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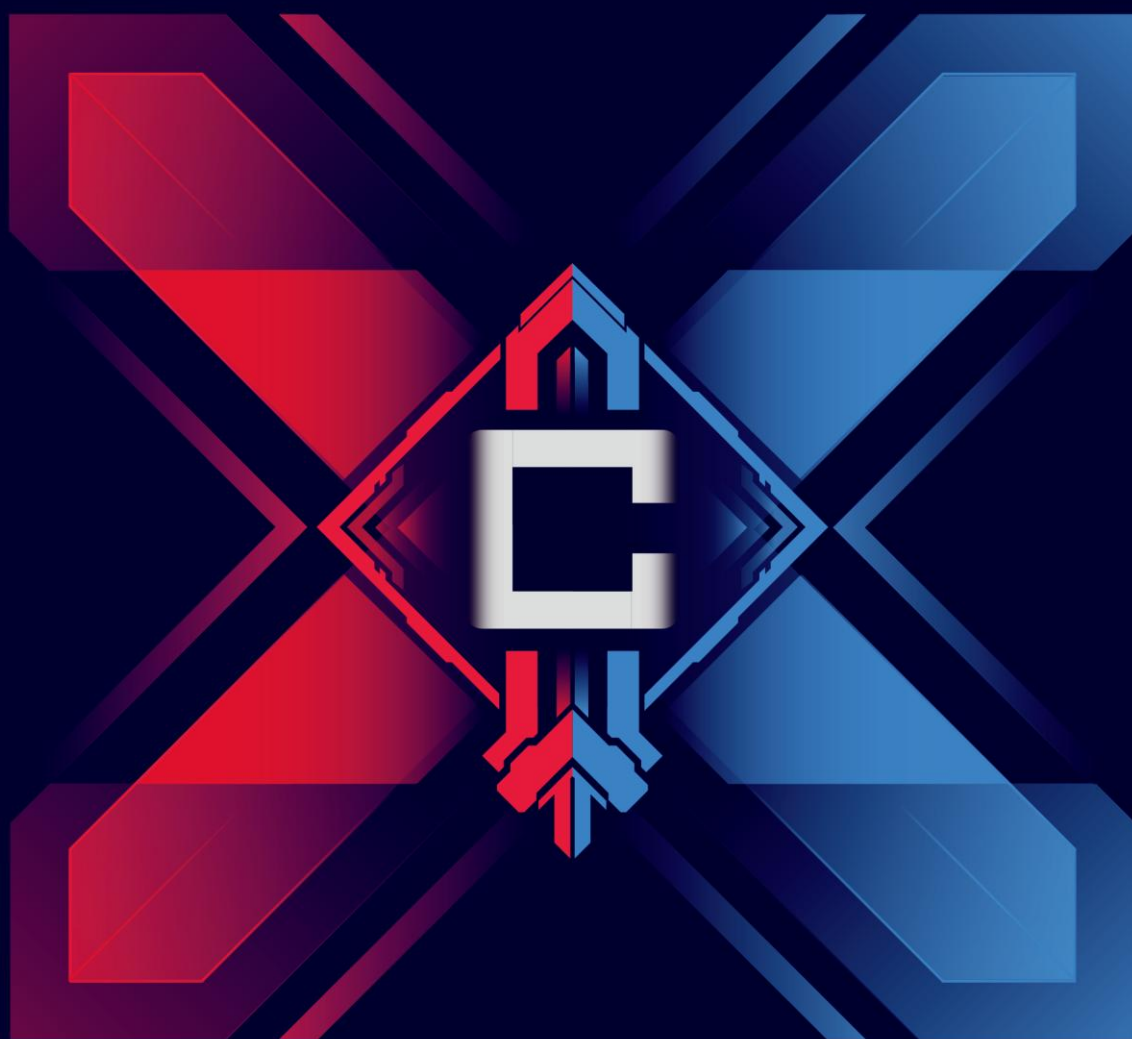
MAKEX

MakeX Robotics Competition

# Courageous Traveler

Competition Guide

V1.2



**Updates:**

Date	Version	Modifications Record
2019.01.23	1.0	Courageous Traveler Competition Guide First Publish
2019.04.30	1.1	Contestant age supplementary explanation
		Electronic engineering notebook submission method revise
2019.11.01	1.2	Engineering notebook on-site submission revise
		Alliance selection rules revise
		Elimination Tournament rules revise
		World championship and rules newly added

MAKE X

## CONTENTS

1.	Introduction.....	5
1.1	About MakeX.....	5
1.2	MakeX Spirit.....	5
1.3	About 2019 Season.....	6
2.	Participation Requirements .....	7
2.1	Contestants.....	7
2.2	Mentors .....	7
2.3	Team Number.....	7
2.4	Identification Symbols.....	7
2.5	Team Roles.....	7
3.	Registration and Application.....	9
3.1	Registration.....	9
3.2	Team Creation.....	9
3.3	Team Management.....	9
3.4	Competition Application.....	9
3.5	Competition Management.....	10
4.	Competition Procedure.....	11
4.1	Agenda .....	11
4.2	On-site Registration.....	11
4.3	Inspection .....	11
4.4	Engineering Notebook Submission.....	11
4.5	Presentation .....	12
4.6	Pits Area Decoration .....	12
4.7	Pre-competition Communication Meeting.....	12
4.8	Schedule Announcement.....	13
4.9	Practice Match .....	13
4.10	Qualification Round .....	13

