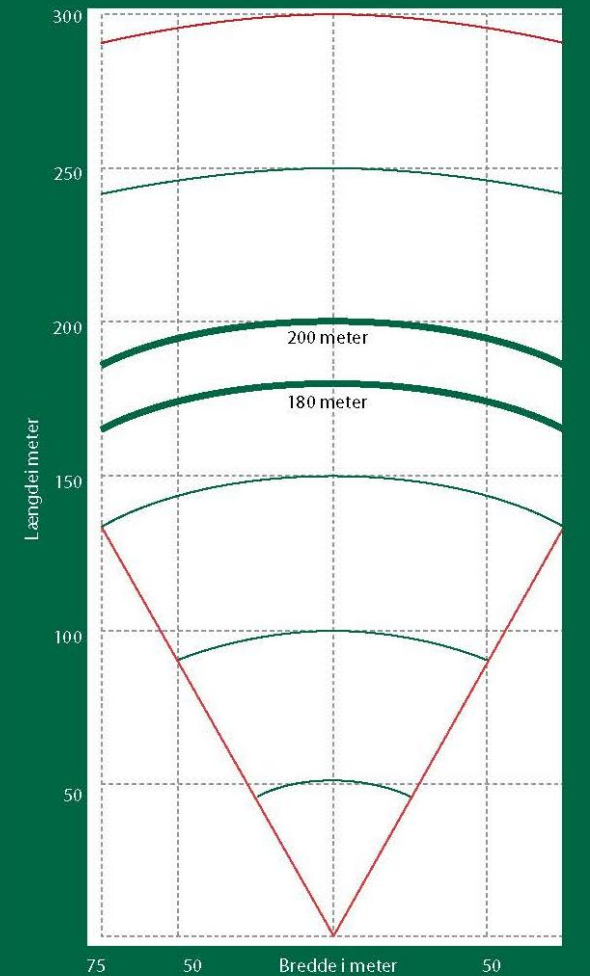
Safety Zones

FIGUR 1: 92 PROCENT



En mandlig amatørspiller slår ca. 180 - 200 m med en driver fra tee. 92% af alle bolde lander inden for en zone på 30°, dvs. 15° på hver side af spillelinjen.

FIGUR 2: 99 PROCENT



En mandlig amatørspiller slår ca. 180 - 200 m med en driver fra tee. 99% af alle bolde lander inden for en zone på 60°, dvs. 30° på hver side af spillelinjen.

