



## **OneWorld Robotics Competition 2019 – Area Competition**

### **OneWorld Robotics Competition – Smart Cities with Autonomous Vehicles**

This year, Actura will be staging its inaugural *OneWorld Robotics Competition*, with “Smart Cities” as its solution category. The aim of the competition is to explore the students’ resourcefulness in finding solutions to real-world problems with the help of robotic technology, while encouraging critical thinking, problem solving, teamwork, effective communication and agility and adaptability. Participation will broaden the acquired STEAM-related skills and deepen the critical approach to problem solving, stimulate curiosity and encourage a design-thinking approach.

Students will be able to utilise robots as an integral part of a solution to a real-world problem while allowing for the comparative evaluation of different approaches. The contest will foster collaboration and teamwork between team members as well as other external teams. “One student, one robot, one world” is the motto that in essence strives to create a network of cooperation in the development of learning STEAM skills. It also awards each and every student with an opportunity to master the robotic concepts, apply transferable skills to a wider context, create ideas and finally, become valuable members of future societies.

The adjudication will be carried out by a panel of industry experts and educators. Students will consider the issues surrounding the problems associated with smart cities such as transport congestion, pollution, environmental sustainability and over-crowding. Students will also consider the relevant social, ethical and legal issues surrounding environmental impact, regulating traffic, accident management and control and consequent privacy and cybersecurity risks, in conjunction with their application of robotics techniques to arrive at a solution. The adjudication process will focus on the critical thinking process and not just the technical application of robotics in assessing what the students finally present.

### **Actura**

Actura provides the leading STEAM learning solutions spanning from in-class to out-of-class environments. Our FlipRobot range provides the ultimate robotic STEAM learning solution for the in-class environment. For the out-of-class solution, the CASE Space School International Study program aims to deliver the once in a lifetime, best STEAM experience at the most inspiring organisation, NASA.

## Head Referee

The Head Referee for the OneWorld Robotic Competition is a Key Volunteer position. They are in a high visibility leadership position that is responsible for training, directing, ~~and supervising~~ all Referees and Scorekeepers ~~for competition purposes.~~ In collaboration with Actura staff, the Head Referee oversees all scoring processes and procedures. They also work and interact with students, volunteers, and Actura staff. The role has final authority for decisions regarding technical challenge scores. Plays a critical role in ensuring smooth flow of technical challenges, facilitating a positive and fair environment for all competitors, and maintaining the pace of the event.

### Responsibilities

- Facilitate a positive and fair competition environment for all participants
- Monitor and promote safe practices on and around the competition field leading by example
- Wear provided Head Referee shirt when in the arena
- Direct Scorekeepers and other referees
- Observe technical challenges, "call" rule infractions
- Lead score deliberations, if necessary, and make final decisions regarding technical challenge scores or contested penalties

### Experience and Skills Needed

- Demonstrate diplomacy and authority; be assertive, but tactful
- Thorough knowledge of the competition rules.
- Approachable personality; high energy
- Strong communication skills
- Self-directed individual
- Ability to collaborate with others, work as a member of a team
- Attention to detail
- Ability to move about the field and stand for long periods of time
- Strong assessment skills
- Previous refereeing skills preferred
- Have experience in a leadership role

### Volunteer Time Commitment

1-2 full days commitment (Area Competition)

Note: Event schedules vary. Please check the event schedule and talk to your Volunteer Coordinator for detailed information on when you are expected to arrive. Volunteers should arrive on site 15-20 minutes prior to the start of each day to allow time to check in at the Welcome table.

## **Training**

Must be available to complete training provided by Actura prior to start of competition. Includes: live and/or recorded web conferences, teleconference(s), manual and other support materials, email communications, and/or one-on-one support.

## **Reporting Relationships and Supervision**

On-site guidance: Volunteer Coordinator

## **Disclaimer and further information**

- Must sign a Conflict of Interest and Disclosure Statement prior to start of service
- have a valid Working with Children number

## **CASE**

California Association for STEAM Education (CASE) is a non-for-profit STEAM education organisation based in Cupertino California USA. It aims to design and deliver the most inspiring and innovative STEAM based educational programs where students will acquire and master critical transferable skills for their future success.