



# World Robot Olympiad™

## Standard Operating Procedures

Version: 2017

*The WRO Standard Operating Procedures states the minimum requirements that a Host Country must follow when organizing international WRO finals. It also serves as a guide to WRO National Organizers.*

*This SOP is approved by WRO Board of Trustees based on input and advice from WRO Advisory Council.*

*Responsible editor is the WRO Secretary General.*

*©2017 World Robot Olympiad Association Ltd.*

## TABLE OF CONTENTS

|  |          |
|--|----------|
| Introduction.....  | 3        |
| <b>A. Basic rules and regulations in WRO competitions.....</b>           | <b>4</b> |
| A.1. Release of Rules for a new season .....                             | 4        |
| A.2. Competition categories and age groups .....                         | 4        |
| A.3. Age groups.....   | 5        |
| A.4. Playing Field Dimensions.....                                       | 5        |
| A.5. Team definition .....   | 6        |
| A.6. Coaches .....   | 6        |
| <b>B. Procedures and principles for the international WRO final.....</b> | <b>7</b> |
| B.1. Table of eligibility.....   | 7        |
| B.2. Operational models for the international WRO final .....            | 8        |
| B.3. Overall timetable and tasks for host country .....                  | 8        |
| B.4. Standard day program for the international WRO final.....           | 10       |
| B.5. VIP Program.....  | 12       |
| B.6. Scheduled activities & announcements .....                          | 12       |
| B.7. Accommodation, food and beverages .....                             | 13       |
| B.8. Judging.....  | 13       |
| B.9. Awards – Trophies, Medals and Certificates .....                    | 13       |
| B.10. Announcement of results .....                                      | 14       |
| B.11. Comments, complaints and improvements.....                         | 15       |
| B.12. WRO international sponsors and host country sponsors .....         | 15       |
| B.13. Policy on official flags at international WRO events .....         | 16       |
| B.14. Copyright and permissions .....                                    | 16       |

## INTRODUCTION

World Robot Olympiad Association presents this WRO Standard Operating Procedures document, which is intended to outline WRO regulations and provisions – relevant to National Organizers and the international WRO final Host Country (section A and B, respectively).

The annual international WRO final takes place each year in November and teams from WRO member countries qualify from national level tournaments to represent their countries.

Each year, the international WRO final is organized in a new country. Being a host country is a privilege that all WRO member countries can apply for.

In WRO we expect each international WRO final to carry its own signature and characteristics. We want each event to reflect the country in which it is hosted. However, in order to be successful and provide a quality event, we require that the regulations and provisions specified in the SOP are followed.

Rules for WRO competitions are published separately each year and the general rules are found in the WRO General Rules document which is published in an updated version each year in January.

## A. BASIC RULES AND REGULATIONS IN WRO COMPETITIONS

World Robot Olympiad™ offers robotics competitions across 4 categories and in up to 3 different age groups. How to go about using these rules – and how to participate in the international WRO final is what we will describe in this section of the WRO Standard Operating Procedures

### A.1. RELEASE OF RULES FOR A NEW SEASON

Each year, on January 15, the official rules for all WRO competition categories are published on the WRO event website ([www.WROxxx.org](http://www.WROxxx.org)).

National Organizers shall use these rules to run national level WRO competitions.

In the event that changes to the rules are required (errors, inaccuracies etc.) these will be implemented and information will be provided on the event website and by direct emails to national organizers.

### A.2. COMPETITION CATEGORIES AND AGE GROUPS

#### **Competition categories**

Regular Category

Open Category

WRO Football

Advanced Robotics Challenge

**No other unofficial categories of competitions may be staged in connection with an international WRO final unless approval from WRO Association is obtained.**

### A.3. AGE GROUPS

- Elementary (Open and Regular): Participants up to 12 years old in the year of competition.
- Junior (Open and Regular): Participants 13 - 15 years old in the year of competition
- Senior (Open and Regular): Participants 16 – 19 years old in the year of competition
- WRO Football: Participants 10 – 19 years old in the year of competition
- Advanced Robotics Challenge: Participants 17 – 25 years old in the year of the competition

#### NOTE:

For participation in the international WRO final it is strictly enforced that participants cannot, at any time in the year of the competition, be older than specified in the age group definitions.

**Example: A participant that is 12 years old at the time of the international WRO final (November), but turns 13 years old in December must participate in Junior.**

Students younger than the age group definition have to obtain permission from the Host Country for participation in the international final and may only be approved if at least one other team member has the correct age.

