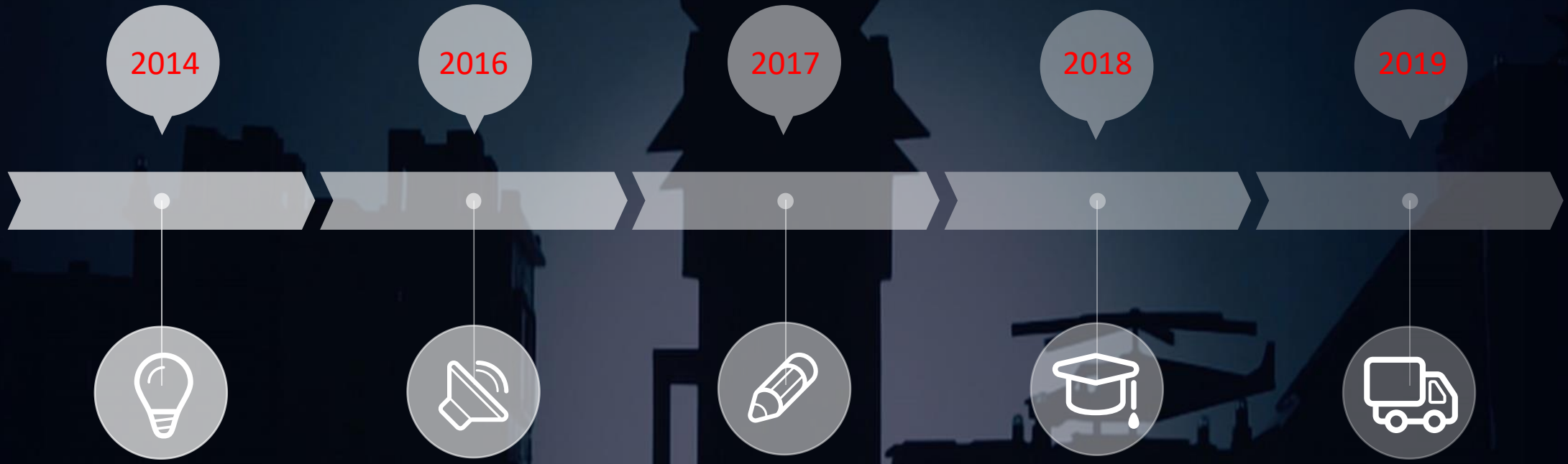
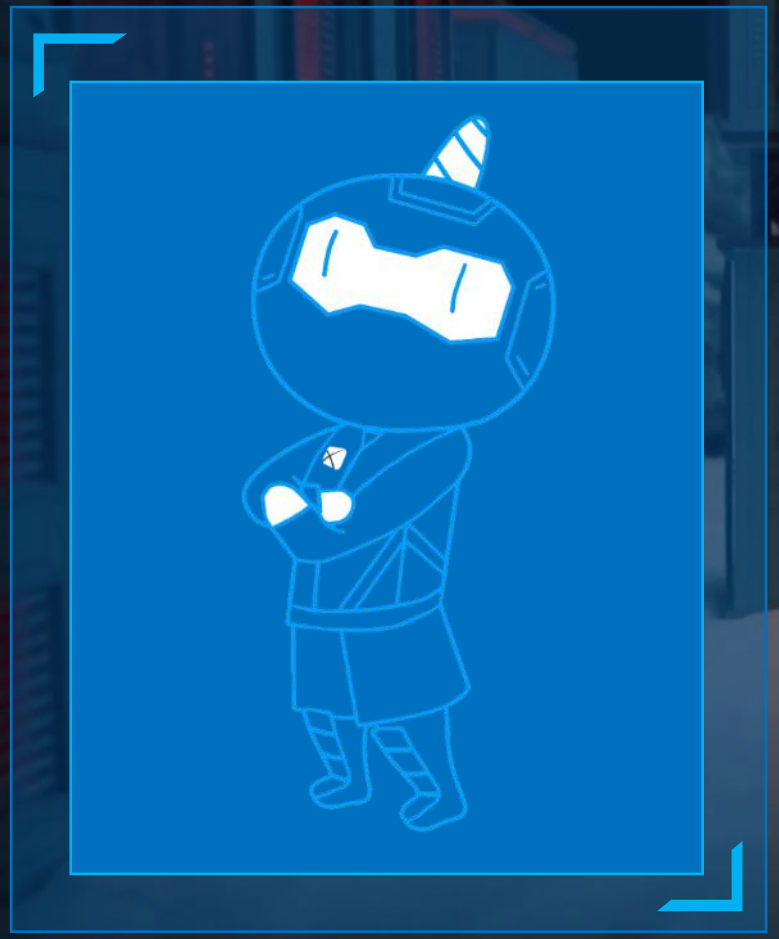
MakeX Challenge & Premier Sharing

By Gary Wen from Xschool

Gary


2014
2016
2017
2018
2019
Makeblock
Level 1 & 2
13 teams
Level 1 & 2
5 teams
Starter/Challenge/ Premier
100 students
Starter/Challenge/ Premier
180 students

2018-Guangzhou-4th Place




Champion
冠军
MAKEX
2019
CHAMPION
冠军
WRCC2019
WORLD ROBOT CONTEST CHAMPIONS
Excellent Award
全能奖
RUNNER-UP
亚军
WRCF2019

2019 . . +

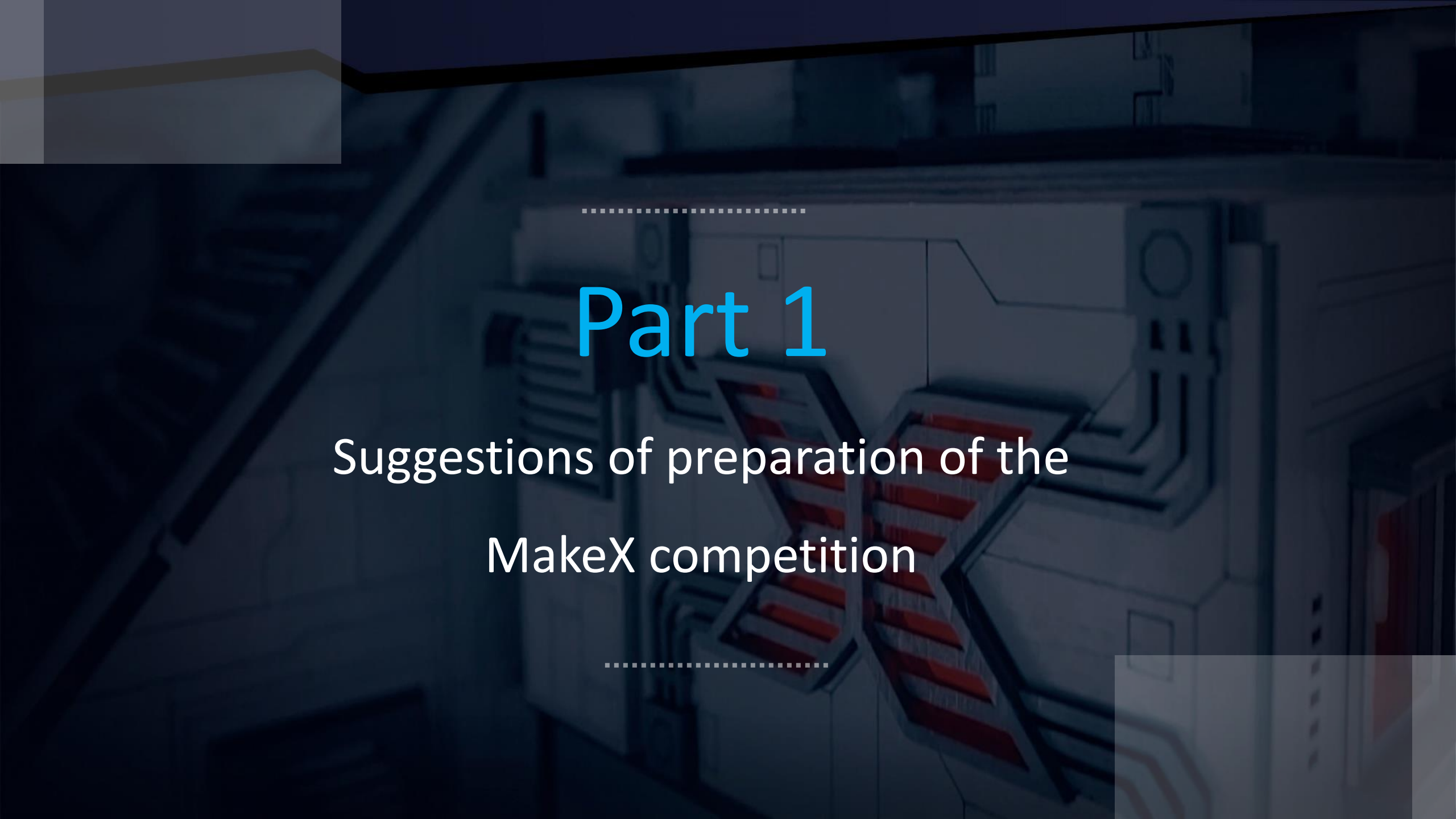
2019.7-Baoding-2nd place


2018.8-Beijing-Champion
makeblock
童心制物
MAKEX
ROBOTICS COMPETITION 机器人挑战赛

2019.11-Guangzhou-Final Champion


“ONE TEAM
and No Gary”
Why the “X Fire Team can win the competition？
makeblock
MAKEX
ROBOTICS COMPETITION

Contents



Part 1

Suggestions of preparation of the MakeX competition

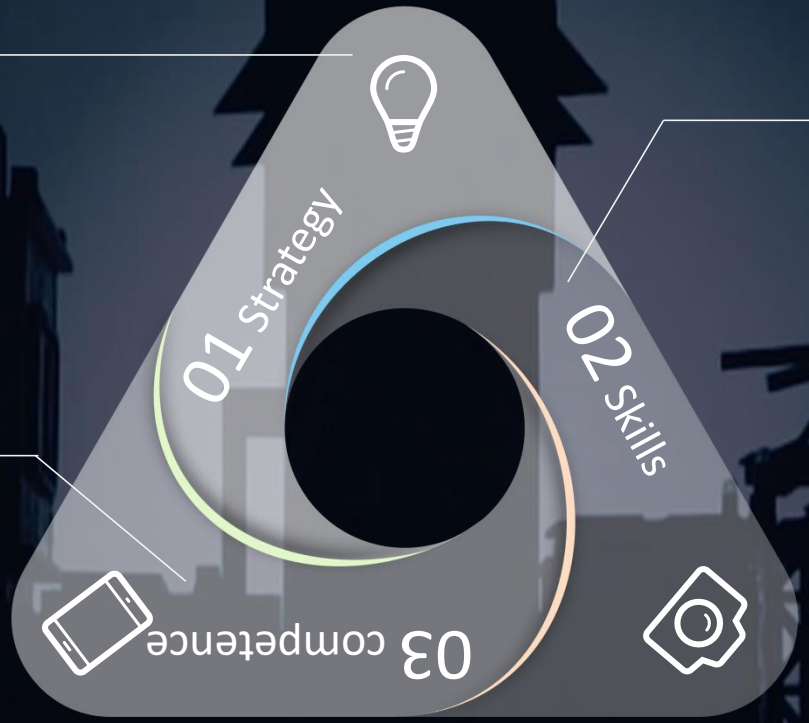
How can a TEAM win the MakeX competition?