4.11	<i>Alliance Selection</i> .....	14
4.12	<i>Elimination Tournament</i> .....	14
5.	<b>Awards</b> .....	16
5.1	<i>Champion, Runner-up, Second Runner-up</i> .....	16
5.2	<i>Awards Focusing on Technology</i> .....	16
5.3	<i>Awards Focusing on Culture &amp; Spirit</i> .....	18
6.	<b>Arbitration and Appeal</b> .....	20
6.1	<i>Results Confirmation</i> .....	20
6.2	<i>Appeal Procedure</i> .....	20
6.3	<i>Valid Appeal Period</i> .....	20
6.4	<i>Appeals Out of the Stipulation</i> .....	21
6.5	<i>Arbitration Procedure</i> .....	21
7.	<b>2019 World Championship</b> .....	23
7.1	<i>Subgroup division in Qualification Round</i> .....	23
7.2	<i>On-site Skills Test</i> .....	24
7.3	<i>Alliance Selection</i> .....	25
7.4	<i>Elimination Tournament</i> .....	26
7.5	<i>Champion, Runner-up, Second Runner-up and Special Awards</i> .....	27
	<i>Champion, Runner-up, Second Runner-up of Annual Points</i> .....	28
7.6	<i>World Championship Annual Awards</i> .....	29
8.	<b>Competition Statement</b> .....	34
8.1	<i>Update of Competition Documents</i> .....	34
8.2	<i>Qualification Statement</i> .....	34
8.3	<i>Copyright Declaration</i> .....	34
8.4	<i>Disclaimer</i> .....	35
8.5	<i>Competition Guide Statement</i> .....	35
	<b>Appendix : Engineering Notebook Guideline</b> .....	36

# 1. Introduction

## 1.1 About MakeX

MakeX is a platform of robotic competitions for guiding the growth of young people. It aims at inspiring people's enthusiasm for creativity, sharing, and collaboration by Robotics Competition, STEAM Carnival, etc.

MakeX Robotics Competition is hosted by the MakeX Robotics Competition Committee, organized by Shenzhen Hulu Maker Co., Ltd. and supported by Shenzhen Makeblock Co., Ltd. As the core activity of MakeX, it aims that through the competition, young people will discover the spirit of creativity, teamwork, fun and sharing. It is committed to promoting innovation in science, technology, education through high-level competition events, guiding young people to learn Science (S), Technology (T), Engineering (E), Art (A) and Mathematics (M) and apply such knowledge in solving practical problems through the exciting and challenging competitions.

## 1.2 MakeX Spirit

**Creativity:** we advocate curiousness and innovation, encourage all contestants to create unique high-tech works with their talent, and challenge themselves for continuous progress!

**Teamwork:** we advocate solidarity and friendship, encourage all contestants to develop a sense of responsibility and enterprising spirit, and sincerely work with their partners for win-win development!

**Fun:** we encourage contestants to build a positive, healthy mindset in the competition. Enjoy the journey and grow in the process.

**Sharing:** we encourage contestants to have an open mind as a maker and share their knowledge, responsibility and joy with everyone including their teammates and competitors.

MakeX spirit is the cultural cornerstone of the MakeX Robotics Competition. We hope to provide a platform for all contestants, mentors and industry experts to exchange ideas, study and grow up, and help young people acquire new skills during creation, learn to respect others in teamwork, gain an enjoyable life

experience in the competition, take delight in sharing with the society their knowledge and responsibility, and work hard to achieve their grand aspiration of changing the world and creating the future!

### **1.3 About 2019 Season**

In 2019 season, MakeX will hold Regional Robotics Competition in more than 30 countries and regions around the world and will launch MakeX competition courses and organize various competition activities, worldwide spreading STEAM education among the teenagers.

Qualified teams can enter into 2019 MakeX World Championship and compete for the 2019 MakeX World Champion.

The theme of MakeX Challenge for the 2019 season is Courageous Traveler, which mainly tests the contestants' engineering technology, strategic teamwork and tactical execution.

In the cities where we live, there always have various safety problems that endanger people's safety, such as terrorist attacks that threaten national safety and food quality problems. To protect everyone on Earth, a group of Courageous Travelers will embark on a journey to protect human's life.

## **2. Participation Requirements**

### **2.1 Contestants**

The number of contestants in each team is 2-8. The age requirement of the Courageous Traveler contestants is between 11 and 18 years (birthday between 2/1/2000 to 31/12/2008) . Contestants already participated in 2018 MakeX Challenge-Interstellar Exploration can attend 2019 MakeX Challenge-Courageous Traveler with the age under 18(birthday after 1/1/2000).

At the start of the season, contestants should be the enrolled students in compulsory education stage (students from different education systems should meet the age requirement).

### **2.2 Mentors**

Each team must have 1 or 2 mentors. The mentor shall be over 18 years old.

### **2.3 Team Number**

Team number will be regarded as the only identification of the team during the whole competition.

Each team will automatically obtain the team number after creating the team on MakeX official website.

### **2.4 Identification Symbols**

Each team must have a team logo, team name and team slogan. Teams are encouraged to use uniforms, flags, posters, badges, base decorations etc. to show the team culture.

### **2.5 Team Roles**

Participation in MakeX Robotics Competition is more than just a few minutes competing. MakeX encourages young people to participate in team building. Everyone in the team can play their respective roles as operator, observer,

engineer, project manager, publicity manager and so on. By participating in MakeX, the contestants will not only learn professional knowledge requested in the project, but also master the necessary skills such as public relations, publicity, project management and so on.





## **3. Registration and Application**

### **3.1 Registration**

Contestants and mentors can use mobile phone numbers (E-mail for overseas team) to register MakeX official website accounts, fill in personal information and choose corresponding identity.

### **3.2 Team Creation**

Mentors can create teams in the "My Team" list on the personal central page on MakeX official website. To create a team, members need to prepare the name, the logo, the slogan and the introduction to the team and select school (or organization) and the country.

Once the team name is filled in, it cannot be modified.

### **3.3 Team Management**

Mentors can find teams successfully created in the "My Team" list on the personal central page on MakeX official website, and modify the basic information of the team, but team name and team number automatically generated by the system cannot be modified. Team's historic achievements will be shown in the "Record Data" list, which can be public or private in privacy setting. Mentors can add the registered contestants through E-mail address on the team management page. Contestants of the same team can be replaced in different seasons.

### **3.4 Competition Application**

Mentors can access the registration page from the "Event List" on the personal central page or the home page of MakeX official website. Application will be completed after filling in the registration information and paying the application fee.

## 3.5 Competition Management

Mentors can manage the competitions applied by the team in the "My Competitions" list on the personal central page.



## **4. Competition Procedure**

### **4.1 Agenda**

The agenda of each competition will be determined according to the actual situation. Teams need to complete the On-site registration and inspection before the start of the competition.