If all members of a team are younger than required, then the team must participate in the corresponding age group.

Participation in the international WRO final is not restricted to students attending school. Anyone can participate in the corresponding age groups except for participants in the Advanced Robotics Challenge Category who **MUST** be either high school or undergraduate students

Participants attending college or university may participate in the Senior and WRO Football competition categories if their age fits the age group definition.

### A.4. PLAYING FIELD DIMENSIONS

The Host Country is responsible for developing the games and rules for the WRO Regular Category (across all age groups). All games and rules are reviewed by WRO experts.

Once the games have been approved by the WRO Advisory Council, the mat designs for the playing fields will be finalized and print files will be made available on the WRO event website.

All Regular Category games are carried out on a field mat provided as a downloadable file from the WRO event website.

Measurements of field mats: 2366 mm x 1143 mm

Recommended wall height of table: minimum 5 cm.

Make sure the table matches the dimensions of the field mat as well as possible. If inside table dimensions exceed mat size then note the guide in the regular category rule documents on how to place the mat inside the table.

In order that the tables can be used over many years, no games should demand major changes to the table (like holes).

WRO Football must be carried out on a Playing Field as defined in the WRO Football rules.

Advanced Robotics Challenge must be carried out on a playing field as defined in the Advanced Robotics Challenge rules.

National Organizers are responsible for:

- Printing the field mat designs for the playing fields for national level WRO competitions.
- Source any materials specified to construct 3D objects on the playing field (WRO sponsor, LEGO Education, has developed a WRO Brick Set that contains all LEGO bricks required to build 3D objects for one table in Regular Category, independent of age group. The WRO Brick Set can be ordered from any LEGO Education distributor)

## A.5. TEAM DEFINITION

Competitions in WRO are team based. A team consists of one (1) coach and two (2) or three (3) team members.

One (1) coach and one (1) team member is not considered to be a team and cannot participate.

## A.6. COACHES

The minimum age of a coach at an international WRO final is age 20 at the time of registration for the WRO final. Registration for the international WRO final ends 4 weeks before the first day of the international WRO final.

Coaches may work with more than one team; however each team needs to be assisted by a responsible adult. This person may be an assistant coach. Minimum age for assistant coaches is also age 20.

Coaches may offer students advice and guidance prior to the competition, however during the international WRO final **all work and preparation** must be performed by the student members of the team.

## B. PROCEDURES AND PRINCIPLES FOR THE INTERNATIONAL WRO FINAL

In this section of the WRO Standard Operating Procedures we provide an overview of the procedures for the international WRO final; host country responsibilities, registration, fees etc.

Note, the WRO Tournament Manual, which provides a detailed checklist for the host country, is an appendix to the SOP.

### B.1. TABLE OF ELIGIBILITY

The WRO Table of Eligibility (TOE) defines how many teams National Organizers of WRO may register for the international WRO final.

- The number of teams a National Organizer may send to the international WRO final in a category depends on the number of teams that participate in the country in the same category
- A team may participate in only one competition; Regular Category, Open Category, WRO Football or Advanced Robotics Challenge
- Any student may participate in one team only!
- The numbers in the table are maximum per age group and category and **cannot** be transferred from one age group or category to another! National Organizers may register fewer teams than allowed by the table of eligibility, but never more.

Each competition category has its own TOE. A country has to have minimum 5 teams in any competition category to register teams for the international WRO final.

#### Open Category – WRO Football – Advanced Robotics Challenge

| Open Category teams at national level | Entries* | WRO Football teams at national level | Entries | Advanced Robotics Challenge teams at national level | Entries |
|---------------------------------------|----------|--------------------------------------|---------|---|---------|
| 5-39                                  | 2        | 5-39                                 | 1       | 5-19  | 1       |
| 40-149                                | 3        | 40-149                               | 2       | 20-39   | 2       |
| 150+                                  | 4        | 150+                                 | 3       | 40+   | 3       |

\* Free choice of age group

#### Regular Category:

| Regular Category teams at national level | Entries in Elementary | Entries in Junior | Entries in Senior |
|--|-----------------------|-------------------|-------------------|
| 5-99                                     | 1                     | 1                 | 1                 |
| 100-299                                  | 2                     | 2                 | 2                 |
| 300-599                                  | 3                     | 3                 | 3                 |
| 600+                                     | 4                     | 4                 | 4                 |

## B.2. OPERATIONAL MODELS FOR THE INTERNATIONAL WRO FINAL

A Host Country may choose between one of two models for organizing the international WRO final.

