GENERAL RULES

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Updates on the general rules from 2023 to 2024

The main changes in the general rules from 2023 > 2024 are listed here:

Rule 3.6	Additional explanation regarding identical robots
Rule 5.2	HiTechnic sensor removed
Rule 5.6	Added a rule about pneumatics
Rule 5.7	Only one robot chassis allowed
Rule 5.8	Clarification regarding placement of the controller
Rule 5.14	Limit to one computer / programming device
Rule 6.6	Added a rule about game elements in the starting area
Rule 6.12	Added a rule about variability on the field
Rule 8.3.8	Program on the robot
Rule 9.2	Adding an example for input data
Rule 9.3	Added a rule about parts lost on the field
Rule 9.8	Clarified what is scored on the field and when things are scored

In addition, please note that during the season there might be clarifications or additions to the rules by the official WRO Questions & Answers. The answers are seen as addition to the rules. You can find the Q&A here: **https://wro-association.org/competition/questions-answers/**

IMPORTANT: Use of this document in national tournaments
The rules in this document are used for the judging at international events.

This rule document is made for all WRO events around the world, but for the national competitions, a WRO National Organizer has the right to adapt these international rules to suit local circumstances. All teams participating in a national WRO competition should use the General Rules as provided by their National Organizer.

1. General information

Introduction

In the WRO RoboMission category teams design robots that solve challenges on a competition field. The robots are fully autonomous.

For each age group a new field and mission are developed each year. On the day of the competition a surprise rule adds a new element to the mission. An extra challenge will test the creativity and quick-thinking skills of the teams at national and international events.

Focus Areas

Every WRO category and game has a special focus on learning with robots. In the WRO RoboMission category, students will focus on developing in the following areas:

- General coding skills & basic robotics concepts (perception of environment, control, navigation).
- General engineering skills (building a robot that can push/lift objects of certain sizes).
- Developing optimal strategies to solve concrete missions.
- Computational Thinking (e.g., tinkering, debugging, collaboration etc.).
- Teamwork, communication, problem solving, creativity.

Age appropriate missions: The fields and missions are designed with a growing difficulty and complexity from Elementary to Senior age group. The rising complexity is seen in the:

- Route on the field (e.g., line following or only markers).
- Technical complexity of the missions (e.g., pushing, lifting, grabbing game objects).
- Randomness of the game elements (e.g., one or multiple random situations).
- Variety of game elements (e.g., number of different colored and/or shaped objects).
- Required accuracy of the solutions to the missions (e.g., a big target area or a small spot).
- Overall complexity in the combination of the elements mentioned before.

All these aspects lead to different requirements for the mechanical design of the robot and the complexity of the code. When participating in WRO for multiple seasons, the teams can grow and develop with the program, solving increasingly complex missions as they get older.

Learning is most important

WRO wants to inspire students around the world for STEM related subjects and we want the students to develop their skills through playful learning in our competitions. This is why the following aspects are key for all our competition programs:

- ❖ Teachers, parents or other adults can help, guide and inspire the team, but are not allow to build or code/program the robot.
- ❖ Teams, coaches and judges accept our WRO Guiding Principles and WRO Ethics Code that should make all of us aware of a fair and learning full competition.
- ❖ On a competition day, Teams and Coaches respect the final decision judges take and work with other teams and judges on a fair competition.

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More information on the WRO Ethics Code you find here: link.wro-association.org/Ethics-Code

2. Team and Age Groups definitions

2.1.   A team consists of 2 or 3 students.

2.2.   A team is guided by a coach.

2.3.   1 team member and 1 coach are not considered a team and cannot participate.

2.4.   A team may only participate in one of the PRO categories in a season.

2.5.   Any student may participate in one team only.

2.6.   The minimum age of a coach at an international event is 18 years old.

2.7.   Coaches may work with more than one team.

2.8.   The age groups in RoboMission competitions are:

    2.8.1.   Elementary: students 8-12 years old (in season 2024: born years 2012-2016)

    2.8.2.   Junior: students 11-15 years old (in season 2024: born years 2009-2013)

    2.8.3.   Senior: students 14-19 years old (in season 2024: born years 2005-2010)

2.9.   The maximum age reflects the age that the participant turns in the calendar year of the competition, **not** his/her age at the competition day.

3. Responsibilities and team's own work

3.1.   A team should play fair and be respectful towards teams, coaches, judges and competition organizers. By competing in WRO, teams and coaches accept the WRO Guiding Principles that can be found at: link.wro-association.org/Ethics-Code.