Strategy

What strategies are needed in the MakeX competition?

Competence

What kinds of competences are needed for a good player or team?



Skills (Experience)

What skills do students need to master for the MakeX advanced competition?

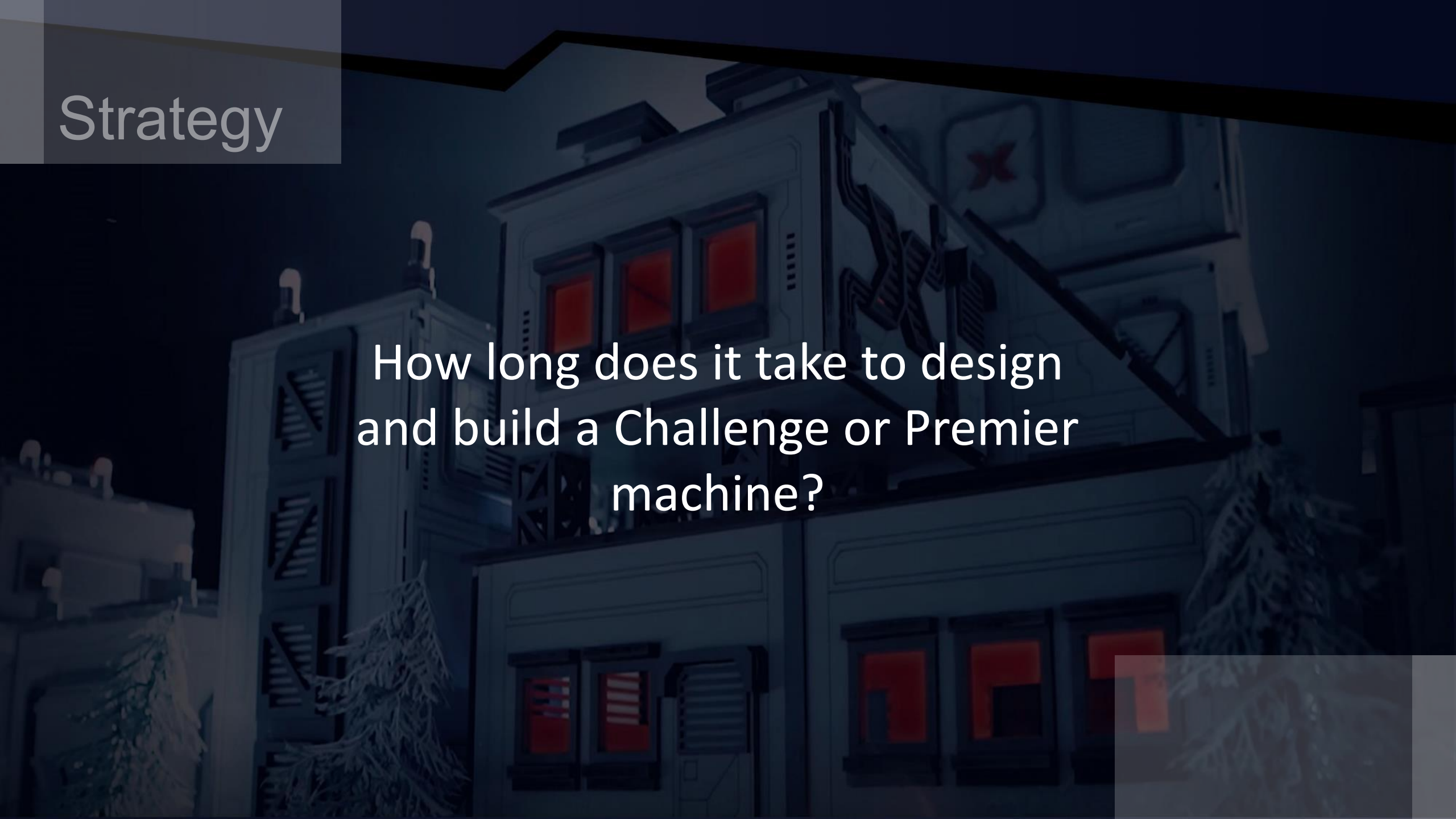
TEAM Organization

How does a team work in the Makex Challenge and Premier competitions?


What positions do you need in your team？

TEAM Organization-Clear roles and responsibilities

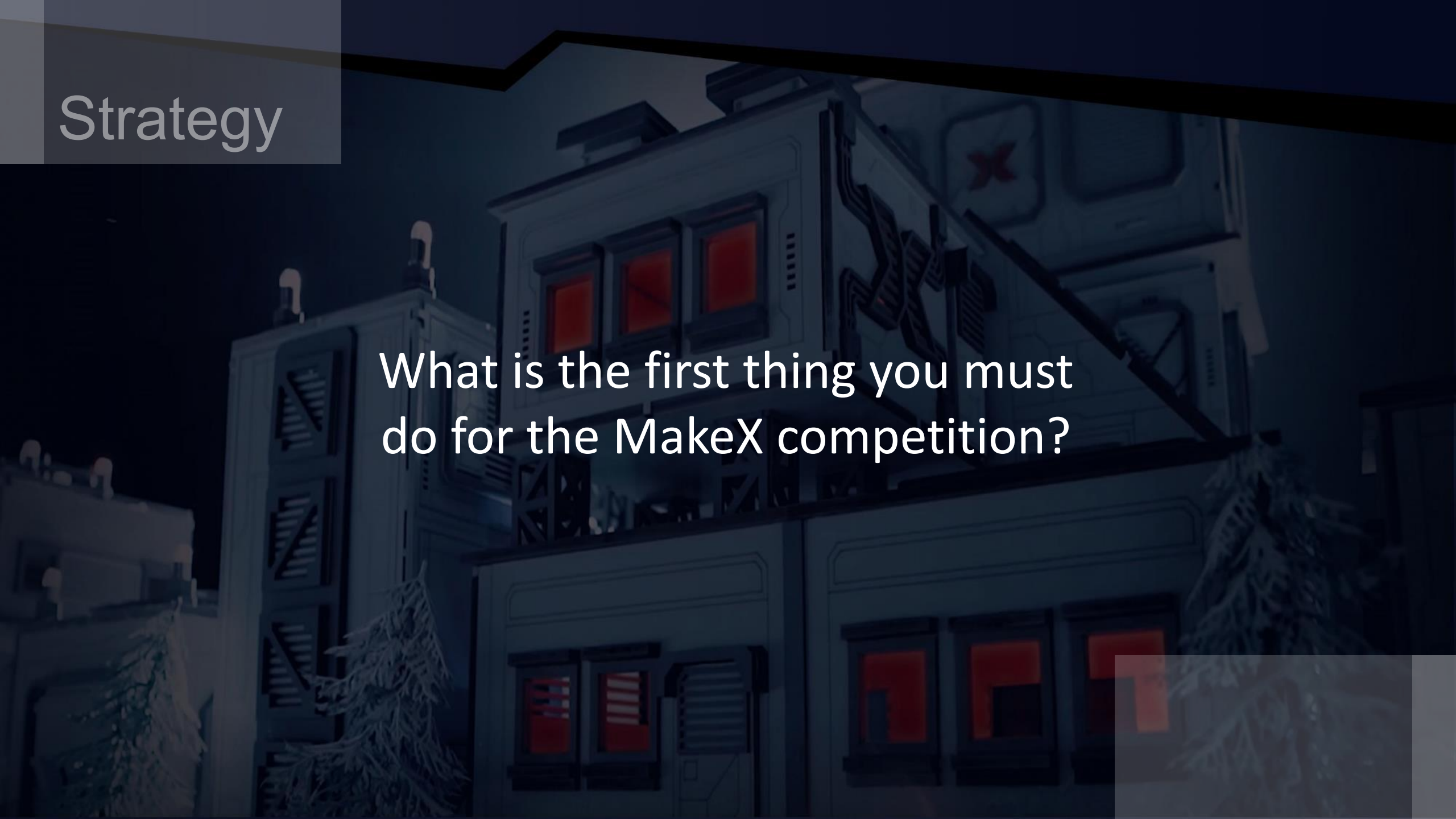
Strategy



How long does it take to design and build a Challenge or Premier machine?

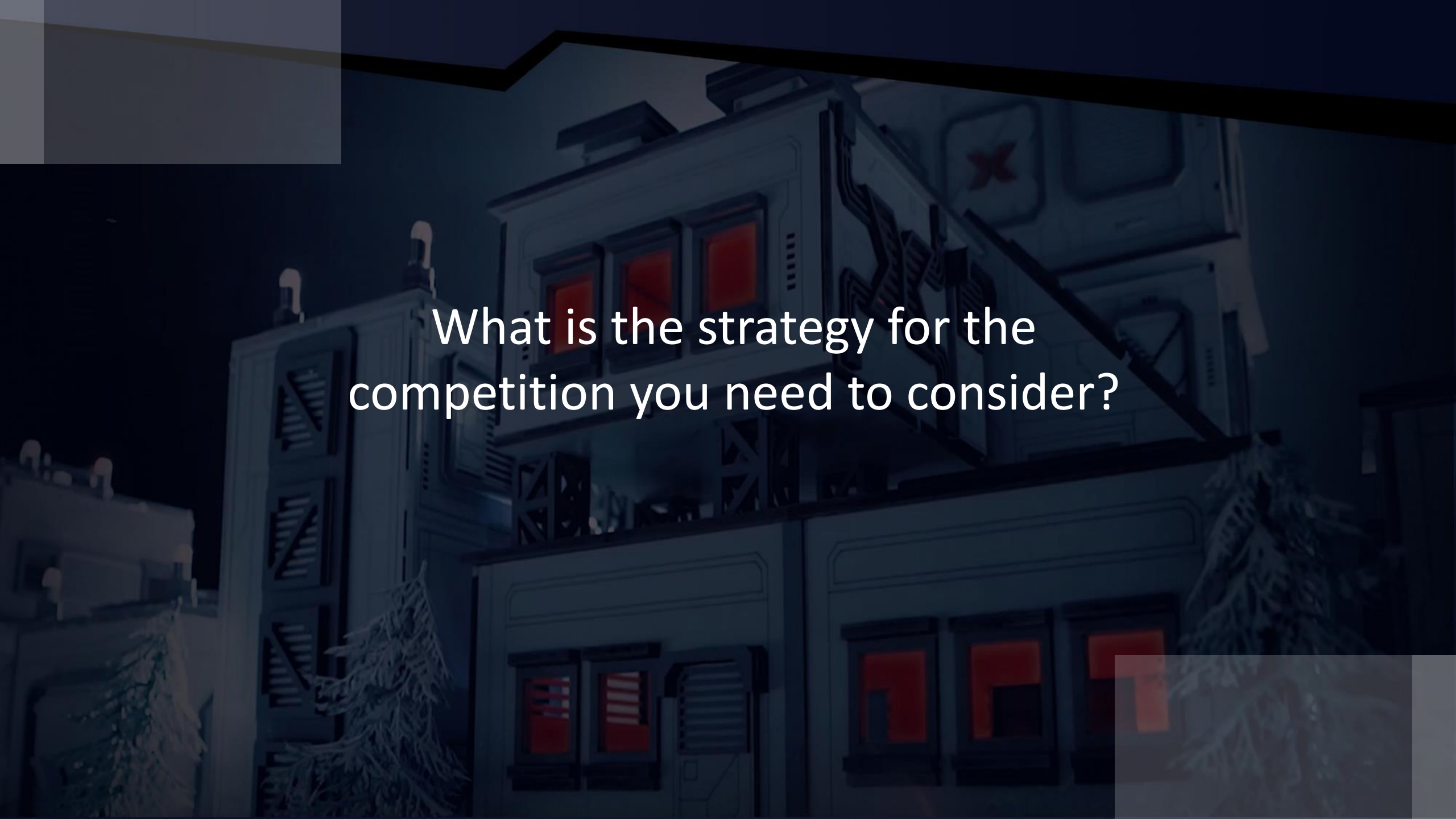
1-2 weeks for building，
but the entire year for
being perfect！

Strategy



What is the first thing you must do for the MakeX competition?