### **4.2 On-site Registration**

When a team arrives at the venue, the mentor should show the ID cards (or passport) to the staff on On-site registration and get the competition materials. The mentor should inform the team members about the fire evacuation passage, match schedule, arena, practice field and pits area etc..

### **4.3 Inspection**

Robots can participate in practice match and formal competition only after passing the inspection. The inspectors will strictly check the safety of robots according to the inspection requirements. Teams can use the " MakeX Starter Robot Self-Check List " to check robots in advance. If inspection fails, the team need to adjust their robots and check again until they pass the inspection.

### **4.4 Engineering Notebook Submission**

Electronic engineering notebook: After successful competition application, teams can access the registration page from the "Event List" on the personal central page need to check competition and upload the engineering notebook. Teams need to upload the RAR file package involving source programs, team photos, robot photos and production photos before the On-site registration date.

Paper engineering notebook: As the Courageous Traveler requires the presentation process, 1 copy of the paper version shall be submitted by each team to the judges at the presentation site.

For details of the engineering notebook writing guideline, please refer to "Appendix : Engineering Notebook Guideline".

## **4.5 Presentation**

MakeX encourages contestants to develop their creativity and skills of making robots and to master the robotic theories through participating competition. The presentation takes about 10 minutes, using the methods of Q&A and On-site problem-solving to examine students' knowledge level of robots. All team members must participate together. Mentors are not allowed to accompany them during the presentation.

Each team should arrive at the presentation room on time, with 1 copy of engineering notebook and the robot. All team members must be present together.

The presentation with full points of 30, will examine the robotic theories from three dimensions: basic robot theory(12 points), mechanism & programming(12 points), innovation(6 points).

The judges will ask questions or require On-site operation demonstration. Teams can obtain different total points (30,25,20,15) according to their On-site performance. The presentation points result will be shown on the MakeX official website after Qualification Round. Teams obtaining only 15 points in the presentation will not be able to enter the Elimination Tournament.

There shall be no irrelevant person offering guidance during the presentation and the teams shall not bring any electronical communication device to ask for help. The teams will only obtain 15 presentation points if situations above are found.

## **4.6 Pits Area Decoration**

Each team has its own space in pits area, where teams can make decoration, publicize and canvas their teams for the Team Culture Award.

Teams can rest and debug robots at the pits area, so please keep the area clean and tidy.

## **4.7 Pre-competition Communication Meeting**

Before the start of competition, the committee will convene a meeting with all team operators to specify what needs to be paid attention to and under which circumstance participants will get penalty.

Only operators in each team need to attend this meeting, without carrying the

robot.

## **4.8 Schedule Announcement**

The MakeX Committee will announce the match schedule at least 30 minutes ahead the start of formal competition through online official website and offline channels such as bulletin boards, screens and other channels On-site.

## **4.9 Practice Match**

Teams can participate in the practice match after completing On-site registration and inspection. The specific arrangement of the practice match is based on the announcement On-site. Teams need to queue up for the practice match.

## **4.10 Qualification Round**

Each team is requested to participate in 4 matches during Qualification Round. Points will be obtained according to the winning or losing situation. Each match is conducted in the form of alliances confrontation. Each alliance consists of 2 teams. Each team's ally and the opponents will be allocated randomly by the system.

In each match, the two teams of the winning alliance will score 30 winning points respectively, and the two teams which end in a draw with the opponents will score 10 winning points respectively. Two teams of the losing alliance will score 0 winning point. The ranking points are the sum of the winning points in 4 matches plus the presentation points. Top-ranking teams will be advanced to the Elimination Tournament. If there are teams with same ranking points, the ranking sequence will be determined according to the following rules:

- 1) Compare the total automatic stage points obtained in the 4 matches. The higher the points, the higher the ranking.
- 2) If the above conditions are the same, compare the total competition points obtained in the 4 matches. The higher the points, the higher the ranking.
- 3) If the above conditions are the same, compare the total net competition points obtained in the 4 matches. The higher the points, the higher the ranking.
- 4) If the above conditions are the same, an additional match will be held. The winner will be the team with the higher total competition points. If both teams

obtain the same total competition points, the winner will be the team with higher automatic stage points. The additional match will continue if the automatic stage points are the same again.

## 4.11 Alliance Selection

In Alliance Selection Ceremony, promoted teams will select their alliance team in turn according to their Qualification Round ranking. The formed alliance will be named as “Alliance 1”, “Alliance 2” , “Alliance 3” … When choosing alliance team, promoted teams ranking top 50% must choose one promoted team ranking bottom 50% as their alliance team. The team being chosen cannot reject.

The advanced teams who are not present before the start of alliance selection are deemed as voluntary quitting the option, and the advanced teams who are not present before the end of the alliance selection are deemed as voluntary quitting the Elimination Tournament.

If it occurs that the advanced teams quit the Elimination Tournament, the promotion places will be given to the following teams according to the ranking points after the Qualification Round.

Promotion proportion:

Number teams: 101 or more	Number of advanced teams: 64
Number teams: 51-100	Number of advanced teams: 32
Number teams: 26-50	Number of advanced teams: 16
Number teams: 13-25	Number of advanced teams: 8
Number teams: 6-12	Number of advanced teams: 4

## 4.12 Elimination Tournament

In Elimination Tournament of MakeX Challenge, alliance can choose either alliance team or substitute alliance team to compete, but the final ranking result of Elimination Tournament can only be given to alliance teams. Substitute team of winner alliance (Champion, Runner-up & Second Runner-up) will receive special award for their participation. If alliance chooses the substitute alliance team to compete, alliance must replace the power management module of substitute alliance team robot with the module from alliance team robot within timeframe.

Match schedule of Elimination Tournament is shown as below.

Teams get 2 wins or 1 win & 2 ties will be promoted to next round. If the alliance achieves "1 win, 1 lost, 1 tie" or "3 ties", the winning alliance will be decided according to the following rules:

- 1) Compare the total automatic stage points obtained in 3 sessions. The higher the points, the higher the ranking.
- 2) If the above conditions are the same, compare the total competition points obtained in 3 sessions. The higher the points, the higher the ranking.
- 3) If the above conditions are the same, compare the total net competition points in 3 sessions. The higher the points, the higher the ranking.
- 4) If the above conditions are the same, an additional match will be held. This match only takes one session. The winner will be the alliance with the higher total competition points. If both alliances obtain the same total competition points, the winner will be the alliance with higher automatic stage points. The additional match will continue if the automatic stage points are the same again.



