robotex
International

CREATIVE FUTURE
RULES

COMPETITION COORDINATOR

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1 Introduction

Robotex Creative Future is a foundational event for school-age students participating in robotics competitions. The competition focuses on testing students' ability to apply structural knowledge in practice, with a strong competitive element. Each season of Creative Future features a different theme for participants to challenge themselves. The event theme is announced two months prior to the start of the new season. Creative Future competitions invite not only schools and robotics organizations but also families to participate as teams.

2 The Competition

2.1 Definition and requirements

The Creative Future event requires that the entries be capable of completing theme-related tasks.

2.2 Theme

1. **The task theme for the 2026 Robotex International is "Rebirth of a Wasteland — Rise from the Ruins."** Jack and Sophia have fallen into a lost world and must activate the energy source to restore vitality to this world.
2. Task Requirements: Participants must assemble a robot in the assembly area, then control the robot in the challenge area to complete the task of returning the broken mechanisms to their designated positions.

2.3 Sub-classes

- Robotex Creative Future competition takes place in one age group:
  U19 - At the competition day up to 18 y.o. (including 18 y.o.) .
- The age group of a team is determined based on the age of the **oldest team member**.
- You must register your team to a correct age category. If during the competition it turns out, that the team is registered to an incorrect age category, the robot of this team will be disqualified from the competition. **NB!** Teams who belong to the younger age group are allowed to compete in the older age group.
- The organizers reserve the right to check the age of the competitors during the competition. In case of violation the robot of the team, who violated the rules will be disqualified.

2.4 Participants

1. Team Member Requirements: Each team consist of one or two members.
2. All participants must comply with the competition rules, terms, and winning conditions. Competition results shall be determined by referees in accordance with the competition rules. Participants must wear the event attire provided by the event organizer and their participant badges in order to enter the competition area.

2.5 Format: project challenge

1. Project Challenge: After the 40-minute assembly and testing phase, participants enter the project challenge phase. During the project challenge phase, participants have two non-consecutive challenge opportunities. Each challenge opportunity provides 2 minutes of challenge time. The best result from the two challenges shall be taken as the official score.

2.6 Equipment

1. For electronic components, only LEGO 9686 Education Set, LEGO WeDo Education Set, LEGO Education Computer Science & AI and the SPIKE Essential Set (product number 45345) are permitted. A maximum of 3 motor-type electronic components may be used. All other structural components may use any LEGO parts. For specific parts usage standards, please refer to the Appendix.
2. The total weight of all equipment used in the competition, including containers, baseplates, and all other items, shall not exceed 1.5 kg. The tablet computer or laptop used for control shall not be included in the weight limit. During equipment check-in, no more than 3 motors may be brought into the venue. (It is prohibited to bring assembly instruction documents or electronic reference files into the competition venue. Any violation discovered shall result in immediate disqualification of the result.)
3. Before the competition officially begins, structural parts must be disassembled to their irreducible state. If non-compliant parts are found during check-in, the team shall be required to make adjustments promptly; only after passing inspection may the team enter the venue. If non-compliant parts are discovered during the competition, the team's result shall be disqualified.

2.7 Technical Inspection and registration

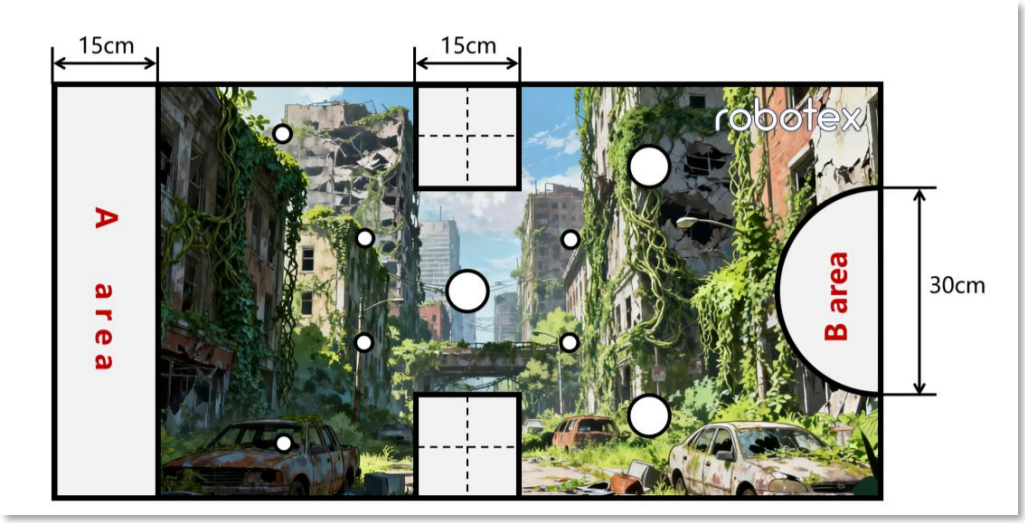
The robot needs to pass technical inspection before the competition. During the inspection, it is checked whether the robot or the operator who is handling the robot meets the paragraphs requirements. **Only one team member with a robot** *(the currently selected robot operator)* **can come to the technical inspection. If necessary, they can have a translator or team instructor with them.** The purpose of this is to guarantee a smooth course of the competition and technical inspection.

