

# Technical Challenge LW.2 and O.2

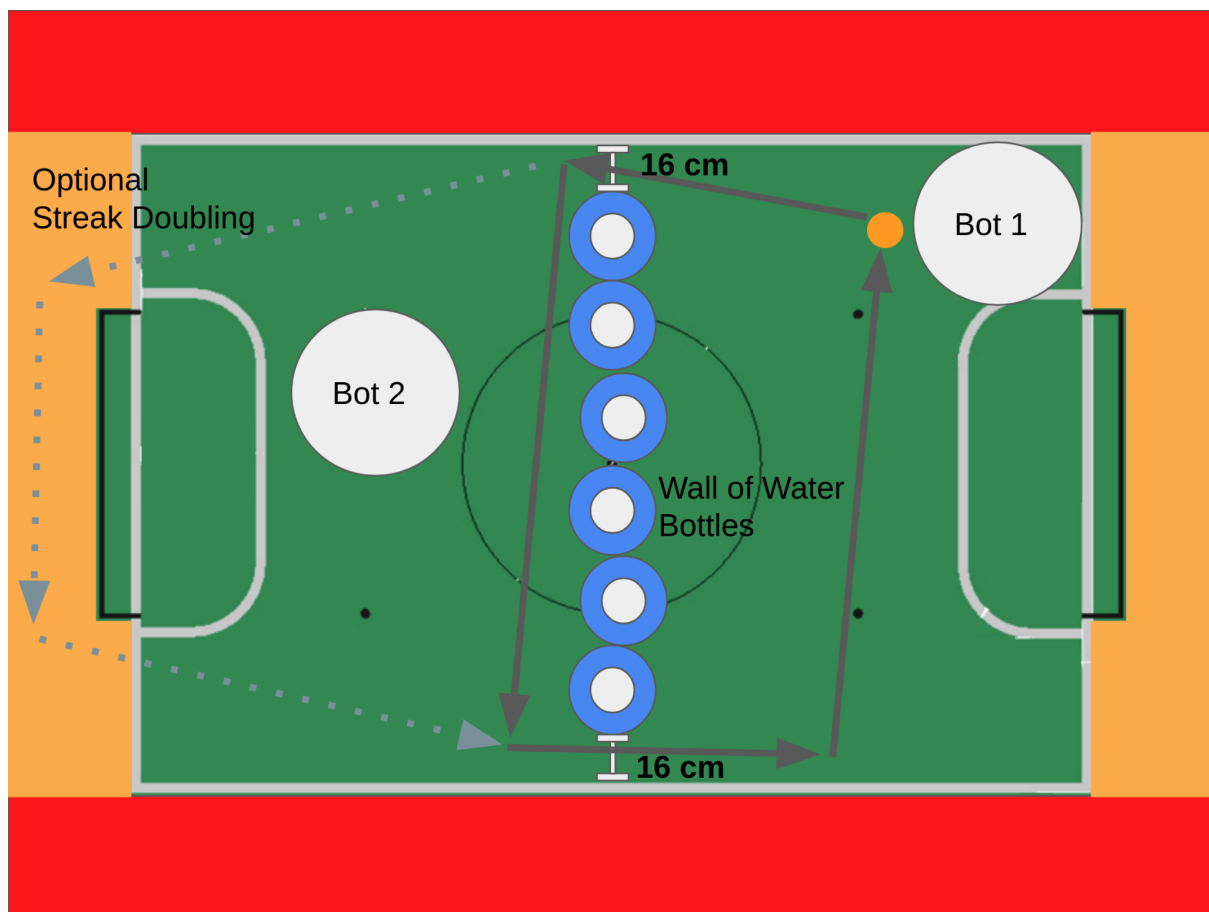
For Soccer Open and Soccer Lightweight

*"The round-robin"*

## Goal

Within two minutes, complete as many passes into the other field half as possible.

## Field Setup



- Divide the field along the half-way line by lining up water bottles (or similar) next to each other, leaving a 16cm gap on both sides (measured from the inside of the white line).
- The bottles may not be altered in any way, therefore they are expected to still contain fluid. (refilling empty bottles is allowed though)
  - If bottles are difficult to obtain for you and you want to build the barrier out of another material, please contact us as soon as possible at the OC booth.
- The barrier shall be at least 22cm in height
- The black field line along the gap in between the outermost bottle and the field boundary may be covered with white tape for this challenge

## Description

- A *successful* pass is the ball crossing the half-way line entirely on the side of the field that it did not cross most recently.
- A *clean* pass is a *successful* pass without neither the ball nor any robot leaving the field boundary entirely -> Red zone
- The center barrier (including its individual parts/bottles) may not be moved in any way.
- Each robot starts on a neutral spot of your choice.
- The ball starts on a spot of your choice on either half of the field, not touching anything other than the carpet.
- When the timer starts, the goal of the robot(s) is to get the ball from one half of the field to the other.
- The robot(s) may **not** cross the **same gap** (same side) as the ball did most recently.
- The ball is not to be touched by humans unless out of reach, in which case the challenge attempt ends.
- The robots are not to be touched by humans unless the challenge has ended.
- If the ball and every robot stays within the field boundaries (white lines), you will be awarded increasingly more extra points(=**streak bonus**) for each successful consecutive pass, starting from 0 points for the first clean pass and increasing by 1 point for each consecutive clean pass thereafter.
- If the ball or any robot leaves the field completely (not touching the white line anymore), you will be awarded no *additional* points for this pass and the streak bonus for future consecutive passes will go back to 0 points.
- The timer stops after 120 seconds (two minutes).
- You can use one or two robots, it's up to you.

## Special rule

- You may **double** your current **streak bonus** by passing the ball behind any of the goals
- This rule is applicable no more than **once** for each half of the field.
- The ball is allowed to go past the goal-line for this purpose, the robots, however, are not -> Orange zone
- Red zone restrictions still apply

## Grading

- For each successful pass (ball went past the half-way line entirely) you get +3 points.
- For each clean consecutive pass without either the ball or any robot leaving the field you get +1 point, increasing by +1 every time.  
*The first clean pass in a row will be awarded the first streak bonus of 0, increasing it to 1 for the second clean pass. (= 3 consecutive passes will be +2 points etc.)*
- If you miss your interview or if your presentation is longer than 3 minutes, you'll get half of the points that you scored.

## General Guidelines

- The robots participating must comply with the general Soccer LWL and Open rules respectively.
- Disobeying any of the rules above will immediately end the challenge (you will still be scored up until that point).
- The video must include your team name, league and the number of this challenge.
- The video of your robot solving the challenge must be one take, without any cuts.
- The video must be uploaded to youtube.com or vimeo.com.
- Make sure both sides of the field are clearly visible.  
Filming top-down or at least from an elevated position is strongly preferred.
- Ideally, there is a visible timer that is started in the same moment you start the robot(s).
- Please send in your video submission **until June 25rd, 3pm UTC** here:  
<https://forms.gle/T5RQYCpmXJMNeQ7e9>