

# Episode Guide

Smart City Robotics Competition 2025

23-25 September 2025, Milton Keynes, UK

Venue: [Centre:MK Middleton Hall Event Space](#)

The Milton Keynes Smart City Robotics Competition will feature five episodes, each presenting a unique challenge for the participating robots, in a real physical environment. Each episode will be judged on qualities such as accuracy, damage, completeness and time. A team may enter one or more episode, and the leader board will show five score tables.

## 1. Deliver Coffee Shop Orders

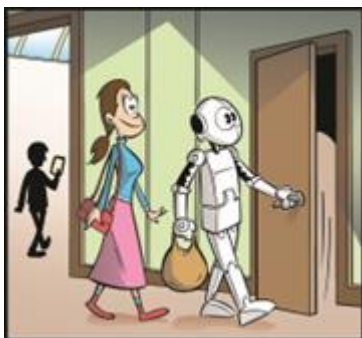


Robots take orders from new customers at their table, collect the order from the counter and deliver to the order. This is a challenging environment to navigate, interact with people and safely deliver coffee orders.

[Episode 1 Rulebook](#)

[Episode 1 Scoresheet](#)

## 2. Through the Door

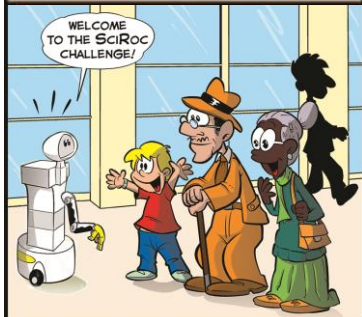


The robot will navigate a doorway, requiring it to operate the door handle and open the door. This requires a good understanding of motion planning and control.

[Episode 2 Rulebook](#)

[Episode 2 Scoresheet](#)

## 3. Assisting a Person in their Home



A person with limited mobility asks the robot to retrieve an object in the home. The robot will need to communicate with empathy and find a requested item on the table, pick it up, and pass it to the person safely hand. This can be achieved with a table mounted robot.

[Episode 3 Rulebook](#)

[Episode 3 Scoresheet](#)

## 4. Select and Pack Shopping



Given a shopping order, the challenge will be to navigate a shopping area to find products on the shelf, safely grasp the product and carry it to the delivery container, without dropping or damaging any products, in the fastest time possible.

[Episode 4 Rulebook](#)

[Episode 4 Scoresheet](#)

## 5. Drone Medical Delivery



This episode requires flying robots to safely navigate the scene and make a delivery for urgent medicine.

[Episode 5 Rulebook](#)

[Episode 5 Scoresheet](#)

## Robot Guide

Each episode will require different capabilities, such as mobility (Locomotion, Localisation, Mapping), manipulation (grasping, transport, place), HRI (speaking, speech recognition, natural language processing, understanding (empathetic response), and one episode where drones will be used for motion (flight) with some load carrying and placement.

| Episode                              | mobility | manipulation    | HRI |
|--------------------------------------|----------|-----------------|-----|
| 1 – Deliver Coffee Shop Orders       | yes      | no              | yes |
| 2 – Through the Door                 | yes      | partial         | no  |
| 3 - Assisting a Person in their Home | partial  | yes             | yes |
| 4 - Select and Pack Shopping         | yes      | yes             | no  |
| 5 - Drone Medical Delivery           | flight   | drone placement | no  |

## Suggested Robot platforms

Previous competitions has seen the teams bring a range of robots, including research robots, commercial robots, and university built robots. Examples of these are the PAL Tiago, SoftBank Pepper, KUKA youBot and Swift Robotics delivery platform.

Newer platforms are welcome such as the Pollen Robot, or a platform derived from the open-source LeRobot and Episode rules can be adapted to incorporate platforms with limitations, such as a fixed arm for manipulation, or the very low KUKA youBot, or a robot such as the SoftBank Pepper that is design for human interaction without manual manipulation capabilities.

If you have a robot platform in mind and want to discuss if it can compete, or questions about storage and transport access to the competition, please contact Duncan Russell [duncan.russell@smccl.co.uk](mailto:duncan.russell@smccl.co.uk) or Matthew Studley

## Travel

### Getting to centre:mk

The competition and events will take place in:

Middleton Hall, centre:mk

24 Silbury Arcade, Milton Keynes, MK9 3ES

**Travel to centre:mk, Milton Keynes:** <https://www.centremk.com/visit/getting-here/>

Travel by Rail:

centre:mk is a short walk from Milton Keynes Central Station, and is well-connected with frequent services from London (1 hour), Manchester (2 hours), and Birmingham (1 hour).

### Travel by Airport:

Milton Keynes is accessible from all London Airports, closest airport is London Luton.

European travel is possible by rail Eurostar, transferring in London from St Pancras International to Euston Station (10-15 minutes).

### Robot Storage

We have secure storage before and during the event at the [Experience Centre](#). Please contact [Duncan Russell](#) for address and capabilities to receive robots if using a courier.

### ETA or Visa for visitors outside the UK

All visitors travelling for outside the UK will need an ETA or Visa. If you are from EU then you will need an ETA.

**ONLY USE:** official UK government application: <https://www.gov.uk/eta/apply>

For each person travelling, you'll need:

- the passport you'll travel with
- an email address
- a credit card, debit card, Apple Pay or Google Pay – cost £16

Check if you need ETA or Visa to enter the UK:

<https://www.gov.uk/guidance/apply-for-an-electronic-travel-authorisation-eta>

**FOR VISA** (not ETA): If you need a Visa. Please contact Smart City Consultancy for a letter of invitation if required for your visa application.

## Accommodation

There are several hotels close to the competition space (Middleton Hall, centre:mk)