To Read the Rule Guides ,and brainstorming for a strategy!


What is the strategy for the
competition you need to consider?

Strategy

Year Strategy

- Periodical Goal Setting
- SOP/deadline control
- Strategy test and adjustment

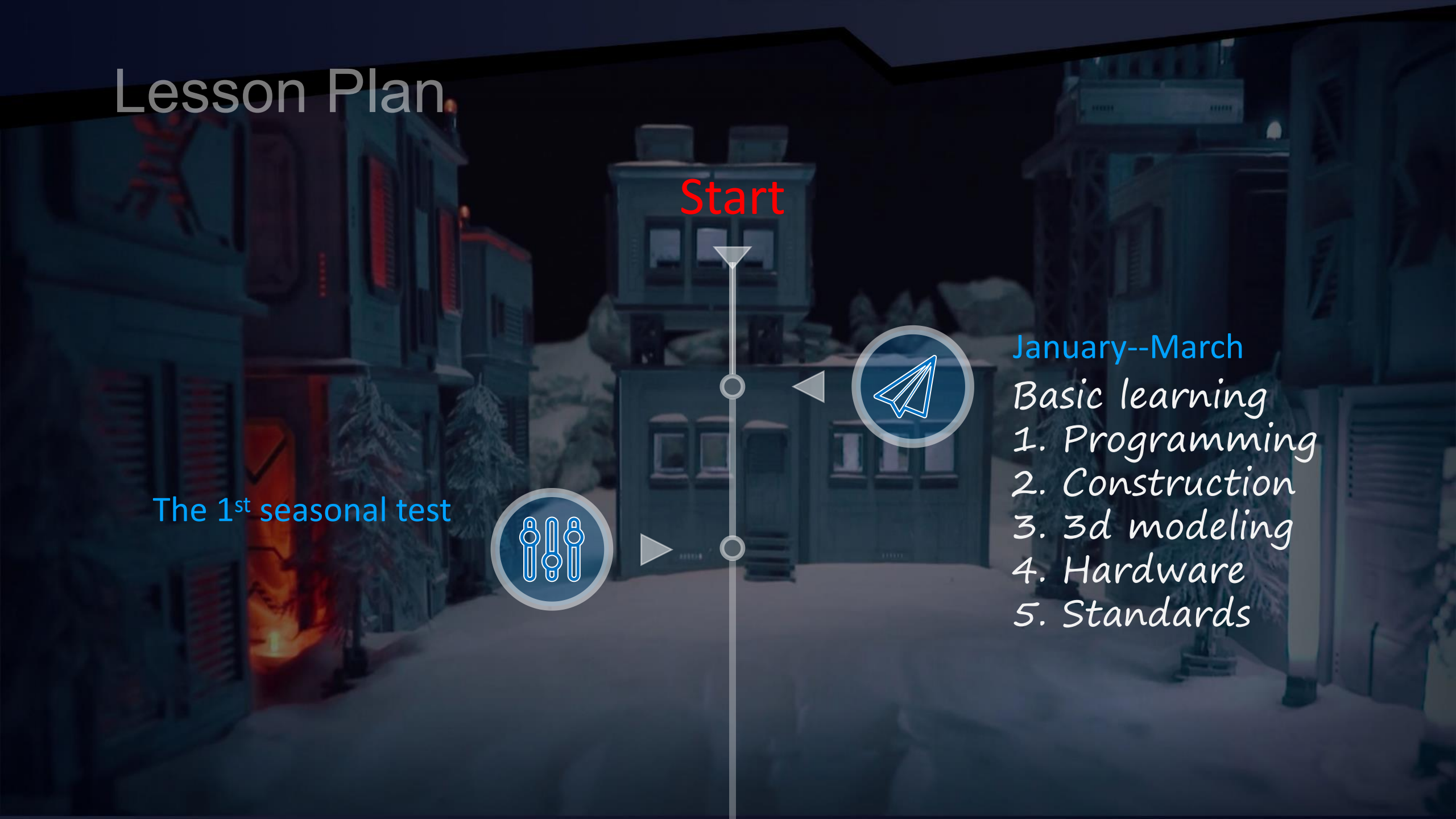
Lesson Plan

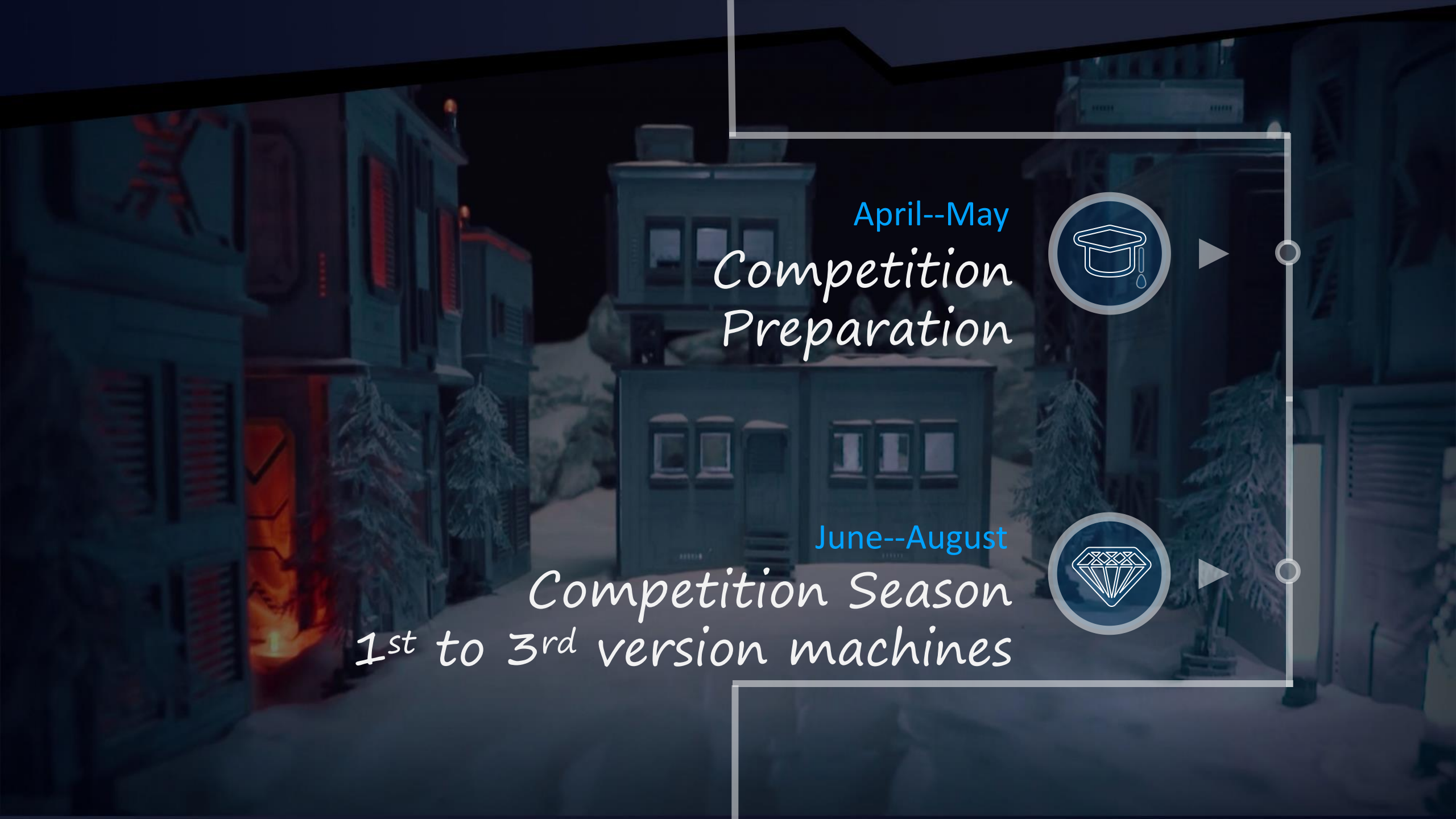
- Curriculum Framework
- Seasonally / weekly outcomes
- Basic and extended learning