Safety Zone 15 Degree VS Distance

15 Degrees off Centre line

@ 150 m	40 m
@ 200 m	56 m
@ 224 m	60 m
@ 250 m	67 m
@ 300 m	80 m



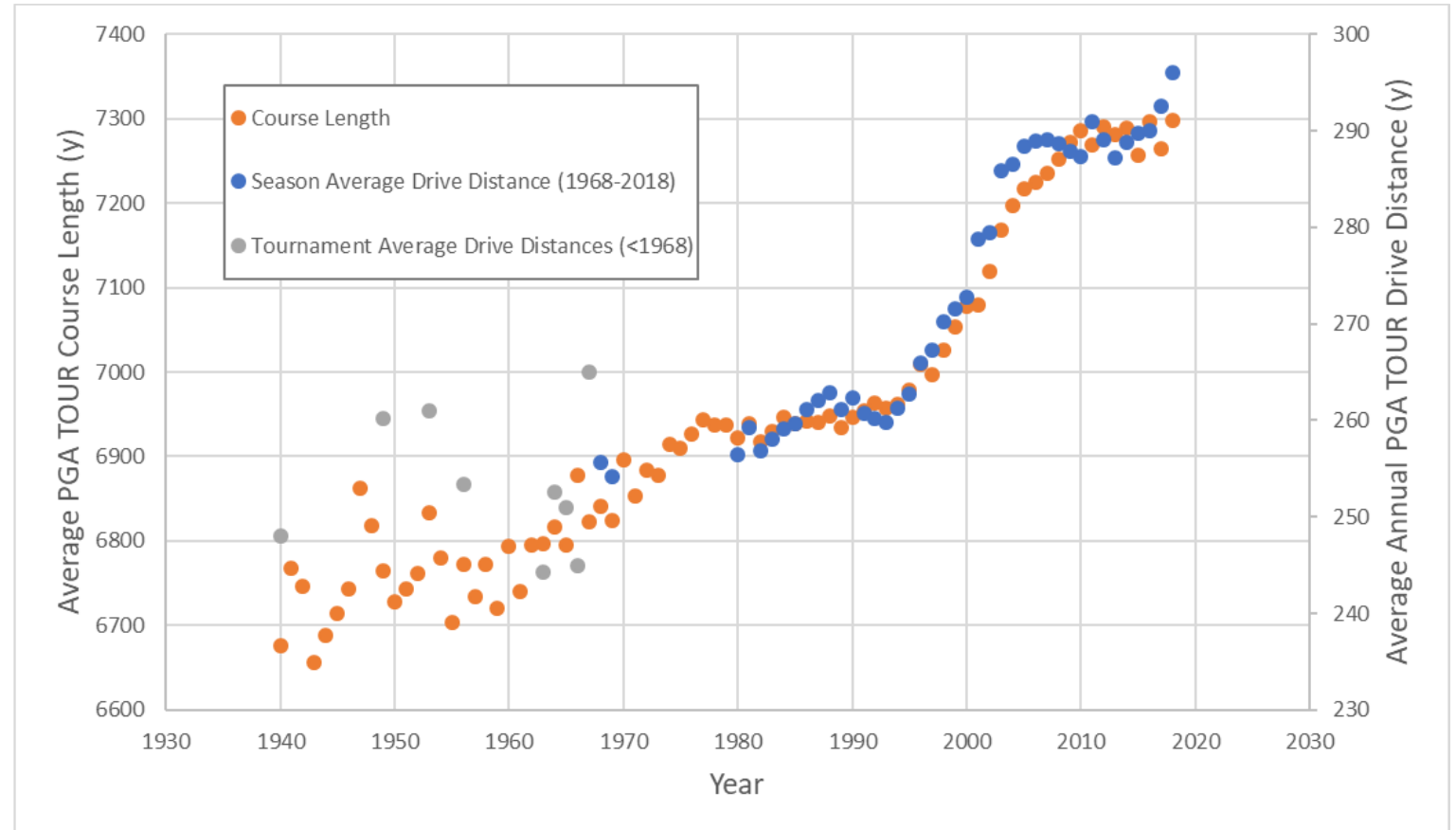
Distances between features

- Centre line to centre line 60+ m
- Green to Tee 20+ m
- Green to path/road 30+ m
- Green to green 20+ m

