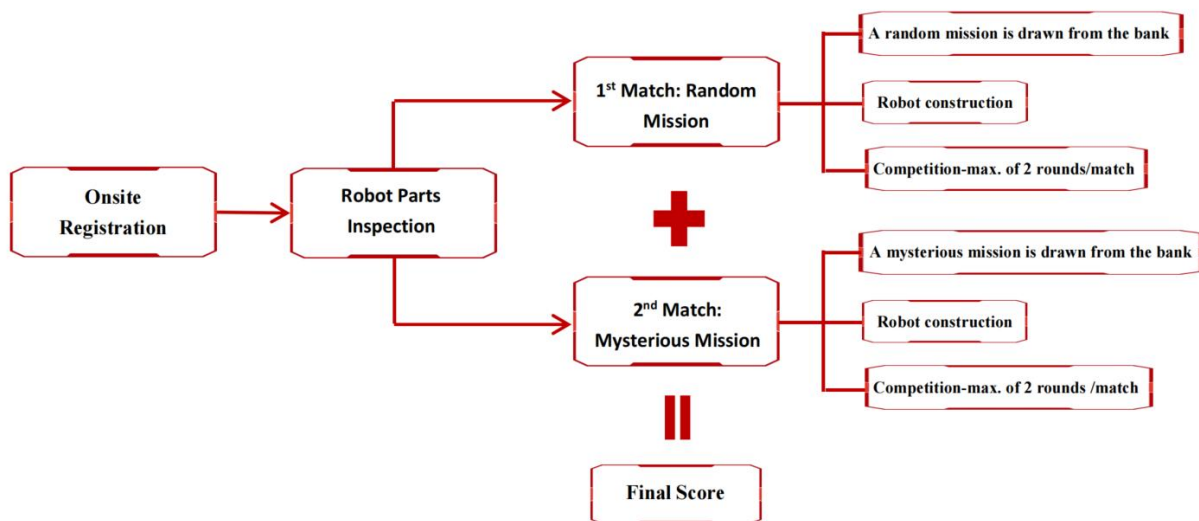


## MakeX Inspire Smart Logistics Mysterious Mission Bank

MakeX Inspire Smart Logistics is an exciting single-player, single-mission competition designed for young innovators aged 6-12. This format lowers the entry barrier, making it accessible for more participants. The open-ended mission structure not only boosts the fun and engagement of the competition but also enhances the critical thinking and strategic planning skills of the contestants. Since its launch in 2023, its easy-to-understand mission content and flexible operations have made it a favourite among students.

For the 2024-2025 season, to increase competitiveness and challenge, the competition will consist of 2 rounds of matches, including one random mission (for more details, please refer to Section 4.4 of the 2024-2025 MakeX Inspire-Smart Logistics Competition Guide) and one mysterious mission. To help participants prepare, the committee will release hints about the mysterious mission at the middle of each quarter of the year. The specific mysterious mission will be drawn and revealed during the competition.

### Competition Procedure:

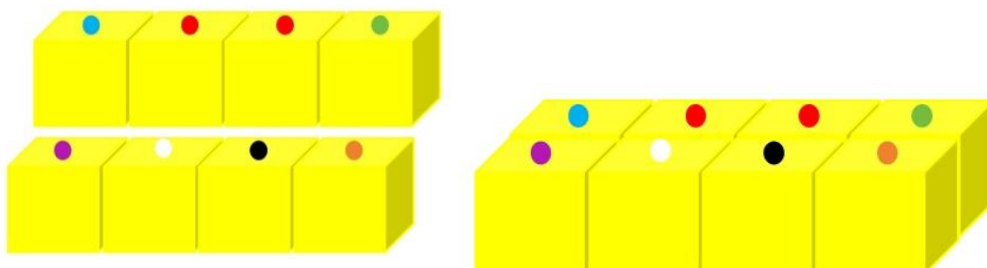
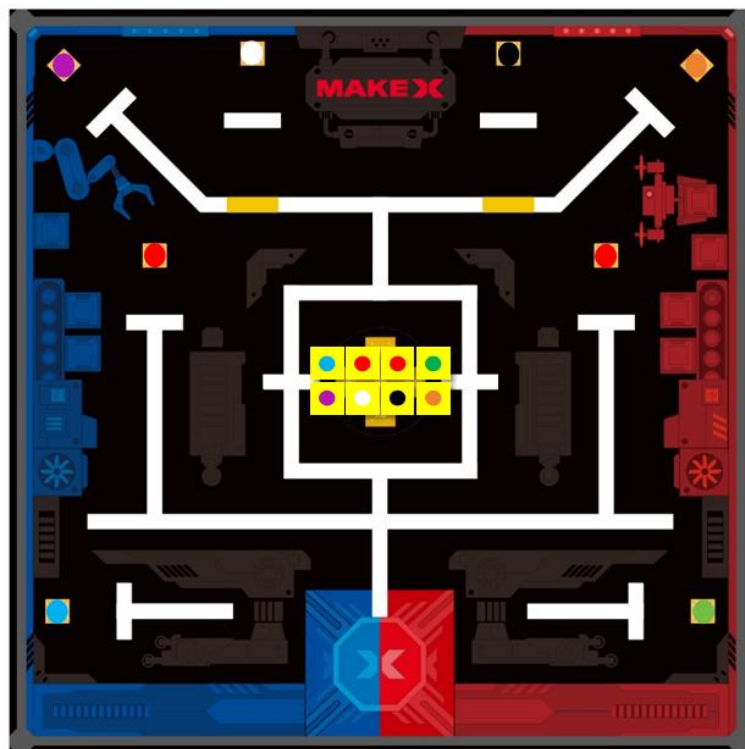