3 Competition Field

Participants need to assemble a robot and complete the task of transporting broken mechanisms in the challenge area.

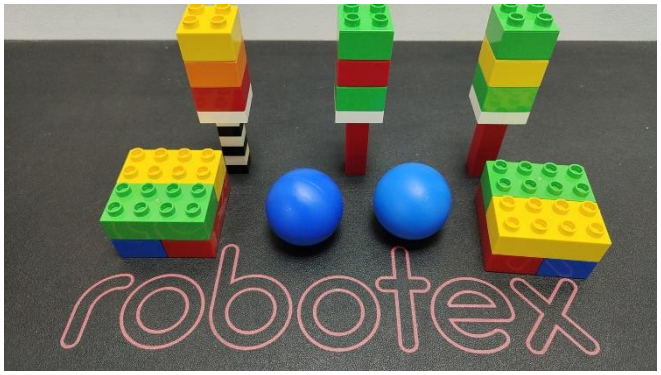
3.1 Competition area

The challenge area is a 60 cm × 120 cm rectangular mat, which is affixed to a 60 cm × 120 cm table, as shown below.

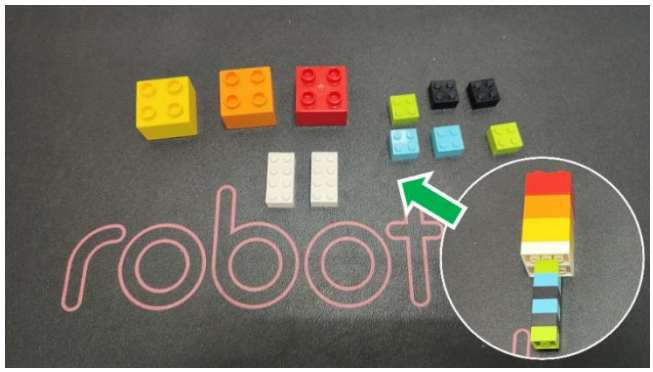


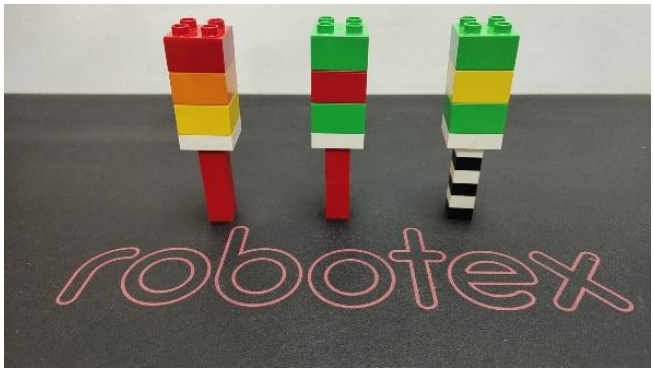
3.2 Description of broken mechanisms

Participants need to transport three types of items: the Mechanism Tree, the Burst Ball, and the Core Brick. The items are shown below.

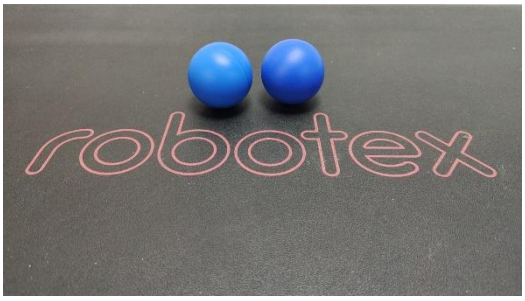


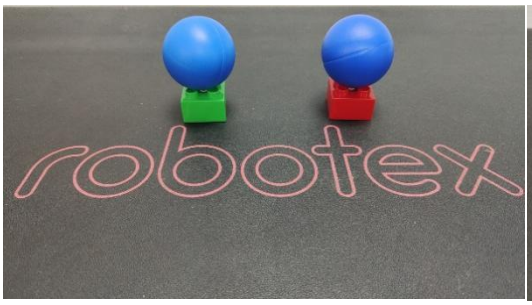
Mechanism Tree: This item is composed of LEGO brick combinations (for detailed parts, see Figure 3). The number of Trees is 3, as shown below.