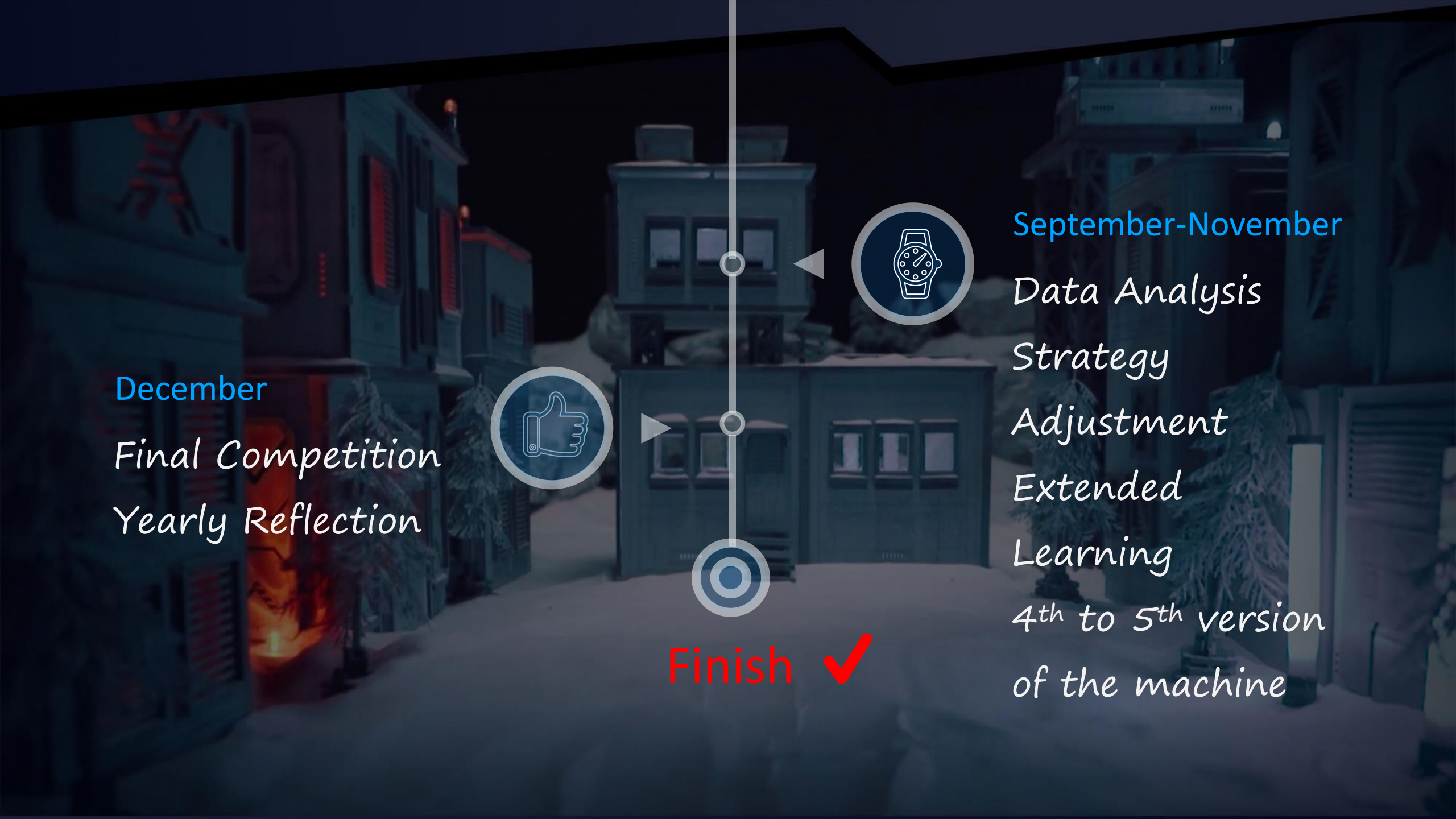
Training Plan

- Training Schedule
- Training Data Statistics
- Practice Match Arrangement

Lesson Plan


Start
January--March
Basic learning
1. Programming
2. Construction
3. 3d modeling
4. Hardware
5. Standards
The 1st seasonal test


April--May
Competition Preparation
June--August
Competition Season
1st to 3rd version machines


September-November
Data Analysis
Strategy
Adjustment
Extended
Learning
4th to 5th version
of the machine
December
Final Competition
Yearly Reflection
Finish ✓

Competence

Communication
Conveying Ideas

Collaboration
Working with others

Critical thinking & ProblemSolving
Finding solutions to problems

Self Motivated
Working independently and withstand pressure

Self Management
Working independently without supervision and willing to learn new things

Leadership
Motivating a team to accomplish a goal

I have no such long time!


TOP 3
New n es,
th g only!

TOP 1:
You won’t make a perfect one on the first time! Focus on one!

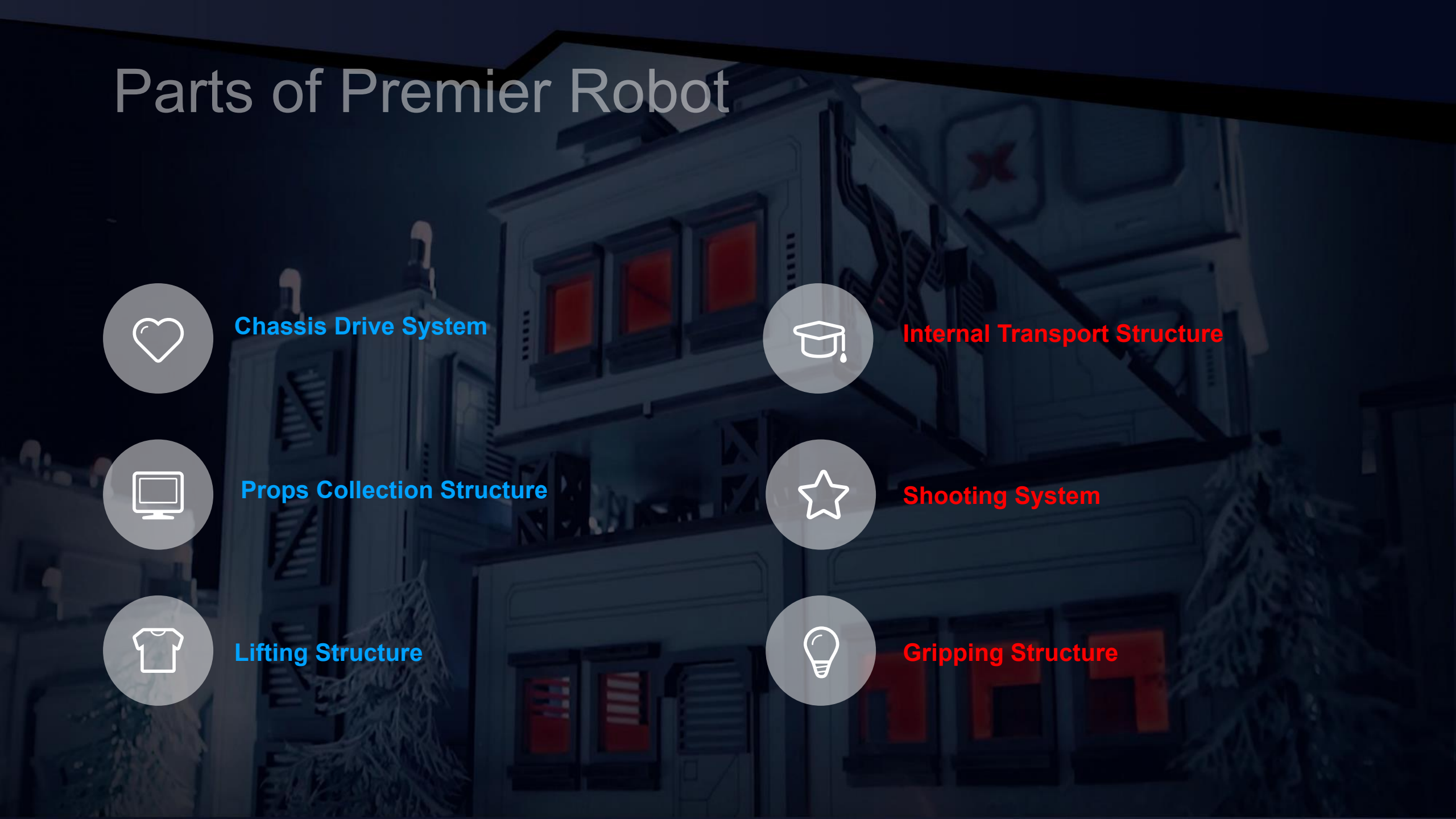
TOP 2:
The simplest is the best! No more than 3!

TOP 3:
Standard + A great Team Captain= Your coffee time

Part 2

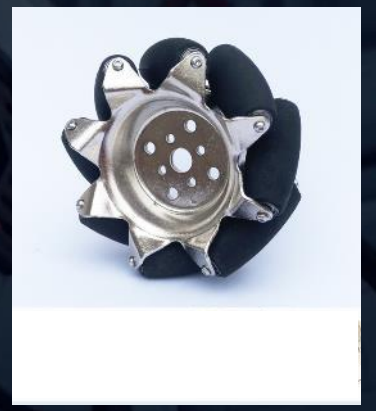
Robots analysis of MakeX competition in the past years

Parts of Premier Robot



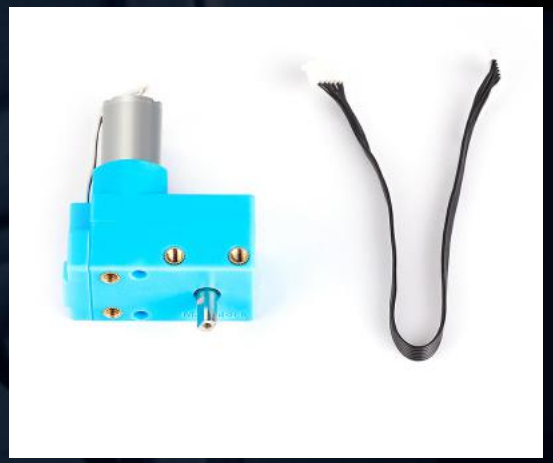
- Chassis Drive System
- Internal Transport Structure
- Props Collection Structure
- Shooting System
- Lifting Structure
- Gripping Structure

Chassis Drive System



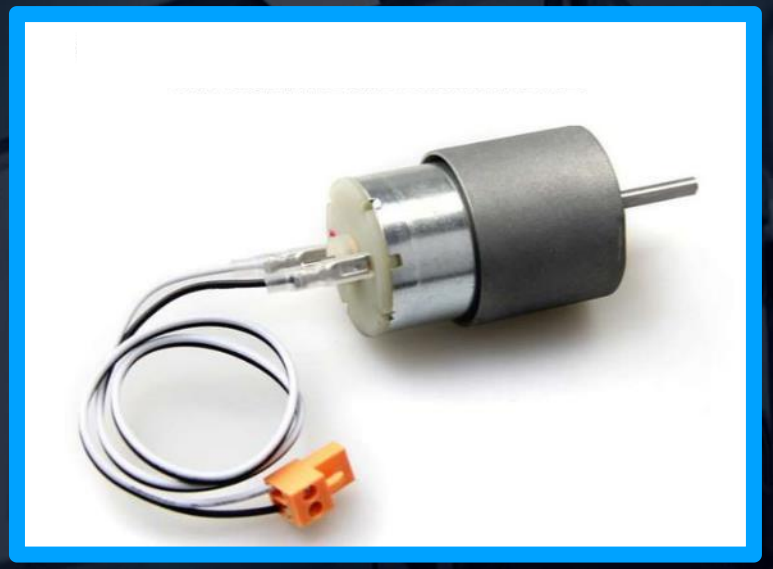
Chassis Drive System-wheels

- Omni wheel-100mm
- Omni wheel-58mm
- Mecanum wheel-100mm
- Mecanum wheel-152mm
- Mecanum wheel - 76.2mm



