

· 2019 ·

MAKE X

MakeX Robotics Competition

City Guardian

Competition Guide

V1.2



Updates:

Date	Version	Modifications Record
2019.01.23	1.0	City Guardian Competition Guide First Publish
2019.4.30	1.1	Contestant age supplementary explanation
		Electronic engineering notebook submission method revise
2019.11.01	1.2	Contestant age explanation for two groups
		Alliance selection rules revise
		World championship and rules newly added

MAKE X

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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 through 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 and education through high-level competition events, guiding young people to learn Science (S), Technology (T), Engineering (E), Art (A) and Mathematics (M) and applying 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 Starter for 2019 Season is "City Guardian", which mainly tests contestants' logical thinking, strategic teamwork and problem-solving ability.

With the rapid development of the economy, some businesses, when they are chasing benefits have caused serious pollution such as air pollution, waste pollution, and soil pollution to the urban environment. The city is once again mired in environmental crisis. Let's break through the environmental crisis and protect our city!

2. Participation Requirements

2.1 Contestants

The number of contestants in each team is 1 or 2. The starting date of the season (January 1, 2019) should be taken as the starting point to calculate the age. The groups in City Guardian include Elementary Group and Intermediate Group. Intermediate Group will be set up for international teams.

For Elementary Group, the age requirement of the contestants is between 6 and 13 years (before January 1, 2019), birthday between 2/1/2005 and 31/12/2013).

For Intermediate Group, the age requirement of the contestants is between 12 and 16 years (before January 1, 2019), birthday between 2/1/2002 and 31/12/2007.

At the start of the season, contestants should be enrolled students in the 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 Account Registration

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

Missions will be selected 10 days before the competition and published in the "Mission Announcement".

Please pay attention to the notice and the "Program Brochure" before each competition. If some rules are updated in the "Program Brochure", the updated rules in the "Program Brochure" shall prevail.

4.2 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.

4.3 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.

4.4 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 to check competition and upload the engineering notebooks. Teams need to upload the RAR package involving source programs, team photos, robot photos and production photos before the on-site registration date.

Paper engineering notebook: There is no presentation for the City Guardian, so each team should submit one paper engineering notebook to staff at inspection area.

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

4.5 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.

4.6 Pits Area Decoration

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

In addition, 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 teams to specify what needs to be paid attention to and under which circumstance participants will get penalty.

Only the captain needs to attend the meeting, without carrying the robot.

4.8 Schedule Announcement

The 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

Teams shall participate in 4 single matches in Qualification Round during which alliances teammate will be allocated randomly. Teams will be ranked according to the total competition points of 4 single matches.

If the total competition points of 4 single matches are the same in Qualification Round, teams with higher total independent mission points of 4 single matches rank higher.

If the above conditions are the same, teams with higher total alliance mission points of 4 single matches rank higher.

If the above conditions are still the same, teams with shorter total competition time of 4 single matches rank higher.

If the above conditions are all same, two teams who rank the same will have an additional match (only for the independent mission). The winner will be the team with higher independent mission points. The additional match will continue if the independent mission points are still the same.

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 Championship Round.

If it occurs that the advanced teams quit the Championship Round, the promotion places will be given to the following teams according to the ranking of 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: 32-50	Number of advanced teams: 16
Number teams: 13-31	Number of advanced teams: 8

4.12 Championship Round

Alliances shall participate in 3 single matches in Championship Round. The red and blue sides in the alliance are decided by themselves. It will take the highest alliance total points of 3 single matches as the final alliance total points of the Championship Round, alliances with higher final alliance total points in Championship Round rank higher.

If the final alliance total points are the same in Championship Round, alliances with higher final alliance mission points rank higher.

If the above conditions are all same, alliances with shorter final completion time rank higher.

If the above conditions are all same, two alliances who rank the same will have an additional match (only for the independent mission). The winner will be the alliance with higher independent mission points.

5. Award

5.1 Champion, Runner-up, Second Runner-up

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

5.2 Award 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 teams with high-quality engineering notebooks.

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.

Alliance Collaboration Award

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

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 staffs.

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 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 competition” 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.

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.