- A) "Premium model"
- B) "Simplified model"

### **Premium Model**

For the Premium model, the Host Country is responsible for organizing all matters pertaining to the technical arrangements of the international WRO final AND logistics for registered participants including accommodation in hotels. The registration fee for participation includes standard accommodation.

### **Simplified Model**

For the Simplified model the Host Country is ONLY responsible for the technical arrangement of the international WRO final. Consequently, registered participants must organize logistics and accommodation themselves. Consequently, the registration fee is lower as it does not include standard accommodation.

For each year, WRO and the Host Country will communicate which operational model will be used in the current season and this will be done no later than 15 January. Fees for participation may vary according to operational model.

## B.3. OVERALL TIMETABLE AND TASKS FOR HOST COUNTRY

The international WRO final should take place during the 2nd weekend of November unless a special reason to hold it in the 1st or 3rd weekend of November is approved by the WRO Advisory Council.

### **August: 15 months before international WRO final**

The future Host Country submits their proposal for new Regular Category games and the theme for the Open Category to the WRO Secretary General who will coordinate the review process with the WRO Games & Rules Review Committee.

This review process is in place to ensure that the games that are presented to the Advisory Council on the November meeting are of the highest quality. The WRO Games & Rules Review Committee acts on behalf of the WRO Advisory Council and has the right to demand changes to the presented games and rules as required to ensure the games fulfill requirements stated in the WRO Game Development Guide.

### **November: 12 months before international WRO final**

The future Host Country presents the final version of Regular Category games and Open Category theme to the WRO Advisory Council.



- The games and rules should now have been tested out with age appropriate children by the Host Country and approved by the WRO Games & Rules Review Committee before being presented to the WRO Advisory Council.
- At the WRO meeting a video of each game must be presented and if possible the actual game should be demonstrated with a real robot on the official playing field.
- If needed - a revised "Table of eligibility" is presented by Host Country.

#### **15 January: 10 months before international WRO final**

- All Games & Rules are published on the event website
- Open Category theme is released

#### **March: 8 months before the international WRO final**

- The WRO Secretary General visits the Host Country and meets with the organizing committee
- The Host Country presents plans for the international final the same year
- Visit to venue
- Presentation of overall WRO event schedule incl. details on competition schedule.
- Venue, hotel and transportation are reviewed.

#### **12 weeks before international WRO final begins**

- Cancellation of the event can only be done under extreme circumstances and in accordance with relevant provisions of the Host Country contract.
- In the unlikely event the host country considers cancellation of the planned WRO event; this must be informed to the WRO Advisory Council and all National Organizers minimum 12 weeks ahead of the competition date with adequate reasoning.
- Cancellation cannot take place less than 8 weeks ahead of the WRO event date!
- If Cancellation is done in less than 8 weeks, host country must bear financial costs and other obligations incurred by all participants. Only exception is cancellation due to Force Majeure (War, earthquake and the like)
- Official notification of cancellation will be issued by the WRO Board of Trustees

#### **8 weeks before competition date**

- Deadline for registration of the number of teams for all three categories: **national organizers** have to submit information to the Host Country on how many teams in each category they will register.

#### **4 weeks before competition date**

- Deadline for registration of the names of teams, individual team members names and coach names.

- Special requests (e.g. food allergies, requirements due to religion). Host country will do their best to accommodate such requests.
- Failure to comply with this deadline may exclude relevant teams for participating in the WRO event, if so decided by the Organizing WRO Committee in the Host country.
- Extraordinary requests from national organizer may be declined by host country.
- The Host Country can only approve national organizers' registration of teams, if national organizers have submitted information on how many teams participate in WRO in their country. This total number of WRO teams in a country decides how many teams a country can register for the international WRO final (as specified in the table of eligibility)

#### **Guidance to National Organizers on registration for the international WRO final**

- It is of utmost importance that National Organizers finalize national tournaments EARLY in order to be able to complete registration for the international WRO final on time
- WRO Advisory Council advises that national finals should be completed no later than 8 weeks before the schedule date for the international WRO final.
- The Host Country is permitted to reject late registrations.
- National Organizers are responsible for knowing the VISA application procedures.
- Host Country is obliged to issue invitation letters if required by any National Organizer. A deadline for issuing of invitation letters must be clearly communicated by the Host Country on the event website.