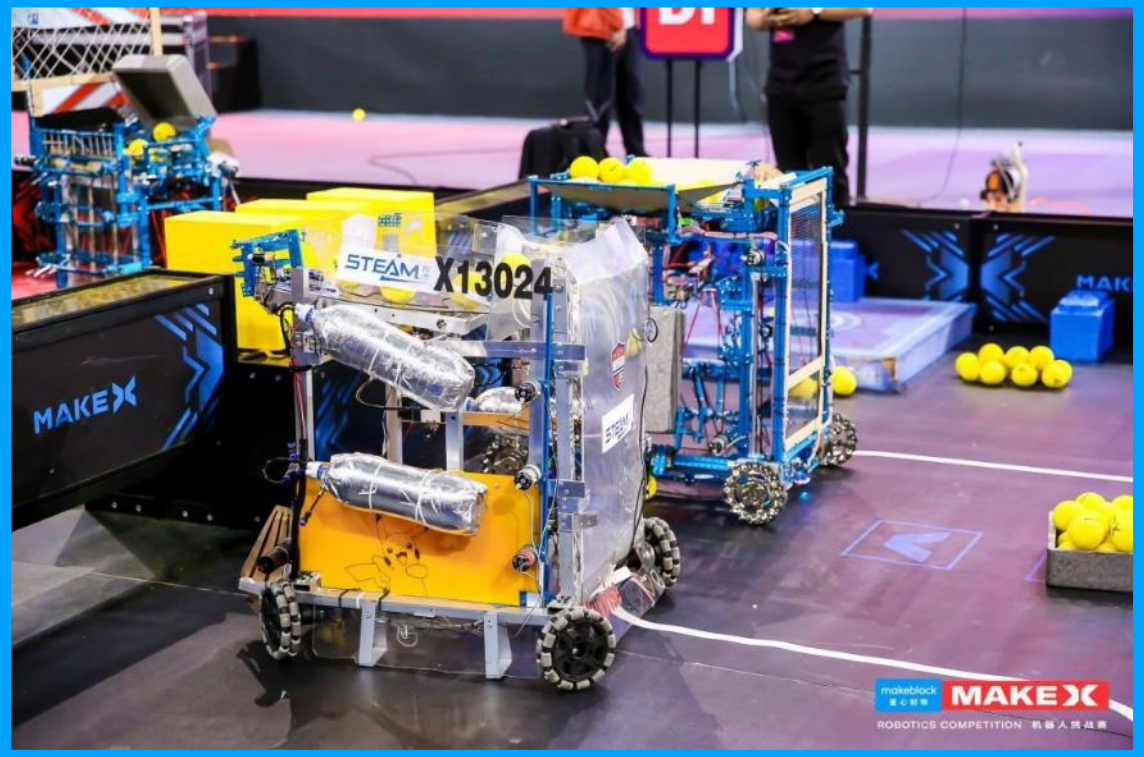
Chassis Drive System- 60-76.2mm wheels

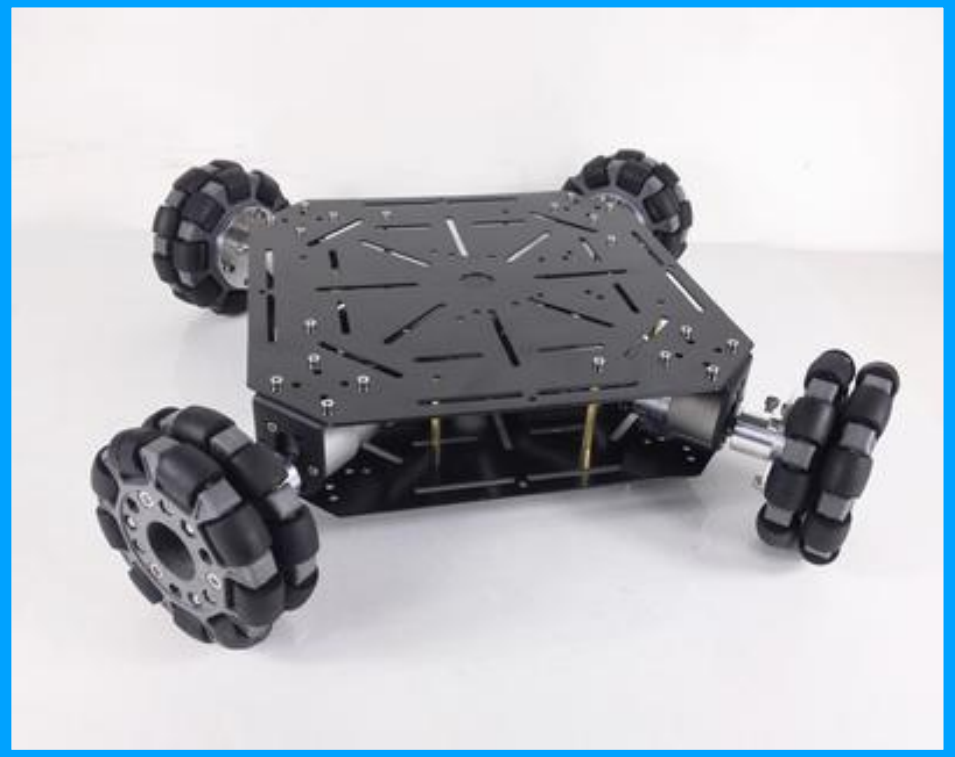
Chassis Drive System-100-152mm wheels

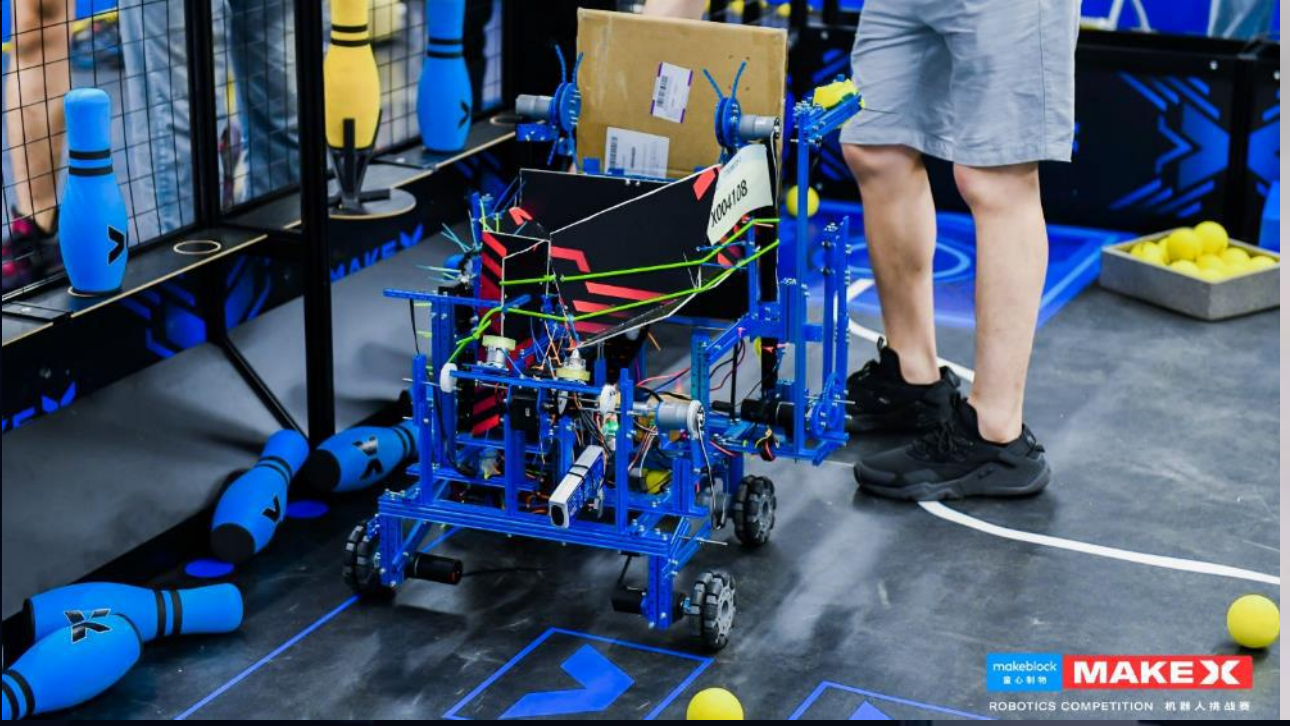


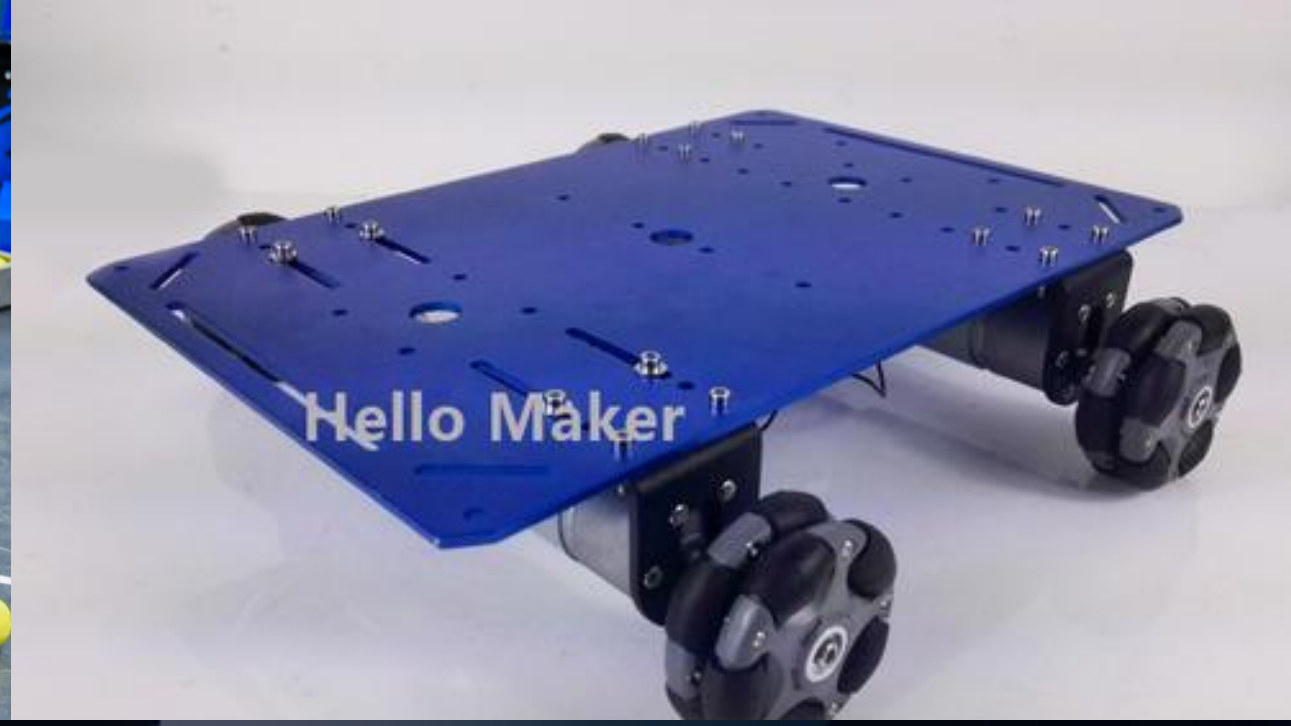
Chassis Drive System-MakeX 100mm mecanum wheels

How to install the omni wheels?