3.2.   Every team and coach need to undersign the WRO Ethics Code. The organizer of the competition will define how the Ethics Code is collected and signed.

3.3.   The construction and coding of the robot may be done only by the team. The task of the coach is to accompany the team organizationally and to support them in advance in case of questions or problems, but not to do the construction and programming of the robot themselves. This applies to both the day of the competition and the preparation.

3.4.   A team is not allowed to communicate in any way with people outside of the competition area while the competition is running. If communication is necessary, a judge may allow team members to communicate with others under supervision of a judge.

3.5.   Team members are not allowed to bring and use mobile phones or any other communication device into the competition area.

3.6.   It is not allowed to use a solution (hardware and / or software) that is (a.) the same or too similar to solutions sold or posted online or (b.) the same or too similar to another solution at the competition or (c.) clearly not the own work of the team. This includes solutions from teams of the same institution and/or country. Teams must develop their robots autonomously and independently of other teams. Robots that are very similar and give rise to the suspicion that they have been jointly developed but partially adapted to bypass this rule will be classified as identical robots. This rule will be applied to the entire competition (including the 2nd-Day-Challenge).

3.7.   If there is a suspicion in relation to rule 3.3 and 3.6, the team will be subjection for investigation and any consequences as mentioned in 3.8 can apply. Especially in these

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cases rule 3.8.5 may be used to not allow this team to progress to the next competition, even if the team would win the competition with the solution that is likely not their own.

3.8. If any of the rules mentioned in this document are broken or violated, the judges can decide on one or more of the following consequences. Before, a team or individual team members may be interviewed to find out more about the possible violation of the rules. This can include questions about the robot or the program.

    3.8.1. A team may be given a time penalty of max. 15 minutes. In this time, teams are not allowed to do any changes on their robot and program.

    3.8.2. A team may not be allowed to participate in one or more rounds. Then, see 9.11.

    3.8.3. A team may get up to a 50% reduced score in one or more runs.

    3.8.4. A team may not qualify for the next round of the tournament
(e.g. in case you have a tournament format with TOP 16, TOP 8 etc.).

    3.8.5. A team may not qualify for the national / international final.

    3.8.6. A team may be disqualified completely from the tournament immediately.

4. Game documents and rule hierarchy

4.1. Every year, WRO publishes new game documents for the specific age group field missions and a new version of the general rules for this category. These rules are the base for all international WRO events.

4.2. During a season, WRO may publish additional Question & Answers (Q&As) that can clarify, extend or re-define rules in game and general rule documents. Teams should read these Q&As before the competition.

4.3. Game documents, the general rule document and Q&As may be different in a country due to local adaptations through the National Organizer. Teams need to inform themselves about the rules that apply in their country. For any international WRO event, only the information WRO has published is relevant. Teams that qualified for any international WRO event should inform themselves about possible differences to their local rules.

4.4. At the competition day, the following rule hierarchy applies:

    4.4.1. General rule document builds the base for rules in this category.

    4.4.2. Game documents of the age group clarify the missions on the field and may add special game definitions (e.g. the orientation of the mat or another starting position of the robot).

    4.4.3. Questions & Answers (Q&As) can overwrite rules in game and general rule documents.

    4.4.4. The judge on the competition day has the final word in any decision.

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5. Robot material & regulations

5.1.   Every team builds one robot to solve the challenges on the field. The maximum robot dimensions before the robots starts a run are 250 mm x 250 mm x 250 mm. Cables must be included in these dimensions. After the robot has started, the dimensions of the robot are not restricted.

5.2.   Teams are allowed to use only the following materials to build the robot:

Controller	LEGO® Education MINDSTORMS® NXT or EV3; LEGO® Education SPIKE™ PRIME; LEGO® MINDSTORMS® NXT, EV3 or Robot Inventor.
Motors	Only motors from the platforms/sets mentioned at "Controller".
Sensors	From the platforms/sets mentioned at "Controller". *Please note: The HiTechnic Colour Sensor is **not** allowed to be used in RoboMission anymore.*
Batteries	Only official LEGO rechargeable batteries (no. 9798 or 9693 for NXT, no. 45501 for EV3, no. 45610 or no. 6299315 for SPIKE/Robot Inventor).
Building Materials	For the construction of the robot only LEGO® branded elements are allowed.