## Mission Q1

**Mission type:** Manual mission

**Mission target:** There are 8 warehouse areas on the map, each marked with a different color: blue, green, purple, orange, black, white, and red. Among these, there are 2 red warehouses. The central storage centre holds 8 yellow cubes representing transport boxes. Each of these yellow cubes is marked with a colored dot corresponding to one of the 7 colors: blue, green, purple, orange, red, black, and white. Notably, 2 of the cubes are marked with red dots. The robot is required to transport each cube to the storage location that matches the color of its dot, ensuring that the side of the cube with the colored dot faces downward.

**Starting condition:** The central storage centre contains the following cubes: 2 with red dots, 1 with an orange dot, 1 with a blue dot, 1 with a green dot, 1 with a purple dot, 1 with a white dot, and 1 with a black dot. Each cube has the colored dot only on its top face, while the other five faces are unmarked.



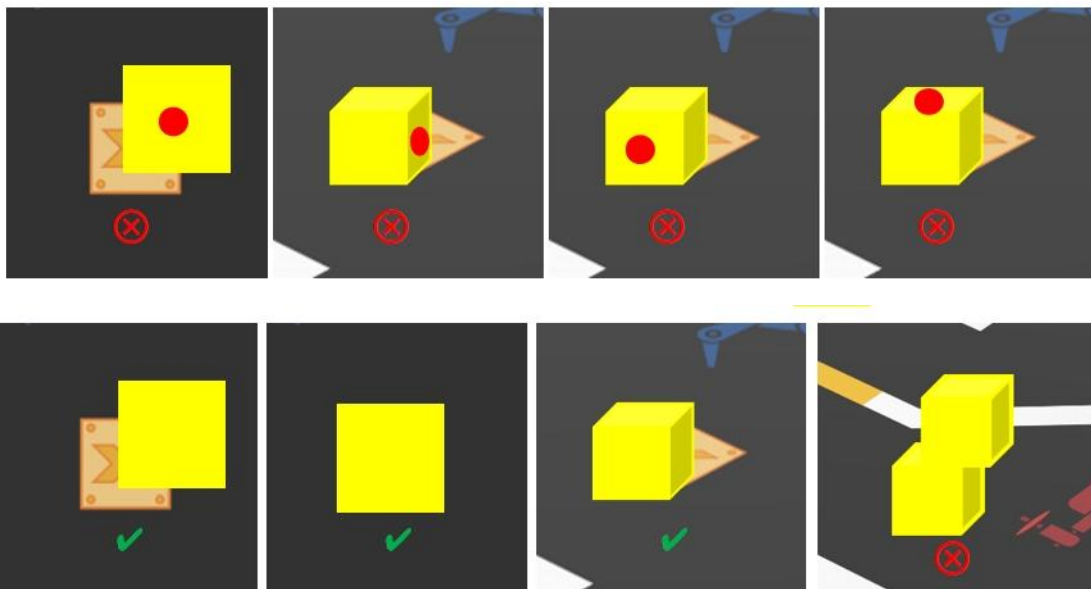
**Mission Score:** If the color of the dot-marked cube matches the color of the warehouse, and the face of the cube marked with the colored dot is facing downward, 50 points can be awarded.

**Scoring Criteria:**

**At the scoring moment after the match ends:**

- A. Each warehouse contains only one layer of cube, and the color of the dot-marked cube matches the color of the warehouse. If there is more than one layer of cubes in the warehouse, the cubes will not be scored.
- B. The vertical projection of the yellow cube partially covers the warehouse area, and the face of the cube marked with the dot is facing downward. The dot-marked face of the cube must be in direct contact with the corresponding colored dot face of the warehouse, without direct contact with the robot or other cubes.

If the above criteria are met, and the cube is successfully transported to the corresponding colored warehouse, 50 points will be awarded. The total possible score is 400 points.