### B.4. STANDARD DAY PROGRAM FOR THE INTERNATIONAL WRO FINAL

This is the standard program for a WRO Tournament. Any changes to this should be presented no later than at the WRO Board of Trustees meeting that is scheduled for April, which is hosted by the Host Country.

#### **Wednesday:**

WRO Board of Trustees meeting

#### **Thursday:**

WRO Advisory Council Meeting

Arrival of teams

Approval of venue

#### **Friday:**

WRO Advisory Council meeting (continued)

Host country briefing of WRO Advisory Council: Final schedule, transportation, surprise rule change, special awards & criteria, social evening & participants, specific issues etc.

Arrival of teams

Testing playing fields

Meals for visiting teams and coaches

Evening: Judge meeting and briefing of coaches

Open Category teams set up booths

Opening Ceremony

**Saturday:**

Preliminary rounds in Regular Category, Open Category, WRO Football and Advanced Robotics Challenge

WRO National Organizer meeting

Social evening with meals for registered guests (Friendship Night)

Optional: VIP dinner – or VIPs are invited to Friendship Night

**Sunday:**

Competition continued (finals in all categories)

Open Category Ballot (all teams will get their Open Category ballot upon arrival – teams can cast their vote from Saturday morning to Sunday noon)

Closing ceremony including award ceremony

National Organizer meeting

Dismantling of Open Category booths

WRO Appreciation Dinner

## B.5. VIP PROGRAM

The host country is responsible for preparing the VIP program and the following people are eligible:

WRO Advisory Council members

WRO Board of Trustees

Host Country organizers

National Organizers

WRO international sponsors

Event sponsors (host country sponsors)

Host country partners

VIPs should all be seated in a designated VIP area during Opening and Closing ceremonies and have access to a VIP lounge where lunch is served Saturday and Sunday.

VIPs are not allowed in the competition area unless a tag issued by host country allows this.

Seating arrangements for VIPs must be approved by WRO Secretary General.

## B.6. SCHEDULED ACTIVITIES & ANNOUNCEMENTS

- All activities must appear in a daily program handed over to all coaches.
- The time schedule must allow for some flexibility and hold time buffers.
- If the schedule MUST be changed this can only happen the day before by a written note to all coaches.
- The announcement of the surprise change for Regular Category must be handed over to the team coaches in writing on the morning of the competition. The team coach will have 10 minutes with the team to translate and explain the change(s)
- The total duration of speeches during the Opening and Closing ceremonies may not exceed 15 minutes. Each speaker will have a maximum of 3 minutes. This also applies to Host Country VIPs! Speeches can be in the host country language or English. A speech can appear on the big screen in textual form - translated to either the national host country language or English.
- During Opening ceremony an oath taking will be led by the host country, preferably by students representing many countries.
- All announcements should respect the multi-language environment and always appear short and clear in both spoken and written version. This also applies during prize-giving.
- An information and message board should be available for update of important information e.g. bus schedules.

## B.7. ACCOMMODATION, FOOD AND BEVERAGES

Bottles of drinking water should be available for students all the time– free of charge!

Food should be sufficient and in case of lunchboxes, these should be handed out to student within max 10 minutes of waiting time in a line.

Host Country should ensure that foods provided cater for various dietary requirements.

Hotels should preferably be within walking distance to the venue or alternatively within 15-20 minutes by shuttle busses.

## B.8. JUDGING

Judging at the international WRO final is a very important aspect of organizing a successful event. The Host Country is responsible for ensuring that judging is carried out in line with the provisions of the WRO Judging Guide.

The process of recruiting judges is done in collaboration between the Host Country and the WRO Judging Panel.

All judges need to be approved and trained to ensure participating teams receive fair judging.

For the international WRO final the aim is to have 50% judges from the Host Country and 50% international judges.

All judges should have a good command of the English language.

No judge may be the coach of a team participating in the international final.

## B.9. AWARDS – TROPHIES, MEDALS AND CERTIFICATES

The following awards and certificates must be consistent every year and should be communicated to all National Organizers and teams on the WRO website:

- 1st , 2nd, and 3rd place in Regular Category, Open Category, WRO Football and Advanced Robotics Challenge across all age groups receive a trophy.
- Individual team members and coach will in addition receive a medal and a certificate indicating the ranking (1st, 2nd or 3rd)
- 4th, 5th , 6th, 7th and 8th places will receive a certificate indicating the ranking (4 – 8)
- All qualified teams (including first 8 places) will receive a “Certificate of Excellence”, without any ranking.
- Judges will receive a certificate of appreciation.