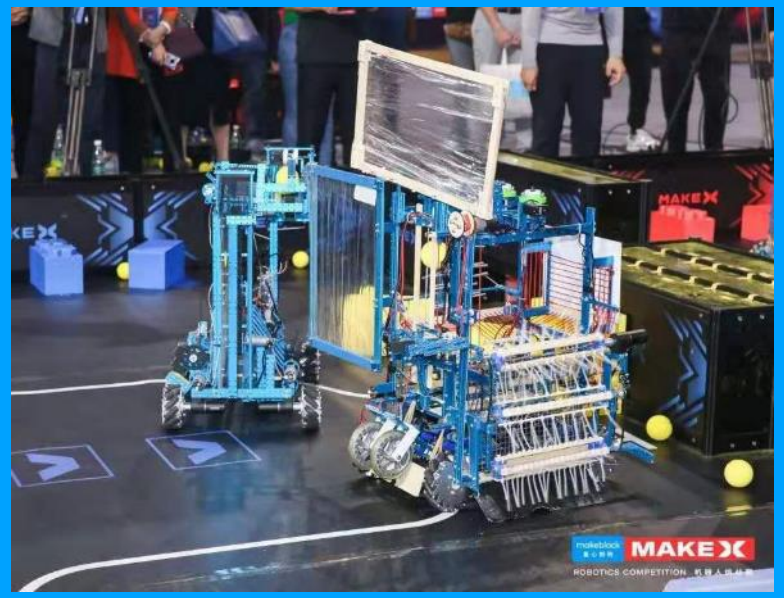




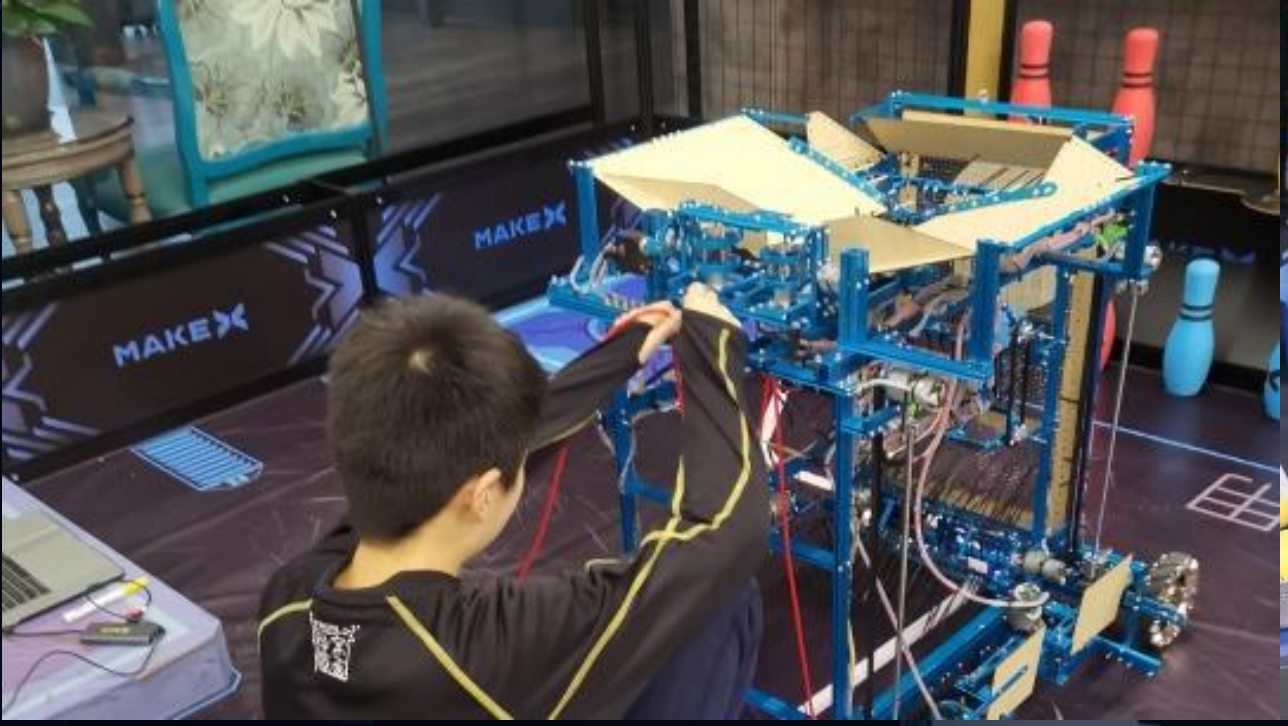
How to install the omni wheels?

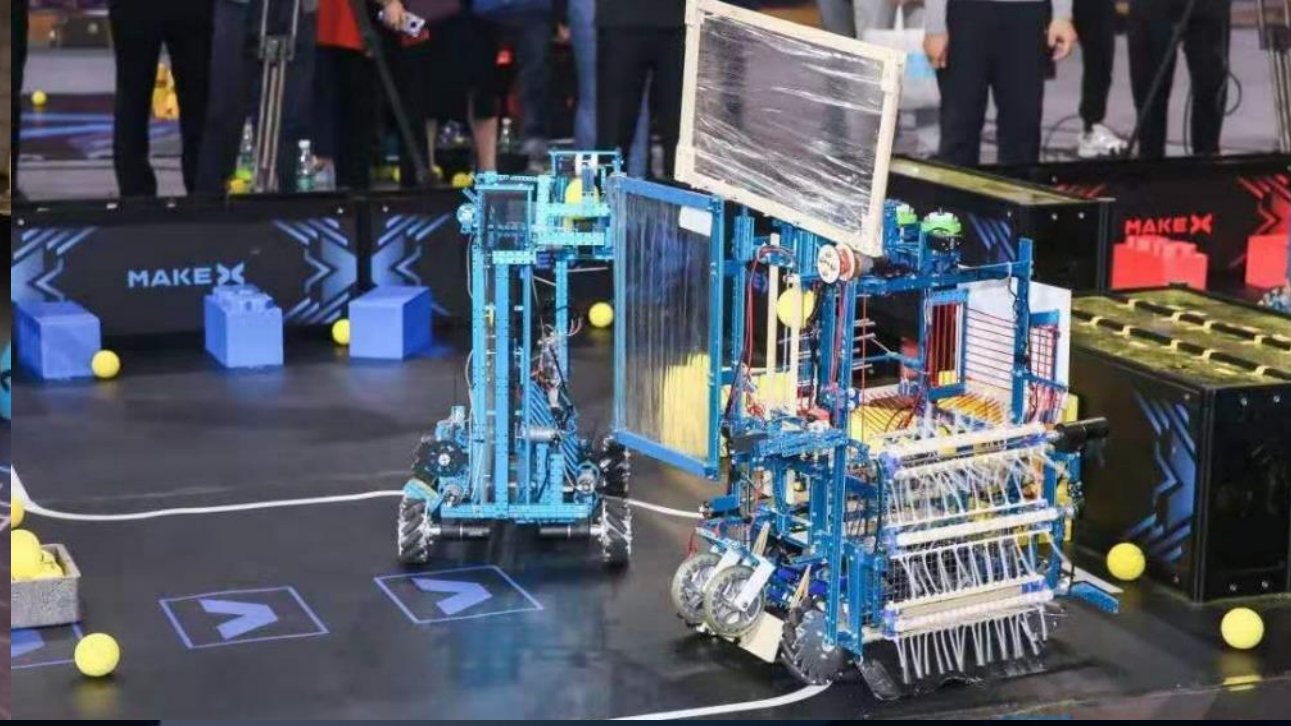
How to install the omni wheels?

