

## Logistic requirements PUB.R competition

### Generalities:

The competition room should be divided in 2 main areas: one where the public will have access (**public area**), and one where only the teams, judges and organizers will have access (**teams area**).

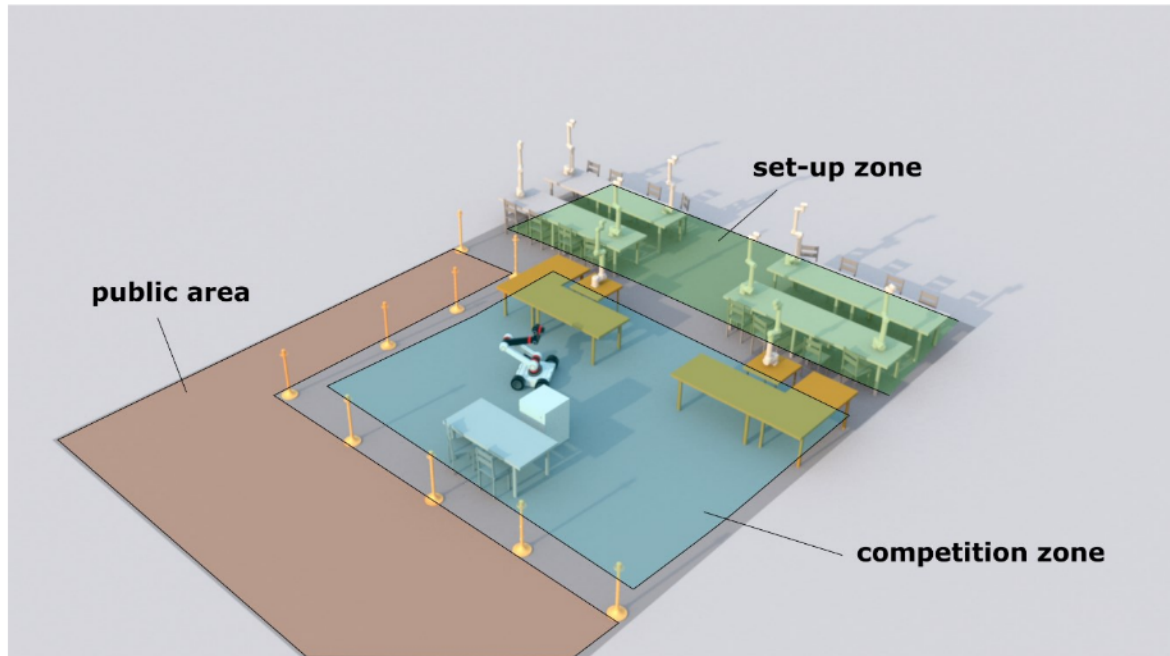


Figure 1: A possible arrangement of the competition room.

The two areas need to be clearly separated, for safety and logistic reasons. The areas can be divided via stanchions and ropes/stripes. An image of the overall competition room, considering a 10m by 10m room, is reported in **Error! Reference source not found..** Please note that the arrangement of the elements is just a proposal and can be adjusted according to the logistic needs of the venue (shape and dimension of the room). Our principal point is to ensure a clear separation of the general public, with the competitors and robots.

### Room requirements:

Inside the competition area, we need to have a **set-up zone** and a **competition zone**.

The **competition zone** is the part of the room where the robots will operate to collect points. The area features:

- A table for the professional chef and the for the technical judges
- A spice rack (on a small table)
- Two pairs of tables, arranged in a L-shape configuration, to provide space for the raw ingredients, the chopping area, the cooking and eventually the dish-up. A list of all the equipment that will be on the tables is reported in the Appendix of this document.
- Two tables, one for each L-shape sector, to hold the robotic manipulator (or any other robot)

The L-shape sectors, where the robot prepares the breakfast, and the judges' table will need power supply. The L-shaped table will need an approximate power of **6kW** for the cooking appliances and the robot: 2kW+2kW induction hobs + 1kw toaster + 1kW robot and related devices. Please note

each hob requires a single extension lead to connect the hob directly to the wall plug (no multiplug allows the connection of two hobs).