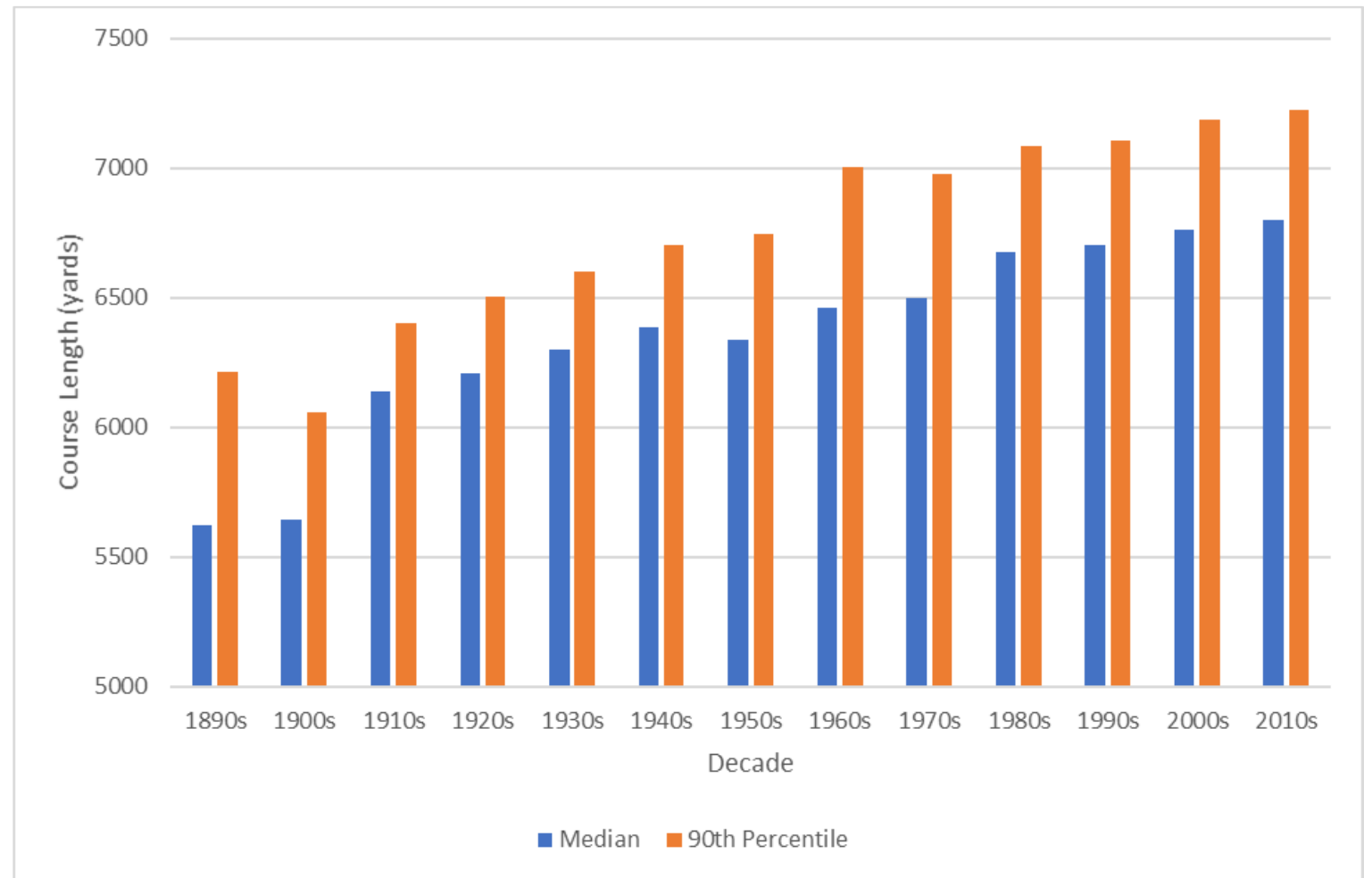


Line of Desire

Tour Hitting Distances and Course Length



Increasing Golf Course Lengths



A wide-angle photograph of a golf course. In the foreground, there is a dense field of tall grasses and wildflowers, including yellow dandelions and pinkish-purple seed heads. A gravel path leads from the bottom left towards the center of the image. To the right of the path is a small pond or water feature with lily pads. In the background, there are several large, mature trees, including a prominent weeping willow on the left and another on the right. The sky is filled with large, white clouds, and the overall scene is a lush, green landscape.