Props Collection Strucutre



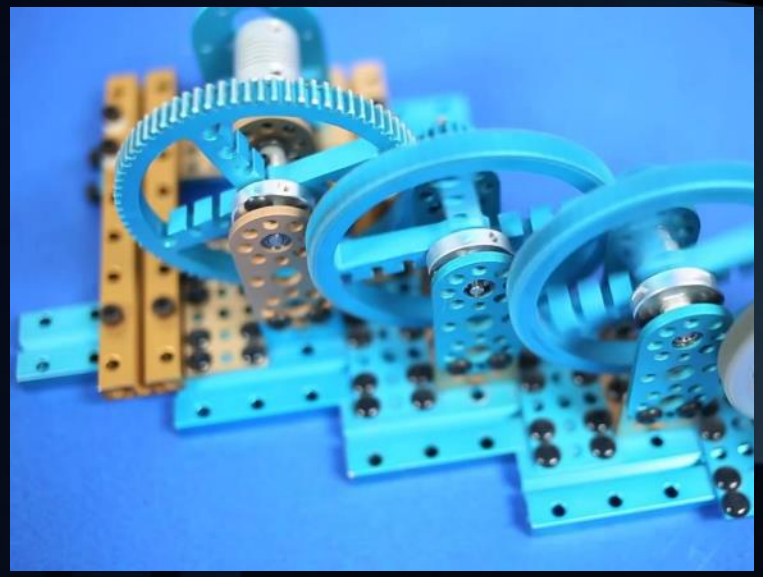
Lifting Structure

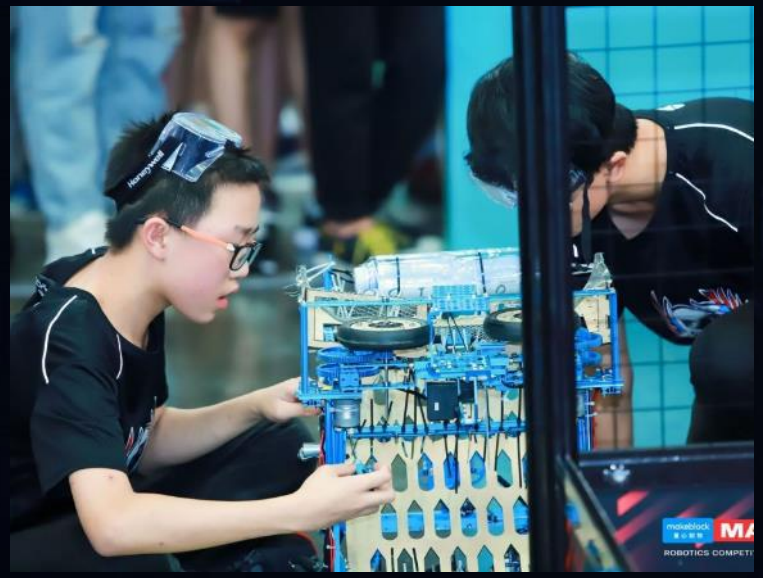




Lifting Structure

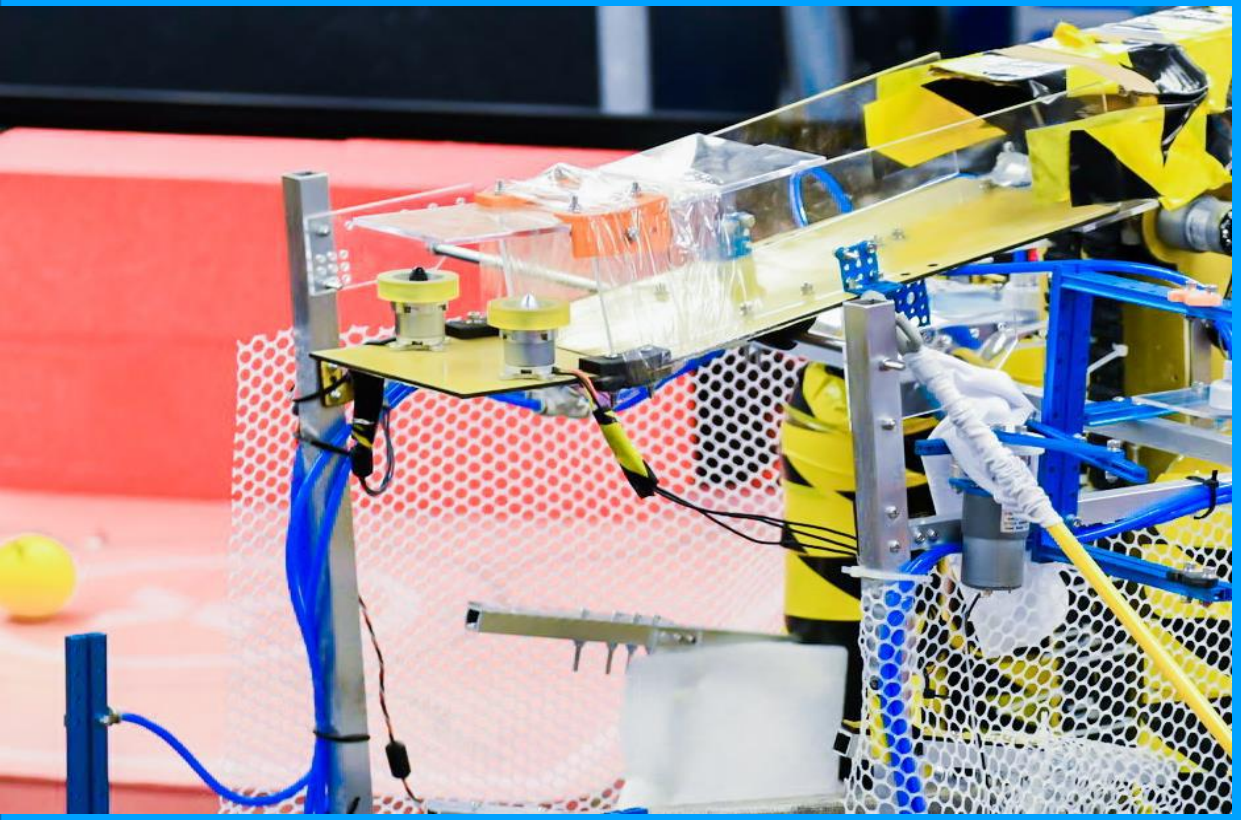
Internal Transport Structure



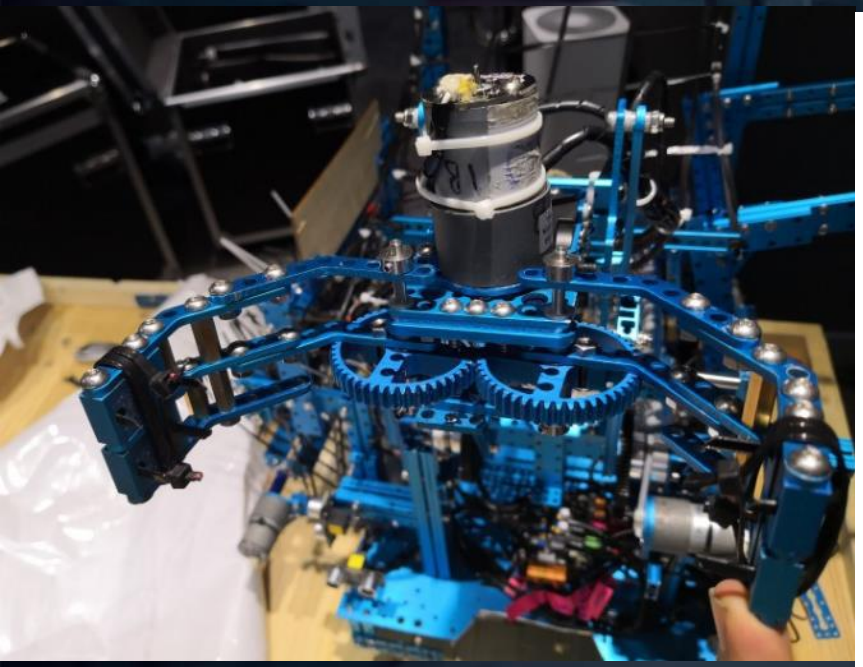


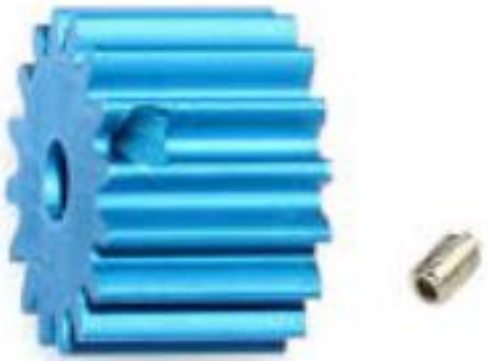
Shooting System

Shooting System

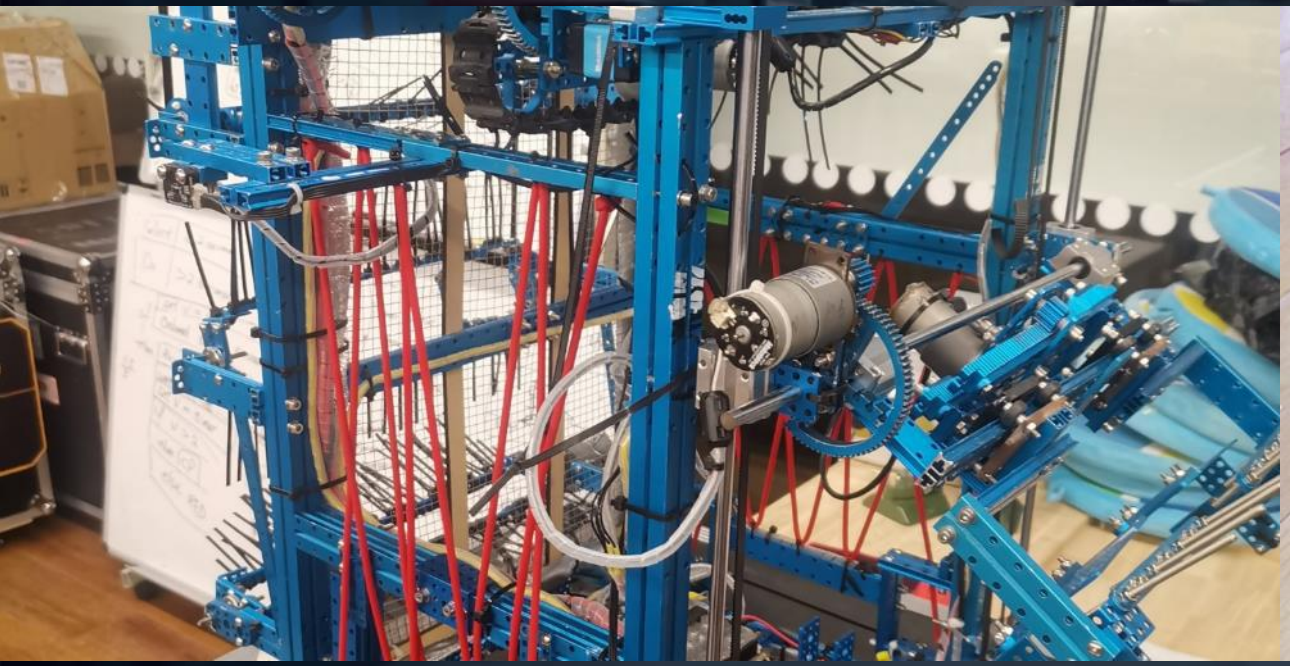


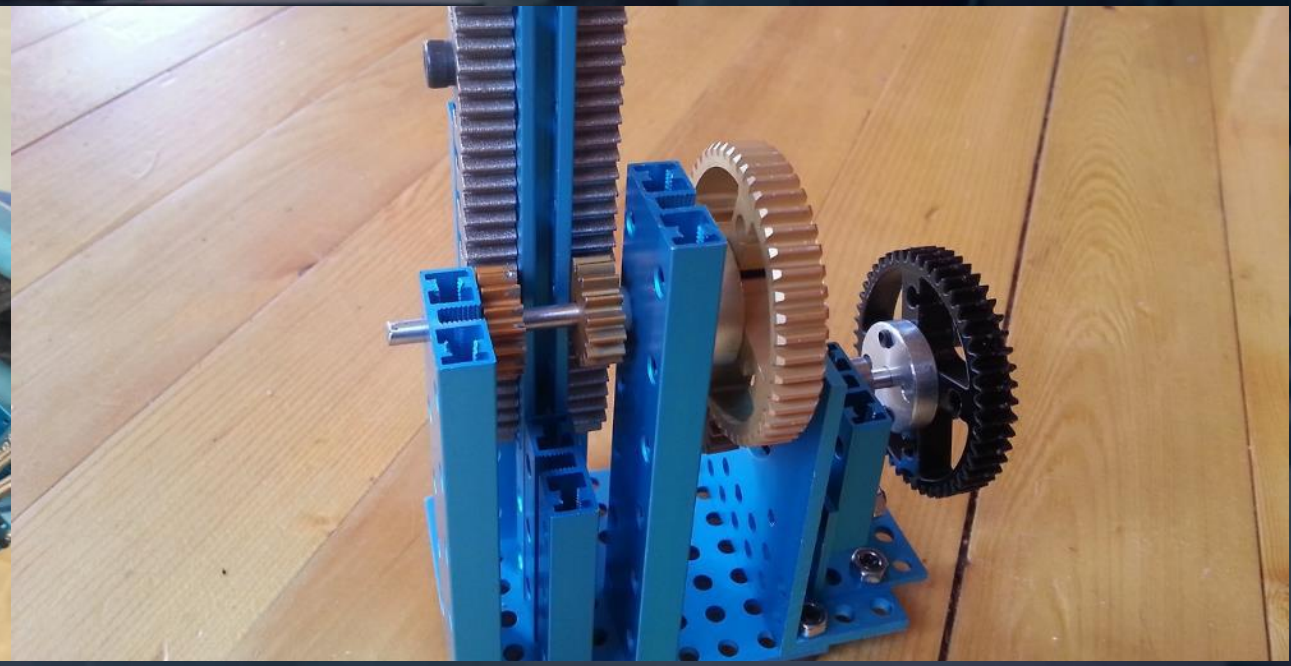
Gripping Structure





Gripping Structure





Gripping Structure

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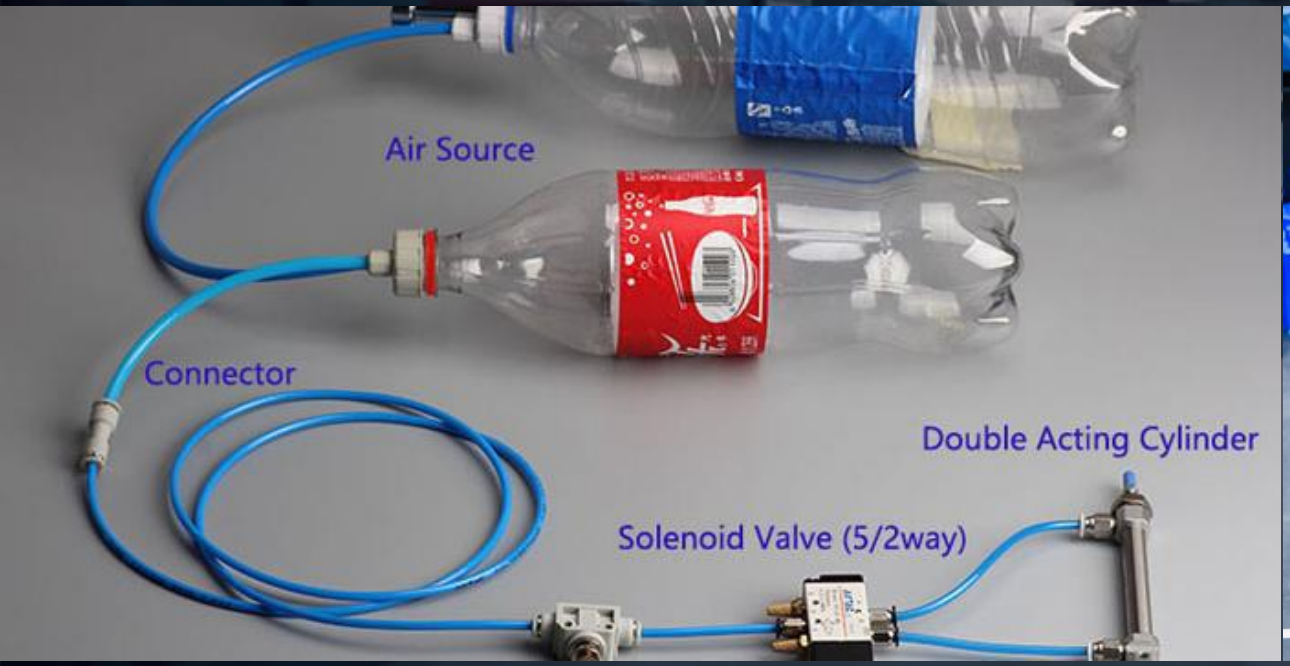