The **set-up zone** should provide a place where teams could store their robots/parts, they can work with their laptops, they can refine or fix grippers or robotic arms, etc. Each robot and associate components will need up to 1kW of power, and they can weight up to 30kg. In general, the set-up zone would need, for each station that will host a team:

- One table of the standard size for desks (approximately 70x180cm)
- Two chairs
- Plugs for electric devices. Usually, extension cables will work well, if capable of handling the power requirements.

We are planning to have **8 stations**, one for each team.

Overall, the power requirement at peak consumption of the room is 6kW for the robots in the set-up zone, plus 12kW for the robots in the competition zone. Therefore, the room should be able to provide – in the worst-case scenario of peak electric load – a total of **18kW**.

Finally, being hot food prepared in the room, ventilation for fume extraction and hot resistance tables are required. For example, a canteen area with access to the kitchen could serve well to host the competition.

#### Cleaning requirements:

The teams will need access to a sink or a washing station (in the same room, or ideally nearby), to allow the cleaning of the appliances/dishes before the next team will start the competition. To clean possible food that could fall on the floor, ideally a not carpeted floor is required, as well as cleaning tools (such as mops, brooms, etc.).

#### Transportation and storage requirements:

The competition organisers will need access with a van to transport the robots and the other equipment. The access is needed from the 29<sup>th</sup> May and until the 2<sup>nd</sup> June. Parking is required for the van during the same period, if possible, to be booked in advance inside the ExCel centre parking space.

We require a trolley that can carry at least 200 Kg for transporting robots and equipment during the setup and competition days.

We require a storage space with restricted access (locker) to store robots and other valuable equipment while the competitors and organisers are not in the competition area (for example, during night). Alternatively, we need CCTV or guards that to watch over them during the above periods in the competition area.

For the purpose of displaying audio/video content to the participants and the public of the competition, we require a large display device (either a projector with a projector screen, or a large TV display), microphones and speakers.

#### Insurance requirements:

Robots will handle hot devices and sharp knives. Potential faults may occur. Do we expect issues with the insurance of the conference? What are the requirements to open the competition to the

wider public? Suggestions to reduce risks? (minimal distance for the public, table binding for knives and pans, etc.).

## Appendix

All the equipment (appliances, cutlery, tools, etc.) will be placed on tables and will be easily accessible to all the teams. A detailed list of kitchen equipment is provided below. This list will be updated but offers a good representations of the type of objects used in the competition zone.

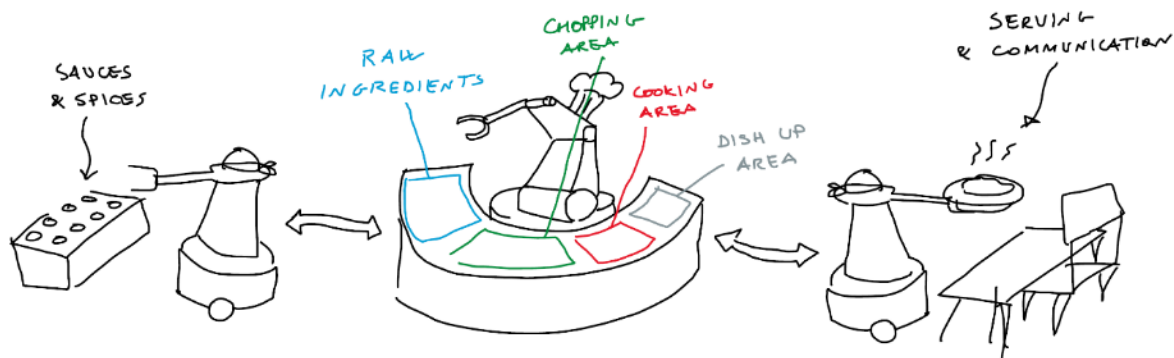


Figure 2: A depiction of the actions expected in the Competition zone. The element described in the following list will be used mostly in this zone.