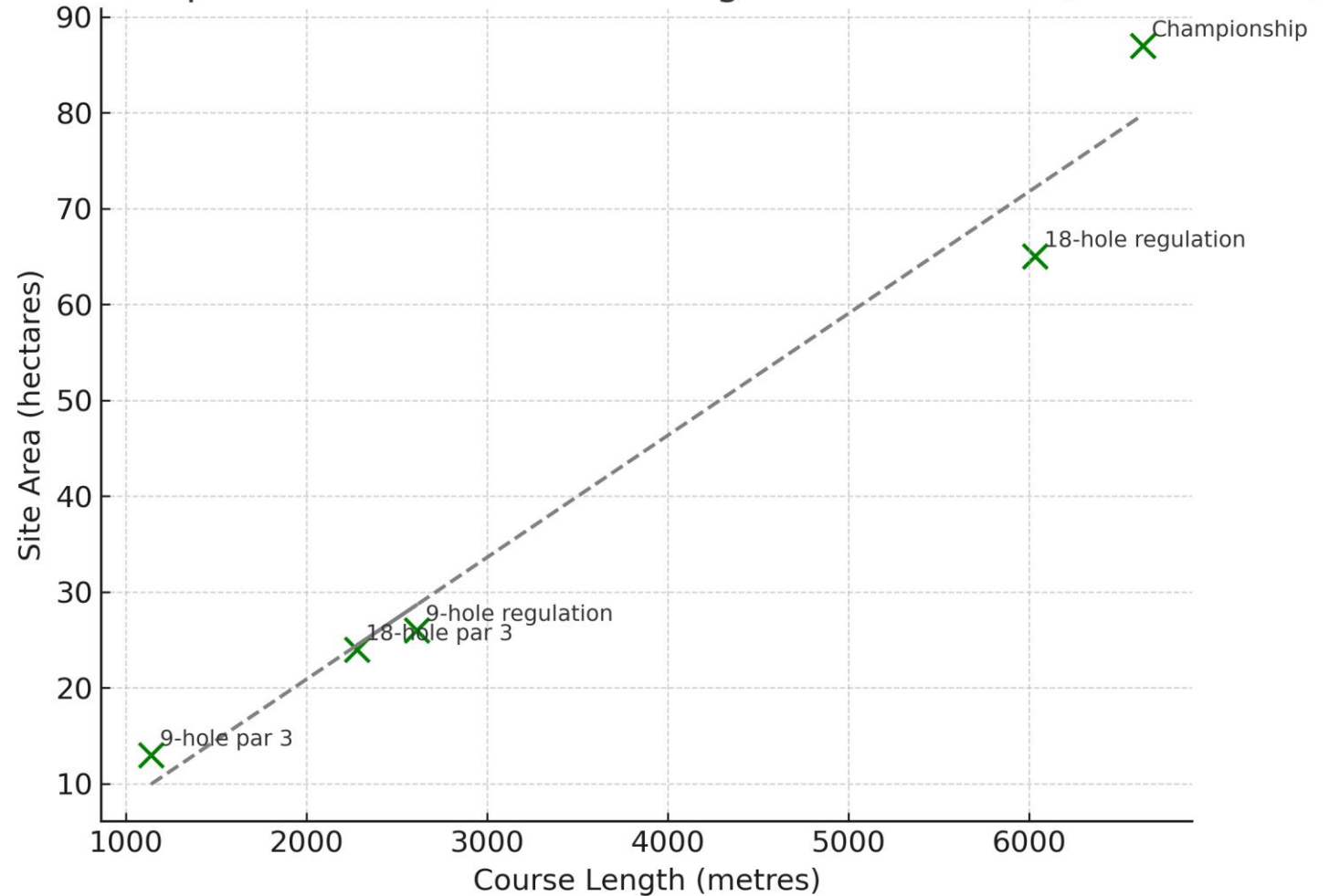
Increase Course Length
=
Less Safety Margins

Area Needed Increases

• Decade Opened	Acres (0,4 ha)
• 1920s	147.1 (59,5 ha)
• 1930s	143.6
• 1940s	152.1
• 1950s	157
• 1960s	147.7
• 1970s	150.8
• 1980s	175.2
• 1990s	222.6
• 2000s	202.3
• 2010s	229.8 (93,0 ha)

Length of Course vs. Area Needed

Relationship Between Golf Course Length and Site Size (Metric Units)



Solutions

- Unfortunately, no easy solutions – it usually requires a shorter course
- Alternate tee positions
- Signage – information to players
- Nets – but they usually must be very high 25-30m
- Trees – not a solution (often a problem)
- Bunkers and lakes



Driving Range

Challenge:

- Too little area
- Increased hitting distances
- Increased need for hitting bays





Driving Range

Solution:

- Full net range
- Indoor - simulators
- Increase other practice options

Summery

- Safety is important for the golfers and the game as whole
- Errand golf balls are **not the only** safety concern on the golf course
- Generally **NO** easy solutions



Questions?

by CASPAR