5.3.   It is allowed to cut the size of original LEGO® ropes or tubes. Any other modification on any other original LEGO® or electronical part is not allowed and it is not allowed to use screws, glues or tape or any other Non-LEGO® material to fasten any components on robots.

5.4.   The number of motors and sensors to be used is not restricted. However, it is only allowed to use official LEGO® materials to connect motors and sensors to the controller.

5.5.   If a team wants to use any equipment to align in the start area, this equipment must be built out of LEGO® materials, it must fit into maximum robot dimensions.

5.6.   It is allowed to use LEGO® pneumatic components. The system can be filled with air before the run.

5.7.   A team is allowed to bring and use only one controller during practice time or robot runs. The team can bring spare controllers but the team should leave it with the coach. If the team needs a spare controller, the team should contact the judge before getting the spare part. Only one robot chassis, the one which includes the controller, is allowed. A chassis is defined as an assembly with motorized mechanisms, sensors and a drive train axis ready to be powered by a controller.

5.8.   A team has to place the controller in the robot in a way that makes it easy to check the program and stop the robot by a judge. This means that the display and the buttons of the controller must be placed on the outside of the robot. No other elements should block or limit the access to the buttons or display. The controller cannot be placed on the bottom side of the robot.

5.9.   A robot must be autonomous and finish the missions by itself. Any radio communication,

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remote control and wired control systems are not allowed while the robot is running.

5.10. A team is not allowed to perform any actions or movements to interfere or assist the robot after the robot started with the run.

5.11. Any software to code the robot is allowed and teams can prepare the code before the competition day. If a team uses a software that requires an online connection (e.g. a browser-based tool), the team should check if there is an offline version for the competition day. The competition organizer is not responsible to provide an online infrastructure (e.g. WiFi for everyone).

5.12. Bluetooth, Wi-Fi or any remote connection must be switched off during check time and robot runs. Only teams can use remote connections if there is no other way to transfer the code from a device (e.g. a tablet) to the controller. In this case, devices that are used for Bluetooth coding must stay with the robot in the robot parking area during check times. However, it is strongly recommended to transfer code via cable to avoid problems (e.g. multiple devices with the same name) at the competition day. Of course, it is not allowed to interfere or obstruct any other team or robot with the remote connections a team uses.

5.13. Use of SD cards to store programs is allowed. SD cards must be inserted before check time and may not be removed until the next practice time starts.

5.14. A team should prepare and bring all the equipment, enough spare parts, software and one portable computer (or other programming device), that it needs during the tournament. Teams are not allowed to share a laptop and / or the program for a robot on the competition day. The competition organizer is not responsible for the maintenance or replacement of any material, not even in case of any accidents or malfunctions.

5.15. The robot can be marked (label, ribbons, etc.) to prevent participants from losing it or confusing it with the robots of the other teams, as long as this does not change its performance or give clues about the assembly process.

5.16. Teams can bring supportive materials such as measuring tape (to check the robot size) or pens and paper (to make notes). However, any paper brought to the competition area should be empty and is not allowed to be used to exchange messages with the coach.

6. Game table and equipment

6.1. In this category, the robot solves missions on a field. Every field consists of a game table (an even ground with boarders) and a printed mat that is put into the game table. Every age group has its own mat because in every age group there are different missions to solve.

6.2. The dimensions of a WRO mat in an age group are 2362 mm x 1143 mm. Game Tables have the same size or max. +/- 5mm in each dimension. The official height of the boarders of a game table is 50mm, higher boarders can be used as well.

6.3. The game mat must be printed with a matt finish/overlay (without reflecting colors!). The

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preferred printing material is a PVC tarp with around 510 g/m² (Frontlit). The material of the game mat should not be too soft (e.g. no mesh banner material).

6.4.   All black lines that a robot could follow have at least a width of 20mm. Other colors that should be identified by the robot will follow the limitations of the allowed sensors.

6.5.   The game elements are built from the WRO Brick Set (no. 45811) and WRO Expansion Brick Set (no. 45819). Other materials, e.g. bricks from an EV3/SPIKE Core Set or wood, paper or plastic, may be used to a limited extent to make the games even more interesting.

6.6.   If a game element is placed in the starting area at the beginning of the run, the object has to fit within the 250 mm x 250 mm x 250 mm (rule 5.1) together with the robot. The object cannot be taken off the mat.

6.7.   If the position of game objects on the field is not clearly defined and the specified area for the game object is larger than the object itself, the object should be place centered in an area.