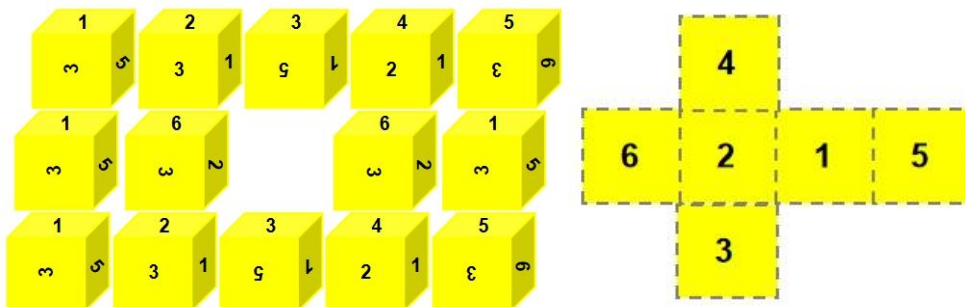
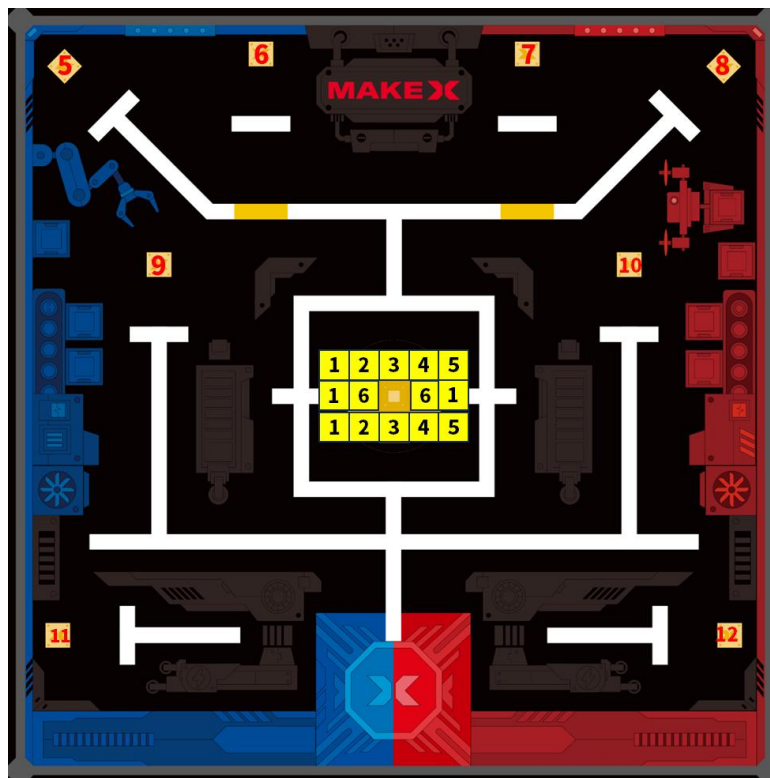


## Mission Q2

**Mission Type:** Manual mission

**Mission Target:** There are 8 warehouse areas on the map, numbered 5 to 12 (corresponding number stickers will be attached to the warehouse area on the map during the competition). The central storage centre contains 14 yellow cubes representing transport boxes. Each yellow cube has the numbers 1, 2, 3, 4, 5, and 6 on its six faces. The robot needs to transport the yellow cubes to the warehouse area. There is no limit to the number of yellow cubes that can be placed at each warehouse area, but only one layer is allowed. The number on the top face of a yellow cube—or the sum of the top face numbers of multiple cubes at the warehouse area—must match the number of the corresponding warehouse area.

**Starting condition:** The central storage centre contains 14 yellow cubes, each with the numbers 1 to 6 on its six faces.



**Mission Score:** If the number on the top face of a yellow cube (or the sum of top face numbers of multiple cubes) equals the number of the warehouse area, and the vertical projection of the cube(s) fully or partially covers the warehouse area, then the warehouse area is considered correctly covered and is awarded 50 points.

**Scoring Criteria:**

**At the scoring moment after the match ends:**

- A. Only one layer of cubes is allowed on each warehouse area. If a warehouse area has more than one layer, it will not score.
- B. The number on the top face of the cube(s), or the sum of the top face numbers, must equal the number of the warehouse area. (Sum includes all yellow cubes that partially cover the warehouse area).
- C. The vertical projection of the yellow cubes must fully or partially cover the warehouse area. Each yellow cube's vertical projection may only partially cover one warehouse area and must not be in direct contact with the robot or other cubes.

If the above criteria are met, and the yellow cube is successfully transported to the warehouse area and the number of the warehouse area is the same as the number on the top of the cube or the sum of the numbers on the top of the cube, 50 points will be scored for one warehouse area, and a total of 400 points will be scored.