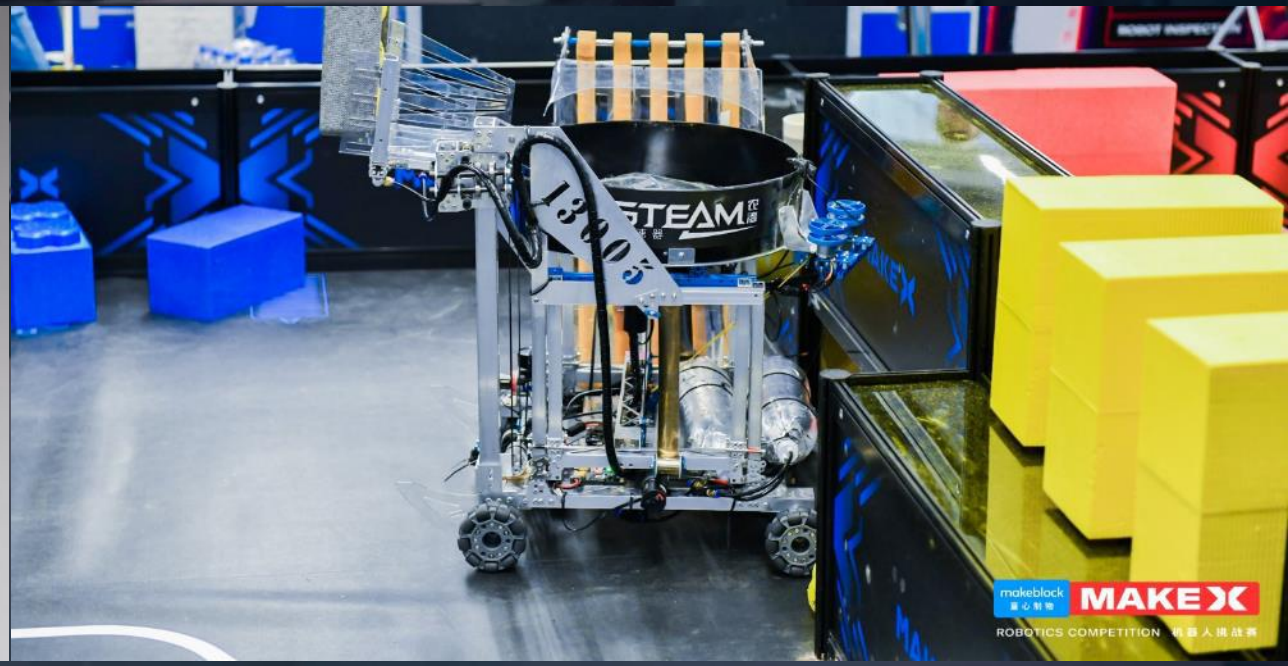




Part 3

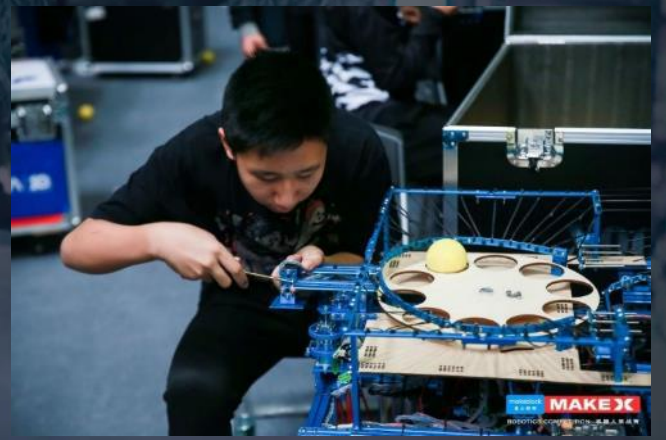
The main Standard of MakeX competition robot design and build

Safey Standard

Fastener application standard

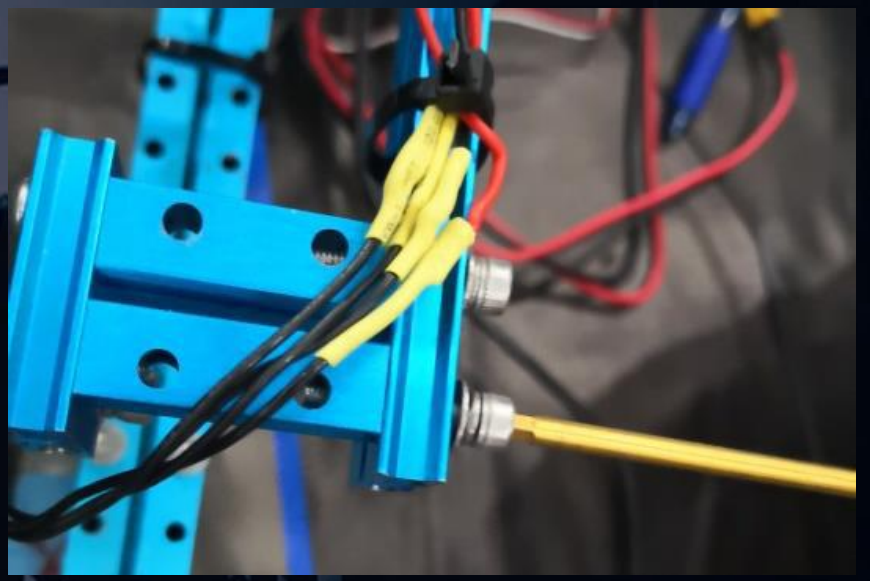
Automatic Stage Testing Standard- 20 times 100 % success

Tolerance control standard

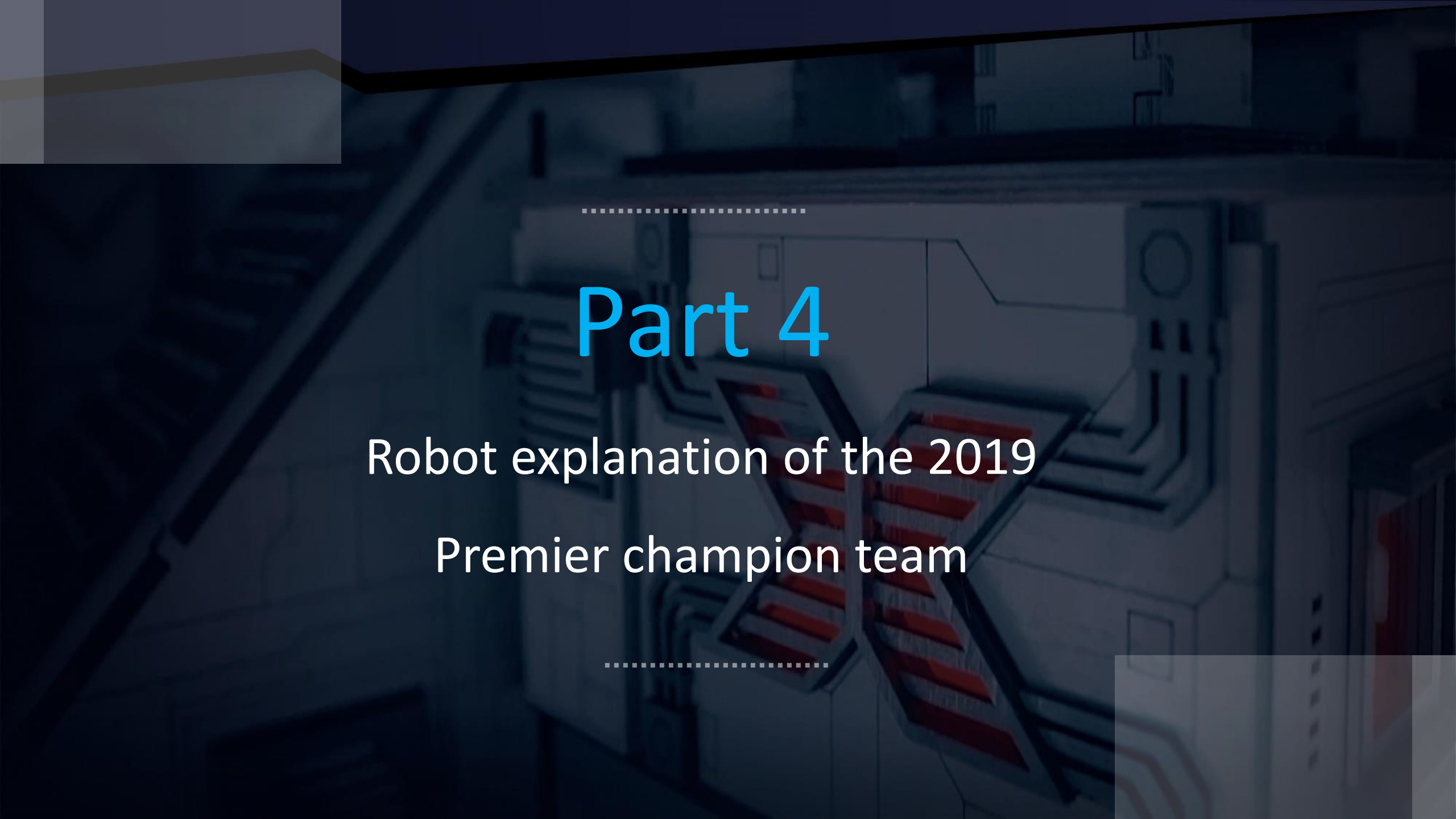


Wiring Standard

Wire Connection Standard



Transport Standard



Part 4

Robot explanation of the 2019

Premier champion team


Part 5
Q & A


Wish you success in the
MakeX Competition !