## 5. Awards

### 5.1 Champion, Runner-up, Second Runner-up

The competition includes Qualification Round and Championship Round, the champion alliance, runner-up alliance and second runner-up alliance are decided according to the ranking results of the competition.

### 5.2 Awards Focusing on Technology

#### Appearance Design Award

The Appearance Design Award will be awarded to the team whose robot is creative, innovative and artistic. The committee encourages teams to break the shackles of thinking, show their robots of unique design and structure, and create a perfect fusion of aesthetics and technology with their own hands.

Evaluation criteria:

- 1) The robot appearance design is artistic and ornamental.
- 2) The robot appearance design is innovative, concise, practical and distinctive to those robots of other teams.
- 3) The engineer notebook must include clear and detailed contents of the appearance design of robot.

#### Engineering Notebook Award

Engineering notebook helps teams to establish files and better record the whole learning process. Every improvement of the robots should be recorded from prototype design, building robot, to the final debugging. The award will be awarded to the team with high-quality engineering notebook.

Evaluation criteria:

- 1) The content of engineering notebook is detailed, well-organized and extraordinary in the core sections.
- 2) The engineering notebook is well-made, with creative content and layout design.

#### Best Automatic Program Award



The Best Automatic Program Award will be awarded to the team accomplish the programming independently and performs well with excellent points result at Automatic Stage.

Evaluation criteria:

- 1) Team performs well with excellent points result at Automatic Stage.
- 2) The engineer notebook must include clear and detailed contents about programming, which helps to show the team's programming capabilities.

### **Best Modification Award**

The Best Modification Award will be awarded to the team that modify their robots in the Modification Stage with great substantial improvement, which makes effective impact on final match results. The Modification Stage will examine the ability of improvising, strategy choices and tactics execution.

Evaluation criteria:

- 1) The team modify their robots effectively in the Modification Stage with great substantial improvement.
- 2) The points obtained at the Final Stage is raised significantly owing to the modification of robot.

### **Alliance Collaboration Award (For substitute alliance teams of Top 3 alliances )**

MakeX is not only a competition of technical strength, but also a test of the competition strategy and execution ability of team collaboration. This award is given to teams that perform well in competition strategy and team collaboration.

Evaluation criteria:

- 1) The teams whose competition strategies are novel and unique, with surprise move.
- 2) The team should know its ally's technical characteristics and set up various cooperation strategies for allies.
- 3) The engineer notebook must include clear and detailed contents of collaboration strategies.
- 3) The teams who is highly collaborative and execute efficiently.
- 4) The engineer notebook must include clear and detailed contents of robot

modification.

### **Technology Innovation Award**

Innovation is always of most importance for a team to develop sustainably. The Technology Innovation Award will be awarded to the teams who break the shackles of traditional thinking and achieve innovation & technology breakthrough. This award will be only for teams participating in Courageous Traveler.

Evaluation criteria:

- 1) Teams achieve excellent performance during presentation, comprehensively demonstrate the various technology design advantages and innovative principles of the robot, which are highly praised by the judges.
- 2) The engineer notebook must include clear and detailed contents about innovation & technology breakthrough, which helps to show the advantages and distinctive functions of the robot.

## **5.3 Awards Focusing on Culture & Spirit**

### **Team Culture Award**

MakeX Robotics Competition advocates the unique team culture. Teams can display their team culture in various ways, such as designing the team posters, flags, badges, etc. They can also design their own gifts for communicating with others.

Evaluation criteria:

- 1) The team who actively displays team culture in the pits area, actively communicates with others and gets to know new teams.
- 2) The team who shows team style through various forms such as posters, flags, emblems, badges and wins unanimous praise from other teams and staff.

### **Competition Spirit Award**

The Competition Spirit Award will be awarded to teams who have strong competition spirit and maintain equity and justice of competition.

Evaluation criteria:

- 1) The teams should civilly participate in competitions, respect the referees, comply with competition rules and initiatively maintain equity and justice of

competition.

- 2) The teams should show everyone their positive energy and spirit of "gaining without pride, losing with grace", and keep calm when meeting contradictions and conflicts.
- 3) The teams should be proactive and collaborative, be willing to help and offer assistance to other teams in trouble.

### **Rookie Award**

The award is awarded to the top ranking rookie team (the teams newly registered in 2019) in the Qualification Round of 2019 MakeX World Championship.



## 6. Arbitration and Appeal

### 6.1 Results Confirmation

- E1. **Results confirmation:** When a single match ends, captains of both teams need to confirm the results with the referees and then sign the results form. Both teams shall not have any objection to the results of this single match after their signatures.
- E2. **Dispute settlement:** If the captains do not accept the results presented by the referee, they can reject to sign the results form. Instead they need to write clearly about the situation on the remarks part of the results form and sign there.

### 6.2 Appeal Procedure

- E3. **Appeal requirements:** Appeals should be lodged within the “valid appeal period” in accordance with the prescribed procedure and the civil participation spirit.
- E4. **Appeal procedure:** The captain of the team needs to fill in the Appeal Form, then cooperates with the Arbitration Commission to investigate the real situation. Both sides will be required to arrive at the designated place if the Arbitration Commission requires. During the investigation, the captain of the appeal team must be present, and only captains or contestants of both teams can be present. The Arbitration Commission has the right to communicate with the appellant contestant alone, avoiding the mentor, the parents of the contestants, their relatives or friends. The appellant contestant should express facts clearly and objectively, not being over-emotionally.

### 6.3 Valid Appeal Period

- E5. **Valid appeal period:** Normally appeal should be lodged within 30 minutes after the end of competition. Please check Program Brochure for specific effective appeal period before competition.
- E6. **Validity of presence:** The appellant and the respondent must be

present at the designated place on time.