### Box

Width 50cm, Depth 20 cm, Height 10 cm

<https://www.ikea.com/gb/en/p/nojig-organisier-plastic-beige-20468105/>

Quantity: 6 (three per table).

### Spice Rack

20x50cm

<https://www.ikea.com/gb/en/p/uppdatera-tray-with-spice-rack-white-anthracite-s59432709/>

Quantity: 2 (one per table).

### Tablecloth

145x240cm

<https://www.ikea.com/gb/en/p/fullkomlig-tablecloth-white-10343045/>

Quantity: 2 (one per table)

### Portable hob

Induction, 2kW, 10A

<https://www.ikea.com/gb/en/p/tillreda-portable-induction-hob-1-zone-white-70493503/>

Quantity: 5 (two per table)

### Toaster

<https://www.currys.co.uk/appliances/small-kitchen-appliances/toasters?searchTerm=toaster>

Quantity: 3 (one per table)

### Utensil tray

20x50cm

<https://www.ikea.com/gb/en/p/stoedja-utensil-tray-white-40177228/>

Quantity: 6 (three per table)

### Try with knife rack

20x50cm

<https://www.ikea.com/gb/en/p/uppdatera-tray-with-knife-rack-white-anthracite-s39432692/>

Quantity: 2 (one per table)

**Chopping board**

32x24cm

<https://www.ikea.com/gb/en/p/legitim-chopping-board-white-90202268/>

Quantity: 2 (one per table)

**3-piece kitchen utensil set**

<https://www.ikea.com/gb/en/p/direkt-3-piece-kitchen-utensil-set-black-stainless-steel-50137581/>

Quantity: 2 (one set per table)

**3-piece knife set**

<https://www.ikea.com/gb/en/p/aendlig-3-piece-knife-set-light-grey-white-70257624/>

Quantity: 2 (one set per table)

**Tongs**

<https://www.ikea.com/gb/en/p/tillaempad-tongs-stainless-steel-20452114/>

Quantity: 2 (one set of 2 pieces per table)

**Whisk**

<https://www.ikea.com/gb/en/p/koncis-balloon-whisk-stainless-steel-10225952/>

Quantity: 2 (one per table)

**Spatula**

Rubber, 26cm

<https://www.ikea.com/gb/en/p/bakglad-rubber-spatula-beige-blue-20485548/>

Quantity: 2 (one per table)

**Food container**

Width 15cm, Depth 15 cm, Height 7 cm

<https://www.ikea.com/gb/en/p/ikea-365-food-container-square-plastic-60452174/>

Quantity: 2 (one set of 3 pieces per table)

**Frying pan**

24cm

<https://www.ikea.com/gb/en/p/hemlagad-frying-pan-black-10462222/>

Quantity: 4 (two per table)

**Plates**

26cm

<https://www.ikea.com/gb/en/p/oftast-plate-white-30258913/>

Quantity: 12 (4 plates per table + 4 spares)

**Bin with lid**

26x21x32cm

<https://www.ikea.com/gb/en/p/hallbar-bin-with-lid-light-grey-80398058/>

Quantity: 2 (one per table)

**Microwave**

44x34x26cm

<https://www.ikea.com/gb/en/p/tillreda-microwave-oven-white-60493358/>

Quantity: 2 (one per table)

**Extension lead 10m**

<https://www.toolstation.com/extension-lead-13a/p84108>

Quantity: 6 (three per table)

**Extension lead 15m**

<https://www.screwfix.com/p/masterplug-13a-1-gang-unswitched-extension-lead-15m/140HH>

Quantity: 6 (three per table)

**Tablecloth**

145x240cm

<https://www.ikea.com/gb/en/p/fullkomlig-tablecloth-white-10343045/>

Quantity: 2 (one per table).