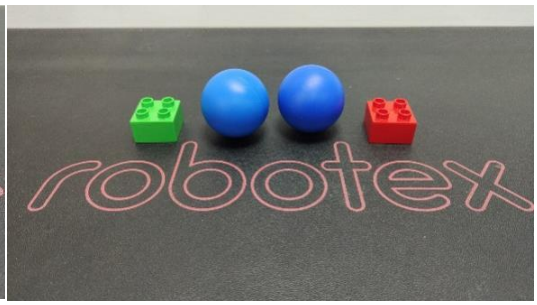




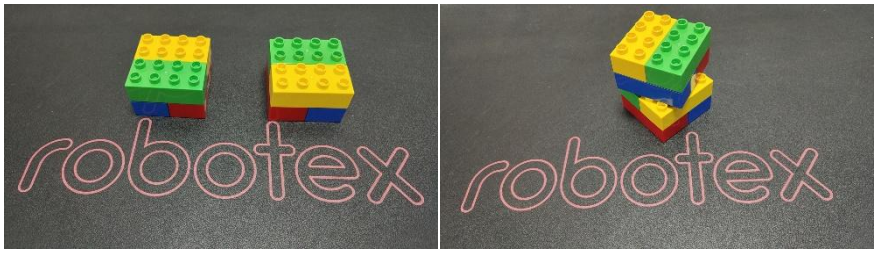
Burst Ball: this item is the LEGO large-particle pipe set (for the specific product number, please refer to the Appendix). The number of Balls is 2, as shown in Figure 5. Additionally, to prevent the ball from rolling on the field, a large-particle 2×2 brick is used as the base for the ball brick, as shown below.







Core Brick: The Core Brick consists of 4 large-particle rectangular bricks, stacked in groups of two as shown in Figure 7. The number of Brick groups is 2, as shown below. Two Core Bricks stacked together are referred to as Core Brick Stack X, as shown below. This upright stacking configuration earns the full score for the brick stack; any other stacking configuration earns half the score of Core Brick Stack X.

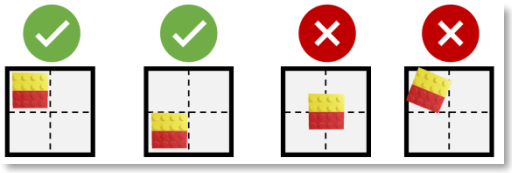


3.3 Placement specifications for items

The placement of items on the field is shown below.

- **Mechanism Tree:** Trees are restricted to placement within the small black circles on the mat. There are a total of 6 small black circles on the mat, and the 3 trees shall be randomly placed within any 3 of the 6 small circles, as shown above.
- **Burst Ball:** Balls are restricted to placement on the large black circles on the mat. There are a total of 3 large black circles on the mat, and the Burst Balls shall be randomly placed within any 2 of the 3 large black circles, as shown above. To ensure stable placement of the Burst Ball, the Burst Ball shall first be placed on a 2×2 brick and then positioned at the large black circle location on the mat.

- **Core Brick:** Bricks are restricted to placement within the black rectangles in the central area of the mat. Each of the two black rectangles contains one Core Brick, and the Core Brick is randomly placed in one of the four zones within that black rectangle. The Core Brick shall not touch the outer boundary lines or the internal marking lines of the black rectangle, as shown below.



3.4 Transport Task Requirements

- ① The robot must start from Area A. Before departure, the robot's orthogonal projection shall not extend beyond Area A.
- ② During the transport process, participants can control the robot's movement using a tablet computer or a computer. Participants can operate their robots within Area A. Once the robot's orthogonal projection leaves Area A, participants can not touch the robot.
- ③ The Mechanism Trees must be transported to Area B.
- ④ The Burst Balls must be transported to Area B.
- ⑤ The Core Brick must be stacked on top of another Core Brick (Core Bricks may not be brought back to Area A). The resulting stacked shape is referred to as Core Brick Stack X. Core Brick Stack X must then be transported to within the boundary of either of the two black rectangles.