- E7. **Appeal response:** Normally the Arbitration Commission responds to the appeal after the end of the competition on the same day or before the start of the competition on the next day.

## 6.4 Appeals Out of the Stipulation

- E8. **Overdue appeal:** Appeals that are not lodged within the "valid appeal period" will be considered invalid and inadmissible.

- E9. **Appeals for overtime presence:** If the appellant fails to be present on time or leaves without any reason during the investigation, the appeal will be considered invalid. If the respondent fails to be present on time, the Arbitration Commission will directly determine the arbitration result and render it as final result.

- R1. **Presence of extra persons out of the stipulation:** In case such persons as the parents, mentors of the appellants participate in the arbitration process without permission from the Arbitration Commission, the Arbitration Commission will warn the team in violation.

⊗ In case multiple warnings fail, there will be a disqualification.

- R2. **Appeal's requests are not clear:** If the Arbitration Commission cannot understand the appeal or conduct the normal investigation due to the emotion factor, the Arbitration Commission will warn the team.

⊗ In case multiple warnings fail, there will be a disqualification.

- R3. **Uncivil appeals:** Neither side shall make uncivil acts nor offensive behavior and words.

⊗ In case multiple warnings fail, there will be a disqualification.

- R4. **Appeals from other persons:** The appellant must be the contestant of the team, and the appeals from other persons will not be accepted.

⊗ In case multiple warnings fail, there will be a disqualification.

## 6.5 Arbitration Procedure

- E10. **Arbitration Procedure:** The Arbitration Commission consists of the

chief referee, the arbitration consultant and the technical responsible person of the competition. The Arbitration Commission is responsible for accepting the appeals and conducting arbitration investigations, to ensure the smooth progress of the competition and the fairness and justness. The playback videos and photographs of any competition may be inaccurate due to the shooting angle, which are only used as reference but not arbitration evidence.

- E11. The arbitration results:** The arbitration results can be divided into “maintaining the original result of the match” or “re-match” between the two teams and the two teams shall not appeal again.
- E12. Additional remarks:** The Arbitration Commission determines the final arbitration result, and neither side shall dispute the result of the appeal anymore.
- E13. Implementation of the arbitration result:** If the arbitration result is a “re-match” between the two teams, the two teams shall have a re-match according to the time and arena stipulated in the Appeal Form. If either team fails to reach the arena within 5 minutes after the start of match, the team shall be deemed to quit the match.

MAKE X

## 7. 2019 World Championship

MakeX is always dedicated to encouraging young people to keep exploring and solving new challenges driven by passion and excitement for science and technology. With the purpose of enhancing participants' ability of problem solving and hands on skills, supplementary rules and annual awards application are added to 2019 MakeX World Championship. All contestants and mentors participating in the competition shall read below carefully to get better preparation.

- On-site skills test newly added
- Alliance Selection rules revise
- Elimination Tournament rules revise
- Elimination Tournament substitute alliance team newly added
- World championship annual awards revise

### 7.1 Subgroup division in Qualification Round

In Qualification Round of the 2019 MakeX World Championship, teams are divided into different groups according to their annual points ranking. Teams from overseas without annual points will be randomly divided into groups. According to the number of the teams and the promotion proportion, teams ranking in the top of each group will be advanced correspondingly.

Take 27 teams as example:

Group	A	B	C	D
Annual points ranking	1	2	3	4
	8	7	6	5
	12	11	10	9
	16	15	14	13

	20	19	18	17
	24	23	22	21
	.....	27	26	25

Each team will participate 4 matches within the group, which means each team's ally and the opponents will be allocated randomly in the same group. The ranking sequence of each group will be based on the sum of the total winning points and the presentation points. Top 4 of each group will be advanced to the Elimination Tournament.

## 7.2 On-site Skills Test

On-site Skills Test will be added to the 2019 MakeX World Championship, aiming to boost contestants' skills and core competencies.

At the On-site Skills Test session, MakeX Committee will announce the mission and new prop necessary on spot.

### Procedures of the On-site Skills Test

1. Captains of teams entering the Elimination Tournament gather in the designated area.
2. MakeX Committee announces the mission and new prop added to Elimination Tournament on site.
3. Teams, taking their robots, reach designated area to build projects and write programs.
4. Teams modify their robots to be compatible with new prop within the time frame.
5. Robots should be placed in the designated area after the test ends.

### Requirements for the On-site Skills Test

1. Teams entering the Elimination Tournament will participate in the On-site Skills Test in Courageous Traveler. Alliance Selection will start after the On-site Skills Test.
2. Materials and tools necessary for the On-site Skills Test are the same as



Courageous Traveler competition equipment kit. Participating teams themselves shall get the materials and tools ready

3. Electronic communication devices are NOT allowed in the On-site Skills Test. Mentors and parents shall not enter the test area.
4. Robots should stay in the test area after the test ends. Taking robots outside the test area is prohibited.
5. Before the on-site test ends, teams should complete their project for later inspection of the committee staff.
6. After the on-site test ends, all teams should leave the test area, just leaving the robots there.

Details of new prop, including dimension, weight, shape and more, will be published when the on-site test begins.

The Courageous Traveler Elimination Tournament will include a new task relating to the prop used in the on-site test. Completing the task can score specific points. More details will be unveiled at the beginning of the on-site test.

## 7.3 Alliance Selection

In Alliance Selection Ceremony, promoted teams will select their alliance team in turn according to their Qualification Round ranking. The formed alliance will be named as “Alliance 1”, “Alliance 2” , “Alliance 3” … When choosing alliance team, promoted teams ranking top 50% must choose one promoted team ranking bottom 50% as their alliance team. The team being chosen cannot reject.

**Substitute Alliance Team:** In MakeX Challenge, promoted teams ranking top 50% can choose one unpromoted team as their substitute alliance team. Promoted teams ranking top 50% can give up the right of choosing one substitute team. The unpromoted team being chosen can reject. If unpromoted team rejects, the promoted team can continue to choose other unpromoted team as their substitute alliance team.

The advanced teams who are not present before the start of alliance selection are deemed as voluntary quitting the option, and the advanced teams who are not present before the end of the alliance selection are deemed as voluntary quitting the Elimination Tournament.