- Cancel subgroup division in Qualification Round
- On-site skills test newly added
- Alliance Selection rules revise
- World championship annual awards revise

7.1 Qualification Round in MakeX Starter

Similar to the regional competition, in MakeX Starter of 2019 MakeX World Championship Competition, there will be no subgroup division within elementary group or intermediate group, all teams will compete in the Qualification Round according to the schedule randomly generated by the system. In the Qualification Round ranking sequence, all teams rank from highest to lowest according to the competition points of the team. The specific advanced proportion are as follows:

Number teams: 101 or more	Number of advanced teams: 64
Number teams: 51-100	Number of advanced teams: 32
Number teams: 32-50	Number of advanced teams: 16
Number teams: 13-31	Number of advanced teams: 8

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 in City Guardian, MakeX Committee will announce the mission and time frame on spot. The participating teams should build projects and write programs to complete the mission within given time.

The mission and rules for the On-site Skills Test in City Guardian shall be subject to the on-site announcement.

Procedures of the On-site Skills Test

1. Captains of participating teams entering the Championship Round gather in front of the stage;
2. MakeX Committee announces the mission on site;
3. Participating teams reach the designated area to build projects and write programs;
4. Participating teams complete the mission;
5. MakeX Committee releases grades and scores of each participating team.

The participating teams' completion of the mission determine the weighting factor that the teams will be granted. The weighting factor will affect the final result.

Requirements for the On-site Skills Test

3. Teams being advanced to the Championship Round will participate in the On-site Skills Test in City Guardian. Alliance Selection will start after the On-site Skills Test.
4. Materials and tools necessary for the On-site Skills Test are the same as City Guardian competition equipment kit. Participating teams themselves shall get the materials and tools ready.
5. Before being allowed to build their projects, all the participating teams should ensure all the mechanical and electronic components are confined to individual components. Participating teams shall start assembling ONLY after their components pass inspection.
6. Before being allowed to write programs, all the participating teams should

ensure all the existing programs are cleared. Participating teams shall program on site.

7. The scores that participating teams earn in the On-site Skills Test in City Guardian determine the grades and weighting factors they will be granted.
8. Electronic communication devices are NOT allowed in the On-site Skills Test in City Guardian. Mentors and parents shall not enter the test area during the session.

Notes on grading

- S, Championship Round Weighting Factor 2.0
- A, Championship Round Weighting Factor 1.8
- B, Championship Round Weighting Factor 1.5
- C, Championship Round Weighting Factor 1.0

For instance, Team X10010 and Team X10020 form Alliance A. In the On-site Skills Test, if Team X10010 earns a Grade S, and Team X10020 a Grade B, the final score of Alliance A will be calculated as:

Final Points = Championship Round Points* $[(2.0+1.5) \div 2]$

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.

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 Championship Round.

If it occurs that the advanced teams quit the Championship Round, the promotion places will be given to the following teams according to the ranking of 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: 32-50 Number of advanced teams: 16

Number teams: 13-31 Number of advanced teams: 8

7.4 Champion, Runner-up , Second Runner-up and Special Awards

Category	Type	Awards	Quantity
City Guardian	Top 3 (Elementary group)	Champion	2
		Runner-up	2
		Second Runner-up	2
	Top 3 (Intermediate group)	Champion	2
		Runner-up	2
		Second Runner-up	2
	Annual Points Awards	Champion of Annual Points	1
		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
		Alliance Collaboration Award	2
		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 4th place to 8th 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**.

7.5 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.cc/io.

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. reserve 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 Starter - City Guardian, 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 City Guardian.



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:** Teams need to upload the RAR package involving source programs, team photos, robot photos and production photos before the on-site registration date.
- 2) **Paper version of the 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 technical awards (except the Opensource Technology Award). 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 Content

1.Directory content

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)

5Feelings and other things you want to share (optional)

- 1) Achievement in competition (Technical)
- 2) Growth in the competition (Spiritual)
- 3) Suggestions for competition



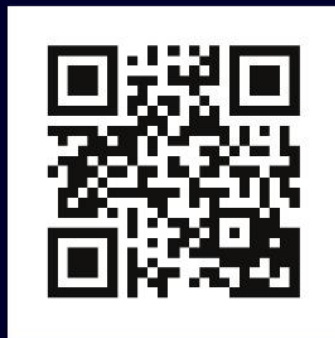
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MAKE X

MakeX Robotics Competition Committee