3.5 Lighting conditions

The lighting in the area needs to be as close to real sunlight as possible *(Midday)*, with consistent color and stability. Field cannot have shadows while the match is running. Lighting is allowed to change between matches. The competition area must be evenly lit.

3.6 Delay of the competition

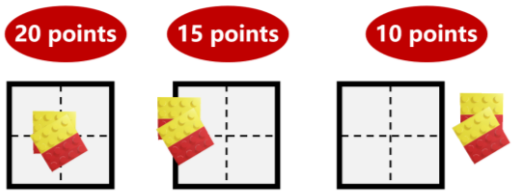
When competitions start to delay, organizers have the authority to act in accordance with rules to minimize the delays and bring the competition back on schedule.
The competition will continue as smoothly as possible, eliminating any rematches or any moments that could cause delays, and instead using a less time-consuming judging system based on rules. Any objections will not be accepted during the delay, and competition will not be delayed to resolve the objections. If the robot cannot be found in the designated area, the match will result in a loss.

4 Scoring

4.1 Score Calculation

- ① The match shall be terminated in any of the following scenarios:1. When the 2-minute challenge duration runs out;2. If the competitor makes illegal contact with the machine within the prescribed challenge time;3. If the competitor completes the challenge early and signals to the referee mid-time, the match is concluded, and the referee records the actual elapsed challenge time.
- ② Upon termination of the competition, the positions of all task items are recorded, and the score is calculated based on these positions.
- ③ Upon termination of the competition, for each Burst Ball that makes contact with Area B, 10 points are awarded.
- ④ Upon termination of the competition, if a Mechanism Tree is in contact with Area B and remains in a standing position, each Mechanism Tree scores 10 points; if it is in a fallen or inverted position, each Mechanism Tree scores 5 points. A Mechanism Tree that does not maintain its complete structure shall not be included in the score calculation.

- ⑤ Upon termination of the competition, if Core Brick Stack X is located outside the two black rectangles, 10 points are awarded; if Core Brick Stack X makes contact with any boundary of the two black rectangles, 15 points are awarded; if Core Brick Stack X is located inside either of the two black rectangles, 20 points are awarded. If Core Brick Stack X has not been formed and the Core Brick is transported to and makes contact with Area B, 5 points are awarded (the contact with the Area B mat surface is the determining criterion), as shown below.



- ⑥ A participant's final competition result is the best result from the two challenges. Final rankings are determined by the participants' task scores. In the event of identical task scores among participants, the comparison shall be based on the corresponding competition time, with shorter times ranked higher.

4.1.1 Score Overview Table

Score Overview Table				
Item	**Quantity**	**Score**		
Mechanism Tree	3	Fallen / Inverted: 5 pts each	Standing: 10 pts each	
Burst Ball	2	10 pts each		
Core Brick Stack X	1	Inside rectangle: 20 pts	On rectangle boundary: 15 pts	Outside rectangle: 10 pts
Core Brick	2	5 pts each		

5 Violations

- ① Participants have two non-consecutive challenge opportunities. Each challenge provides 2 minutes. Tasks completed after the time expires shall not be included in the final score.
- ② If a Core Brick is brought back to Area A, that Core Brick is invalidated, and no score shall be awarded for any Core Brick-related tasks.
- ③ When a task item (excluding Core Bricks) makes contact with Area A, the participant can touch the item. At any other time, once the participant touches the item, that item's task is invalidated.
- ④ During the challenge, participants can modify their robots within Area A. During the challenge, participants can use tablet or computer to remotely control their robots. During the challenge, as soon as any part of the robot's projection enters any part of the field other than Area A, participants can not touch the robot; otherwise, the scoring phase is initiated directly, and the timing for the current round stops.
- ⑤ The competition area is an isolated 60 cm × 120 cm table, if a task item falls off the edge of the field, that item's task is invalidated.
- ⑥ Non-compliant parts: if non-compliant parts are found during check-in, the team is required to remove them before entering the venue. If non-compliant parts are discovered during the competition, the team's result for that competition shall be invalidated.
- ⑦ Burst Balls consist only of the ball brick. The ball brick must make direct contact with the competition mat surface to score. If the ball brick is in Area B but still rests on a brick, no points are awarded.
- ⑧ The final state of the Core Brick and the Mechanism Tree must be determined without reliance on the robot's support. If the item remains in a robot-supported state, it shall not be considered a final state. If the time expires and the item is still in a robot-supported state, the task shall be deemed unsuccessful.