6.8.   If game objects must be fixed on the game field, the organizers decide on the material to fix the objects unless the game rules specify it differently. For example, double sided tape or hook-and-loop tape.

6.9.   It is not allowed to damage game objects. If a game object is damaged, a potential score of the game object does not count (unless the game document state it differently).

6.10.   The start area of the robot is exclusively the white area within a colored border. The robot must be completely within the start area (white area) when starting.

6.11.   If there is a different setup at a local / national / international competition (table size, borders, material of game mat etc.), the organizers of the competition should inform the teams upfront.

6.12.   As you build and program, keep in mind that organizers make every effort to ensure that all fields are correct and identical, but you should always expect some variability, such as:

6.12.1. Flaws on the fields

6.12.2. Variety in color brightness on the game mat, from table to table

6.12.3. Variety in lighting conditions, from hour to hour, and/or table to table

6.12.4. Judges' shadow on the field

6.12.5. Judges will walk around the field during judging

6.12.6. Texture / bumps under the mat

6.12.7. Waviness in the mat itself. Location and severity of waviness varies.

7. Surprise Rule

7.1.   Every WRO tournament has a surprise rule for every age group. This rule will be announced during the opening of the competition. The surprise rule can change rules or tasks, extend them and even allow for extra or penalty points. Teams will get the surprise rule in writing as well. A coach time may be allowed to explain the surprise rule to the teams.

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7.2.   In the case of competitions lasting several days, different surprise rules may apply to the individual competition days.

7.3.   The teams have time to react to the surprise rule during their practice times. If the surprise rule brings additional game elements, teams are not allowed to remove these elements from the playing field if they do not want to solve the surprise rule.

7.4.   The surprise rule does not count towards the regular missions on the playing field and therefore is seen as bonus points. This has the following effect: If a task only scores points if points have already been scored, solving the surprise rule alone is not enough. Regular missions (not bonus points) on the playing field must be solved.

8. Tournament Format and Procedure

Especially for this chapter, please see the definitions of words in the glossary attached.

8.1.   The tournament format and ranking for local events in a country is decided by the National Organizer in a country. There is a preferred tournament format for a two-day WRO International Final (see 10).

8.2.   The tournament in this category <u>must</u> consists of the following elements:

8.2.1. A number of **practice times**. Every tournament should start with a practice time to align for local circumstances (e.g. light conditions in the venue).

8.2.2. A number of **robot rounds**

8.3.   The tournament in this category <u>can</u> consist of the following elements:

8.3.1. An **assembly** of robots during the first practice time. In this case, the first practice time should be at least 120min to allow teams to assembly the robot and practice on the field.

8.3.2. An **extra-challenge** (in the afternoon, on a 2nd-day etc.), see more in chapter 9.

8.3.3. If a tournament format has included the assembly of robots, all parts of the robot should be disassembled before the first practice round. For example, a tire cannot be put on a wheel until the first practice round has started. However, it is allowed to sort all parts strategically, either on the table in front of the team or prepared and sorted in bags. These bags must be transparent and can only be labelled with numbers (no words). Electronical parts can be marked with single keywords, e.g. a name or a number. Teams are allowed to bring the code of the program with its comments. It is not allowed to bring any instructions, guides or further information (paper or digital) into the competition area. The judges will check the state of all parts before the start of the first practice round. During this time, the team is not allowed to touch any parts of the computer.

8.3.4. Teams work in designated team areas and are only allowed to modify the construction or code of the robot during practice times. If teams want to make test runs, they need to queue with their robots (controller included). No laptops should be brought to the competition table and no own mats should be brought to the team area. Teams need to calibrate their robots during practice time, not directly before an attempt. If there are different tables for practice and official robot attempts, the team may ask the judges to calibrate the sensors on the official game tables.

8.3.5. Coaches are not allowed to enter team areas to provide any instructions and guidance during the competition. Specified coaching times, where teams and coaches meet, can be defined. During such coaching times, coaches could bring notes to talk to the team but are not allowed to hand any materials to the team.

8.3.6. <u>Before</u> practice time is over, the teams must place their robots on the robot parking. A robot that is not handed in on time cannot participate in the respective round.

8.3.7. <u>Once</u> the practice time is over, the judges prepare the competition tables for the next round (including possible randomization of game robots) and robot check-time starts.