If it occurs that the advanced teams quit the Elimination Tournament, the

promotion places will be given to the following teams according to the ranking points after the Qualification Round.

Promotion proportion:

Number teams: 101 or more	Number of advanced teams: 64
Number teams: 51-100	Number of advanced teams: 32
Number teams: 26-50	Number of advanced teams: 16
Number teams: 13-25	Number of advanced teams: 8
Number teams: 6-12	Number of advanced teams: 4

## 7.4 Elimination Tournament

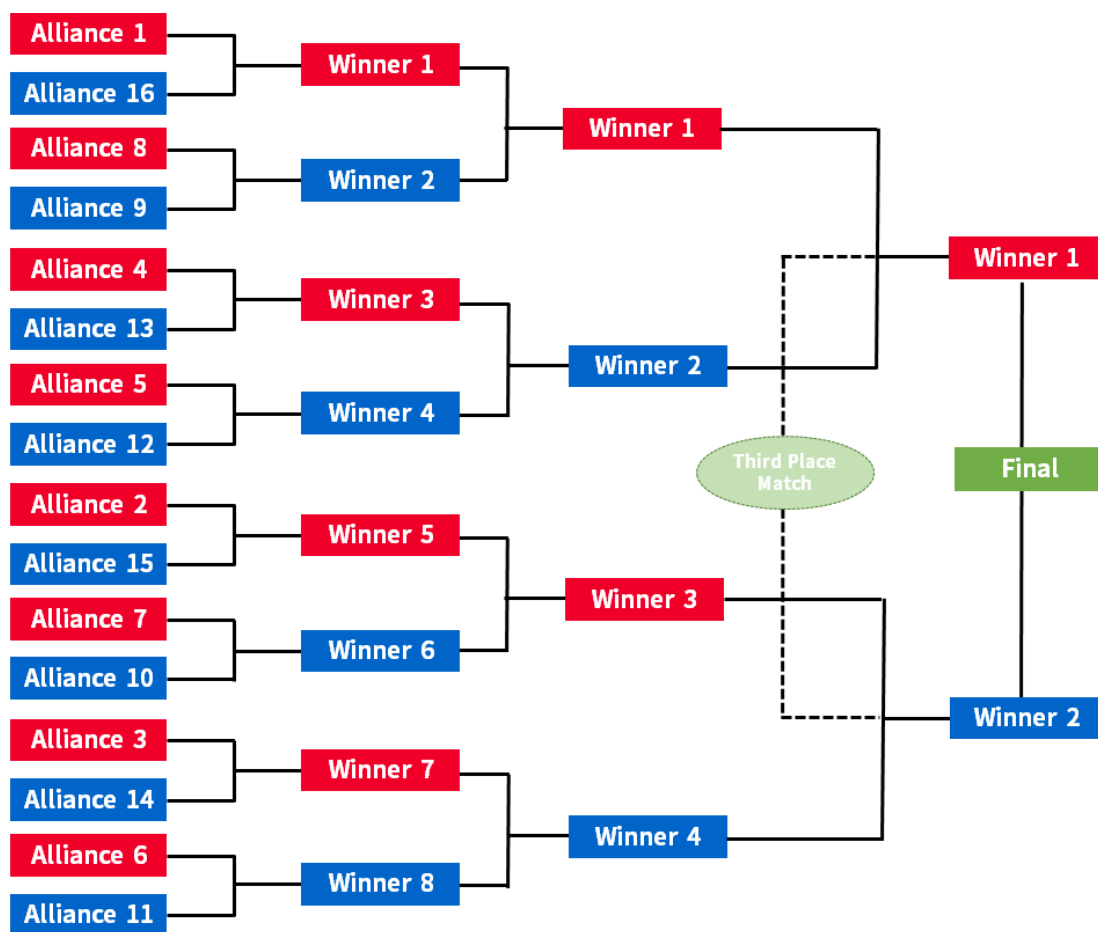
In Elimination Tournament of MakeX Challenge, alliance can choose either alliance team or substitute alliance team to compete, but the final ranking result of Elimination Tournament can only be given to alliance teams. Substitute team of winner alliance (Champion, Runner-up & Second Runner-up) will receive special award for their participation. If alliance chooses the substitute alliance team to compete, alliance must replace the power management module of substitute alliance team robot with the module from alliance team robot within timeframe.

Match schedule of Elimination Tournament is shown as below.

Teams get 2 wins or 1 win & 2 ties will be promoted to next round. If the alliance achieves "1 win, 1 lost, 1 tie" or "3 ties", the winning alliance will be decided according to the following rules:

- 1) Compare the total automatic stage points obtained in 3 sessions. The higher the points, the higher the ranking.
- 2) If the above conditions are the same, compare the total competition points obtained in 3 sessions. The higher the points, the higher the ranking.
- 3) If the above conditions are the same, compare the total net competition points in 3 sessions. The higher the points, the higher the ranking.

If the above conditions are the same, an additional match will be held. This match only takes one session. The winner will be the alliance with the higher total competition points. If both alliances obtain the same total competition points, the winner will be the alliance with higher automatic stage points. The additional match will continue if the automatic stage points are the same again.



## 7.5 Champion, Runner-up , Second Runner-up and Special Awards

Category	Type	Awards	Quantity
Courageous Traveler	Top 3	Champion	2
		Runner-up	2
		Second Runner-up	2
	Annual Points	Champion of Annual Points	1

	Awards	Runner-up of Annual Points	1
		Second Runner-up of Annual Points	1
		Top Eight of Annual Points	5
	Special Awards	Appearance Design Award	2
		Engineering Notebook Award	4
		Best Automatic Program Award	1
		Best Modification Award	1
		Alliance Collaboration Award	3
		Technology Innovation Award	1
		Team Culture Award	2
		Competition Spirit Award	2
		Rookie Award	1

### **Champion, Runner-up, Second Runner-up of Annual Points**

Annual Points Champion, Annual Points Runner-up, Second Runner-up of Annual Points will be awarded to the top three teams according to the ranking of team's annual points in 2019 season.