6 Objections

The decisions of the referees are not subject to appeals. Complaints must be submitted during or immediately after the match. If no settlement is reached with the referee, claims must be submitted immediately to the Robotex Head referee. Any later complaints will not be accepted. In case of any conflicts or disputes, the final word will be said by the referees and/or the organisers. **NB! Rude behaviour is not tolerated and the team who does not respect the referee's / head referee's decisions can be disqualified by the head referee and/or event organisers.**

7 Changes and cancellations in the rules

Changes and cancellations made to the rules are adopted by the main organizer of the competition according to the regulation of the regulatory committee of the competition.

8 Organizing

8.1 Lighting and infrared noise

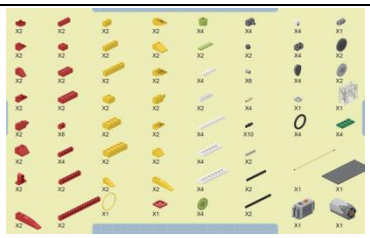
The arena has at parts uneven lighting and infrared noise, which may disrupt the work of sensors during the competition. For this reason, the organizers recommend using covers or blinds for sensors, testing the sensors under intense lighting conditions or even under direct sunlight to imitate the lighting conditions of the competition arena.

8.2 Winners one-year break

Winners of 1st place cannot compete in the same category next year– they must take a one-year break from that category. At least 50% of the team must consist of non-winners. If the winners' team has three members, next year they should have at least one new member who was not previously on this team to compete in the same category again instead of taking a year off from it. *This rule is aimed at bringing new people, giving everyone a fair chance and encouraging recurring winners to try new competitions they usually do not participate in and to educate and engage new beginners in the field of robotics.* *****

*** The rule complies only with Robotex International standards and is used for Robotex International competition.**

9 Appendix 1. Approved Sets

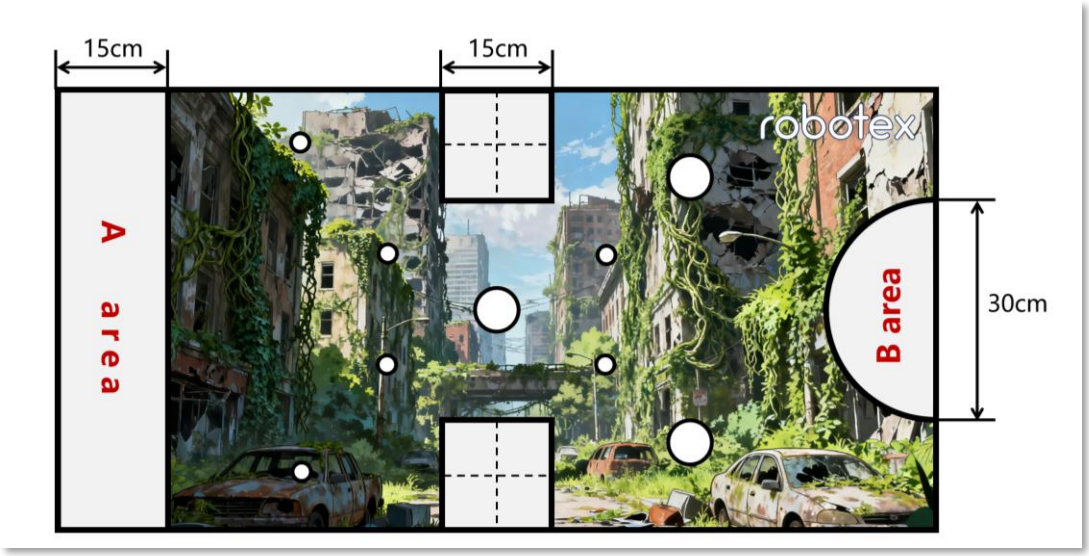
Set Name	
Simple and Powered Machines 9686	
LEGO WeDo 1.0	
LEGO WeDo 2.0	
LEGO SPIKE Essential Set	
The ball part is sourced from Pipe Set 9076	

10 Appendix 2. Allowed Electronic Components

Only the electronic components shown in the figure may be used. A maximum of 3 motor-type electronic components may be used. There is no limit on the quantity of other components.

Motor-type electronic components include: the M Motor (product number 8883) from the 9686 Set, the Motor (product number 21980) from the WeDo Set, and the Motor (product number 68488) from the LEGO SPIKE Essential Set.

11 Appendix 3. Field Dimensions



12 Revision History

- 22.08.2026 Rules are created.
- 28.10.2026 **Changed age group from U14 to U19.**
- 28.10.2026 **Removed assembly time. Robot must be pre-assembled.**