8.3.8. Before the robot is placed on the robot parking, the robot is only allowed to have one executable program (sub-programs that belong to one core program are OK). Judges

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must have the opportunity to clearly identify one program on the robot. Teams have to inform the Judges about their program name during the quarantine. The name of the program will be written down on the robot parking lot at the quarantine table and only that program can be started by the team. If there is no program on the robot, the team cannot join this round and is disqualified for this attempt (see 9.11).

8.3.9. During check-time, the judges will inspect the robot and check all regulations. If a violation is found at the inspection, the judge will give the team three minutes to convert the violation. It is not allowed to transfer new programs during these three minutes. If the violation cannot be solved during the time, the team is disqualified for this attempt (see 9.11).

8.3.10. In the case of a competition lasting several days, the robots must remain overnight in the robot parking areas. If charging at the robot parking is not possible, the battery may be removed and charged overnight.

8.3.11. It is suggested, that every participant receives a participation, bronze, silver and gold certificate based on the robot performance based on the following table (see below). Competition organizer can decide to only to a ranking based on these criteria (without a ranking of placements 1st, 2nd, 3rd) or to award these certificates additional.

% of total points (in age group) in best robot attempt	Certificate
< 25%	Participation
25-50%	Bronze
50-75%	Silver
> 75%	Gold

Example: If the best robot attempt of team on a competition day results in 130 of 200 points in total, then the team will get a silver certificate (130/200 => 65% of the points).

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9. Robot attempt

9.1. Each robot attempt is 2 minutes. Time begins when the judge gives the signal to start.

9.2. The robot must be placed in the starting area so the projection of the robot on the game mat is completely within the start area. The participants are allowed to make physical adjustments to the robot in the starting area. However, it is not allowed to enter data to a program by changing positions or orientation of the robot parts or to make any sensor calibrations of the robot. For example, adjusting an arm of the robot to a specific degree, to input information, is not allowed. Entering data in any way is not allowed. If entering data is suspected, the team will be investigated by the Judges.

9.3. If the robot loses any parts on the field, these parts are considered free and do not belong to the robot anymore, but stay on the field. It is not allowed to lose the controller, motors or sensors. In that case the attempt will be scored with 0 points and 120 seconds.

9.4. In the event that starting a program <u>directly</u> sets the robot in motion, the team needs to wait for the start signal of the judge before starting the program.

9.5. In the event that starting a program <u>does not directly</u> set the robot in motion, participants are allowed to start the program before the start signal. After that, it is allowed to set the robot in motion by pressing the central button on the controller, no other buttons or sensors are allowed to start the robot. If a SPIKE PRIME/Robot Inventor controller is used, it is allowed to use the left button on the controller to set the robot in motion.

9.6. If there is any uncertainty during the robot attempt, the judge makes the final decision. The judge should decide in favor of the team if no clear decision is possible.

9.7. A robot attempt will end if…
  9.7.1. the robot attempt time (2 minutes) has ended.
  9.7.2. any team member touches the robot or any mission objects on the table during the run.
  9.7.3. the robot has completely left the game table.
  9.7.4. the robot or the team violated rules or regulations.
  9.7.5. a team member shouts "STOP" <u>and</u> robot does not move anymore. If the robot is still moving, the robot attempt will only end once the robot stops by itself or is stopped by the team or judge.

9.8. Once the robot attempt has ended, time is stopped and the judge scores the attempt based on the situation on the field at this point of time. The points are awarded based on the randomization at the begin of the run. The scores are noted on a scoring sheet (on paper or digital), the team need to sign off the scores (on paper or digital signature/checkbox). Once the score is signed off no further complaint is possible.

9.9. If a team does not want to sign off after a certain period of time, the judge can decide to disqualify the team for this round. It is not allowed that a team coach joins the discussion with judges on the scoring of the run. Video or photo proofs will not be accepted.

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9.10. If a team touches or changes the task objects on the playing field during the attempt, the team will be disqualified for this round.

9.11. A disqualification of a team in a round will result into a robot attempt with the worst possible score and maximum time (120 seconds).

9.12. If a team finishes an attempt without having solved a (partial) task that yields positive points, the time of that run will be set at 120 seconds.

9.13. The ranking of teams depends on the overall tournament format. For example, the best attempt out of three rounds could be used and if competing teams have the same points, the ranking is decided by the record of time.

Format of an Extra-Challenge

9.14. The Extra-Challenge is an unknown challenge that teams can solve in the afternoon of a one-day competition or on a second day as a 2nd-day challenge.

9.15. The missions of this challenge will be orientated on the challenges on the field of the specific age group, so that teams that have prepared themselves for the regular missions will be able to solve the day-challenge as well.