### **Top Eight of Annual Points**

Top Eight of Annual Points will be awarded to the teams from the 4<sup>th</sup> place to 8<sup>th</sup> place according to the ranking of team's annual points in 2019 season.

### **Special Awards (World Championship)**

For details please check contents of **5. Awards**.

## 7.6 World Championship Annual Awards

Annual awards which include MakeX Ambassador Award, MakeX Outstanding Mentor Award, MakeX Spirit Award, MakeX Opensource Innovation Award will be awarded in 2019 MakeX World Championship Awarding Ceremony. These awards need application to MakeX Committee. For details please check award description below.

### 1 . Awards List

MakeX Ambassador Award	*3	(Individual Award)
MakeX Spirit Award	*1	(Team Award)
Outstanding Mentor Award	*3	(Individual Award)
Opensource Innovation Award	*2	(Team Award)

\* (Team Award, one for overseas team, one for Chinese team)

### 2 . Application Timeline

Sept.1st -Oct.31th / Applicants submit application documents online

Nov.15th / Nomination list announced on MakeX official website

Nov.29-30th / Roadshow on 2019 MakeX World Championship

Dec.1st / 2019 MakeX World Championship Awarding Ceremony

### 3 . Applicant Qualification

All individuals or teams achieve outstanding results in MakeX 2019 season with civilized participation

### 4 . Evaluation and Application Documents

#### MakeX Ambassador Award

Applicant: Individual (mentor or contestant in 2019 season)

Evaluation Criteria:

1) Actively participate in 2019 MakeX competition throughout the year,

making efforts to get more people around involved in MakeX.

2) Initiatively promote MakeX Robotics Competition in social media (Instagram, Facebook, etc.), community, forum and other platforms. Publicize the spirit of the MakeX: Creativity, Teamwork, Fun and Sharing.

Application documents:

1) Award application form(download)

2) Personal Introduction Video (3 mins, please upload the video to internet and share the link, DO NOT send the original video.) In this video, share your understanding of MakeX, experience and what you obtain during the competition participation.

3) Personal Achievement Report (PPT or Essay in PDF, with pictures / video link inserted). Reveal all your achievements, events, activities in details.

4) Other documents that helps to demonstrate the applicant's achievements.

### **Outstanding Mentor Award**

Applicant: Individual (mentor in 2019 season)

Evaluation criteria:

1) Educate and guide students to establish correct values;

2) Excellent professional knowledge and skills, effective teaching methods and practice, with team mentor experience;

3) Help to build a fair playing environment, respect and practice the spirit of competition;

4) Initiatively promote MakeX Robotics Competition in various platforms. Share the spirit of MakeX: Creation, Teamwork, Fun and Sharing.

Application documents:

1) Award application form(download)

2) Personal Introduction Video (3 mins, please upload the video to internet and share a link, DO NOT sent the original video). Please share personal experience, teaching practice and achievements.

3) Personal Achievement Report (PPT or Essay in PDF, with pictures / video link inserted). Present personal education ideal, professional skills, teaching practices.

- 4) Other documents that helps to demonstrate the applicant's achievements.

### **MakeX Spirit Award**

Applicant: Team (participated in the 2019 season)

Evaluation criteria:

- 1) Actively participate in MakeX 2019 season, demonstrating outstanding team capability and achieving excellent competition results. Play as a role model for other teams.
- 2) Put emphasis on scientific-exploiting, team collaboration, and makes technological and innovative breakthroughs.
- 3) Superior team operation mode, reasonable teamwork division, clear vision and plan for future development.
- 4) Make efforts to the cultivation of new members, inheritance of knowledge and skills, and constantly team knowledge accumulation.

Application documents:

- 1) Award application form(download)
- 2) Team Introduction Video (3-5 mins, please upload the video to internet and share a link, DO NOT sent the original video). Please present all members, share team grown up experience, and social influence.
- 3) Team Achievement Report (PPT or Essay in PDF, with pictures / video link inserted). Mainly focus on team technology & innovation breakthrough, team culture construction, team operation mode, and inheritance of knowledge.
- 4) Other documents that helps to demonstrate the applicant's achievements.

### **Opensource Innovation Award**

Applicant: Team (overseas teams participated in the 2019 season)

Evaluation criteria:

- 1) Put emphasis on scientific-exploiting, achieve technological and innovative breakthroughs.
- 2) Share technology & innovation knowledge on various online and offline platforms.

- 3) Always willing to help other teams solve technical problems.

Application Document:

- 1) Award application form(download)
- 2) Team Achievement Report (PPT or Essay in PDF, with pictures, link inserted). Reveal in details all your technology & innovation achievements, the platform you share, activities such as innovation forum, technology workshop etc and the influential results.
- 3) Other documents that help to demonstrate the applicant's achievements

## 5. Submission

1) Applicant needs to send email with all necessary documents (application form, video link, report etc.) to MakeX Committee (makex@makeblock.com) within the valid application period. Any application from other channels or expired application will not be accepted.

2) The application documents should be integrated into a package. The email title and attachment name must comply with the format of "Team Number-Applicant Name-Program-Award Name". For example: "X10001-MakeXer-City Guardian-Applying for Ambassador Award". Any application doesn't comply with the required format will not be accepted.

3) Applicant should display basic information on the homepage of all documents, including but not limited to team number, team name, and team member.

4) All the files should be created originally by the team or individuals themselves. If there is plagiarism, embezzlement or misappropriation of other people's achievements, the application will be disqualified.

## 6. Judge Panel

Advisor	
Jasen WANG	Makeblock CEO, Founder of MakeX
Chun ZHANG	Technology Director, World Robot Contest- Youth Robot Design Competition Member
ISKANDAR BIN YAHYA	Senior Lecturer, The National University of Malaysia



Sunny FANG	Competition Operation Manager, MakeX Committee
Xiaorong SONG	Head Referee, 2018 MakeX World Championship
Qihao XU	2018 MakeX Outstanding Leadership Award winner

## 7 . Prize

Award	Quota	Certificate	Trophy	Prize
Ambassador Award	3	Yes	/	Starter Equipment Kit or Challenge/Premier Specific Extension Kit for 2020 season
Outstanding Mentor Award	3	Yes	/	Scholarship ¥ 30,000 RMB
MakeX Spirit Award	1	Yes	Yes	Scholarship ¥ 20,000 RMB
Opensource Innovation Award	2	Yes	Yes	Scholarship ¥ 10,000 RMB
Nomination	Several	Yes	/	MakeX Gift Package

\*Notes: All the individuals or team members of nomination list will get a MakeX Gift Package.