- All certificates have to be signed by the chairman of the host country WRO Committee and chairman of the WRO Advisory Council and presented to the participating teams on the day of closing ceremony.
- **All certificates and trophies should hold the official WRO and Host Country logo only.**

### Other awards

Host Country and WRO may decide to present other awards.

However the reasoning for the special awards must always be stated.

Examples:

- Judges special award
- Most popular Open Category team (Ballot - only registered participants at the international WRO final can vote).
- Sponsors awards (currently LEGO Education presents the **LEGO Education Creativity Award**)
- Other special awards

## B.10. ANNOUNCEMENT OF RESULTS

Announcement of results takes place in the Award Ceremony.

- Announcement of results should simultaneously appear in writing on the big screen
- Awards start with “Runner up 4 – 8”, then bronze, silver and gold.
- 1., 2. and 3. placed teams same age group should appear on the stage at one time to allow for a category winners photo
- The host country will decide whether or not runner up 4 – 8 should appear on the stage (to reduce time it is recommended that these teams are not presented on stage – only announced on big screen
- **If possible the Open Category winners should be presented on the big board by a project photo or video playback.**

Post event announcements

- Top 50% teams will be ranked, scored and listed by team name on the WRO event website after no later than 1 week after the event
- The scores and ranks of all teams will be sent via e-mail to each WRO national organizer within four weeks after the competition.
- Once rankings have been published by the host country WRO national organizers can publish the same information on national websites or printed materials. But the above principle of only announcing the top 50% must be respected.

## B.11. COMMENTS, COMPLAINTS AND IMPROVEMENTS

For any issue (except judging) comments and complaints should be directed to the WRO Advisory Council Chairman and/or the WRO Secretary General in writing no later than 1 week after the tournament has been concluded.

Such issues will be discussed in the next WRO Board of Trustees meeting and the result or action taken will be published to all National Organizers.

In case the WRO Advisory Council Chairman finds a complaint or appeal very urgent, he may call for “urgent WRO Advisory Council meeting” in the afternoon right after the award ceremony, and the solution will be published to all WRO Organizers right after.

Each year a WRO Survey is sent out to all national organizers and WRO Advisory Council members no later than one week after the WRO final. The National Organizers are responsible for collecting feedback from their delegations.

Main findings in WRO Survey will be debated in the next Board of Trustees meeting and passed on to next Host Country and WRO Advisory Council.

## B.12. WRO INTERNATIONAL SPONSORS AND HOST COUNTRY SPONSORS

As an international association, WRO depends on sponsors to fund the work that is done each year to ensure quality and reach of the WRO competitions worldwide.

Hence, it is very important that all WRO international sponsors are promoted at the international final and this is done in accordance with sponsorship agreements and other regulations.

WRO international sponsors are sponsors that hold a sponsorship agreement with World Robot Olympiad Association.

Host Country sponsors are sponsors that sponsor the international WRO final

- The Host Country must promote all WRO international sponsors in accordance with the provisions stated in each individual sponsorship agreement
- Promotion of the WRO brand and WRO international sponsors must follow the regulations provided in the WRO Brand Manual
- The Host Country cannot make sponsorship agreements, which are binding in any way for WRO member countries
- The Host Country may enter into any sponsorship arrangement with sponsors of the international WRO final as long as this is not exclusive
- All branding material at the international WRO final must be approved by WRO
- Announcements, acknowledgements or credits at the WRO event website, must be approved by WRO

Important: event sponsors can never receive dominating visual promotion relative to the promotion of WRO and its Gold and Premium sponsors at the international WRO final.

## B.13. POLICY ON OFFICIAL FLAGS AT INTERNATIONAL WRO EVENTS

At the international WRO final United Nations (UN) resolutions and rules on official flags must always be adhered to.

Specific cases:

At international WRO events the Taiwan flag is not accepted. Host Countries of international WRO events must always use the Chinese Taipei flag as specified by the UN.

Important: if in doubt, please consult the WRO Secretary General for advice.

## B.14. COPYRIGHT AND PERMISSIONS

Images, videos and other media recordings is under copyright of the WRO Committee in the host country and WRO Association Ltd. This also includes submitted Open Category videos.

Media access to the international WRO final is subject to approval by the Host Country organizing committee. However, all media invited by the WRO Association should be granted access to the competition.

All participants must submit a signed Consent & Release form.