9.16. The extra-challenge can have two different tournament formats:

9.16.1. Option A: Multiple Practice Times and rounds as the regular missions.

9.16.2. Option B: One large time-slots to practice and to run robot attempts. In this case, teams can inform the judge when they are ready to make an official attempt. Then this attempt is scored. Teams may be asked to submit their first, second etc. attempt before specific times.

9.17. If a tournament format includes the day-challenge, the day-challenge should have a significant effect on the ranking of the teams (e.g. by combining scores of the regular age group challenges and the day-challenge and/or by awarding teams separately).

10. Format and ranking at WRO International Final

Note: This chapter may be replaced from a National Organizer with information about the format and ranking of teams at local events and at a National Final in a country.

10.1. The WRO International Final is a two-day event. On the day before, teams have the opportunity to practice and test attempts for teams and judges are scheduled. The official format for the two-day tournament would look like the following:

- Day 1: Practice Time (60 min), Round 1, Practice Time (60 min), Round 2, Practice Time (60 min), Round 3.
- Day 2: Day-Challenge with at least two scored runs per team.
- At the WRO International Final teams do not need to assembly their robots.
- The time of the practice time can be extended pending on the overall schedule.

10.2. For this tournament format, the following ranking criteria would apply:

- Sum of points from best run from Day 1 and best run from 2nd-Day-Challenge
- Sum of time from best run from Day 1 and best run from 2nd-Day-Challenge

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- Points of best run from 2nd-Day-Challenge
- Time of best run from 2nd-Day-Challenge
- Points of 2. best run from Day 1
- Time of 2. best run from Day 1
- Points of 2. best run from 2nd-Day-Challenge
- Time of 2. best run from 2nd-Day-Challenge
- After that, teams are ranked the same place.

10.3. The Host Country of the WRO International Final can have decided together with WRO on a slightly different format (e.g. different time/number of practice time/rounds), but need to inform all teams no later than 10 weeks before the event on the competition schedule.

10.4. Every team/participant at the international final will receive a bronze, silver or gold certificate based on the sum of points from best run from Day 1 and best run from 2nd-Day-Challenge. The exact procedure for awarding these certificates will be shared with teams before the International Final.

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Glossary

Check Time	During the check time, the judge will take a look at the robot and check the measurements (e.g. with a cube or a folding rule) and other technical requirements (e.g. only one program, Bluetooth off etc.). A check needs to be done before every official robot attempt, not during practice time.
Coach	A person assisting a team in the process to learn different robotics aspects, teamwork, problem solving, time management, etc. The role of the coach is not to win the competition for the team, but to teach them and guide them through the problem identification and in discovering ways to solve the competition challenge.
Competition organizer	The competition organizer is the entity that hosts the competition a team is visiting. This can be a local school, the National Organizer of a country that runs the National Final or a WRO Host Country together with WRO Association running the International WRO Final.
Extra-Challenge	The extra challenge is an unknown challenge that teams need to solve on the competition day. It may be a challenge in the afternoon of a one-day challenge or as a 2nd-day challenge on an event with multiple days (e.g. the International WRO Final). The extra challenge should foster the quick-thinking and problem-solving skills of the students while allowing them to solve challenges with their robot of the morning / first day.
Practice Time	During the practice time, the team can test the robot on the field and the team can change mechanical aspects or the coding of the robot. In case of an event where teams need to assemble the robot, the teams will do that at the start of the first practice time.
(Robot) Attempt	A robot attempt is the official try to solve the missions on the field. A robot attempt will be scored by judges and is maximum 2 minutes long. Teams usually do multiple attempts during practice time to test the robot before the official attempts.
Robot Round	During one robot round, every team will run their robot on the game field. Every round contains a Check-Time before the actual runs start. Before the round starts with the first team but after all robots are placed on the robot parking, randomizations to game fields (if any) are done.
Robot Parking	Robot parking is the place where all teams must place their robot before the practice time is over.
Coaching time	This is an optional time the competition organizer can include in the schedule. The coaches are allowed to talk with the team and discuss the strategy for the competition. It is not allowed that any programs or robot parts are handed over or that the coach helps coding or building during this time.
Team	In this document the word team includes the 2-3 participants (students) of a team, not the coach who should only support the team.
WRO	In this document, WRO stands for World Robot Olympiad Association Ltd., the non-profit organization running WRO world-wide and that prepares all the game and rule documents.