## **8. Competition Statement**

### **8.1 Update of Competition Documents**

The official documents and files are including but not limited to Competition Guide, Equipment Guide Book, Rule Video provided by the MakeX Committee. Contestants are obliged to pay attention to the updates of these documents and files before the competition. Any problem caused by the contestants not keeping up with updates of the documents and files are borne by the contestants themselves. All the official documents and files will be updated on the MakeX official website [www.makex.io/en](http://www.makex.io/en).

#### **Competition Guide**

The MakeX Robotics Competition Committee reserves the right to revise and improve the Competition Guide during the whole season. Contestants and mentors can download the latest version from the MakeX official website.

#### **Q&A and Sharing**

All contestants, mentors and any robot enthusiast can raise questions or share their experiences on social media platforms. Anyone posting messages and replying should abide by the network ethics. Online speeches that are out of the stipulation will be banned or deleted.

### **8.2 Qualification Statement**

The MakeX Committee reserves the right to disqualify any contestant for any reason, including but not limited to failing to meet safety or technical requirements, seriously violating the spirit or fairness of the competition.

### **8.3 Copyright Declaration**

Shenzhen Hulu Maker Co., Ltd. reserves the copyright of this Competition Guide. Without the written consent or authorization from Shenzhen Hulu Maker Co., Ltd, any entity or individual may not reproduce, including but not limited to any network media, electronic media or written media.

## **8.4 Disclaimer**

All contestants in 2019 MakeX Robotics Competition shall fully understand that safety is the most important issue for the sustainable development of MakeX Robotics Competition. To protect the rights and interests of all contestants and organizers, according to relevant laws and regulations, all contestants registered for the 2019 MakeX Challenge - Courageous Traveler, shall acknowledge and abide by the following safety provisions:

Contestants shall take adequate safety precautions when constructing the robots, and all parts used for constructing the robots shall be purchased from legal manufacturers. Contestants shall ensure that the structural design of the robots takes into account the convenience of the inspection and actively cooperate with the host of the competition.

When modifying and using the parts with potential safety hazards for the robots, it must conform to the national laws, regulations and quality & safety standards. Those operations shall be manufactured and operated by persons with relevant professional qualifications.

During the competition, the teams shall ensure that all the actions such as construction, testing and preparation will not do harm to their own team and other teams, referees, staff, audiences, equipment and arenas.

In the process of construction and competition, if any action that may violate the national laws, regulations or standards occur, all consequences will be borne by the contestants themselves.

The competition kits and parts sold and provided by the supporter, Shenzhen Makeblock Co., Ltd., shall be used in accordance with the instructions. Shenzhen Makeblock Co., Ltd. and MakeX Committee will not be responsible for any injury or loss of property caused by improper use.

## **8.5 Competition Guide Statement**

The official language for MakeX is Chinese. English or other language translations are prepared to facilitate the team's preparation process. All documents translated to English are for reference only.

The MakeX Robots Competition Committee reserves the final interpretation of MakeX Robots Competition – Competition Guide for Courageous Traveler.

# Appendix : Engineering Notebook

## Guideline

### 2019 MakeX Robotics Competition

#### Engineering Notebook Guideline

**\*Instruction:**

1. **The value of engineering notebook:** It helps the team establish files and record the whole learning process. Therefore, the record of engineering notebook should run through the whole preparation process for the competition.

2. **Engineering notebook submission:** Teams can use online documents or handwriting. No matter which way to use, each team must submit a paper version On-site.

1) **Electronic engineering notebook:** After successful competition application, teams can access the registration page from the "Event List" on the personal central page need to check competition and upload the engineering notebooks. Teams need to upload the RAR file package involving source programs, team photos, robot photos and production photos before the On-site registration date.

2) **Paper engineering notebook:** As the competition programs (Courageous Traveler & Strong Alliance) require the presentation process, 2 copies of the paper version shall be submitted by each team to the judges at the presentation site. If there is no presentation process (City Guardian), teams will need to submit 1 copy of the paper version to the staff at inspection area.

3. Engineering notebook will be required for the evaluation of all awards focusing on technology. Please refer to the Competition Guide for the evaluation criteria of each award.

#### Basic Requirements of Cover

The team name, team number and competition program must appear on the outside cover of the engineering notebook.

## Basic Requirements of Contents

### 1. Directory contents

Creating directory contents brings convenience for the presentation judges to review and quickly find the corresponding section.

### 2. Process records

Every improvement of the robots should be recorded from prototype design, building robot, to the debugging. **Keep pictures of all manuscripts, design drawings, calculation process, circuit diagrams, etc., and insert them into engineering notebook.**

- 1) Schedule of robot building progress
- 2) Design inspiration/sketch
- 3) Technical principle (it can be disassembled into different parts)
- 4) Production step by step (with clear pictures)
- 5) Problems encountered and solutions

Examples of problems:

What technical failures did you encounter? Why did you fail? How did you solve the problems finally?

What efforts have you made for the robots? What improvements have been achieved?

Does your project progress schedule go as planned? What accidents or delays have occurred? How to fix it?

Have there been any dispute among the team members? How to settle it?

### 3. Projects summary

- 1) The structure and function of the project (with pictures and text enclosed)
- 2) The technical innovations of project
- 3) Competition strategies for scoring and defense

### 4. Team introduction

- 1) Brief biography of each team member and their role on the team.

- 2) Culture displaying (logo, team flag, slogan, posters, T-shirt, etc.)
- 3) Excellent achievements sharing (Stories)
5. **Feelings and other things you want to share (optional)**
  - 1) Achievement in competition (Technical)
  - 2) Growth in the competition (Spiritual)
  - 3) Suggestions for competition



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Instagram: makexofficial

Facebook Official Account



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MakeX Robotics Competition Committee