

Robot Design Pre-Season Guide

CARGO CONNECT



Evaluate the challenge using the released videos/images

Robot Prototyping

Look at the layout of the mat and where the models are. What type of robot would be useful? How wide can the robot be? Are there lines to follow? What sensors would help with navigation (e.g. color/gyro)? Where should the sensors go on the robot? What type of wheels should you use?

Use the pre-season to build different robots and test them. Document your tests and results.

Mechanism Prototyping

Look at videos of past challenges on YouTube to see what actions were needed. Look at the mission models in the released teaser and images for CARGO CONNECT. Guess what type of actions might be needed. Push? Pull? Lift? Turn? Press? Drop off? Pick up? Learning to build simple mechanisms that might achieve these tasks can help you prepare for any season.

Programming Skills

Look at the Challenge Mat? What skill might be worth learning? Line Following, Squaring on a Line, Wall Following, Moving Until a Line, Moving Straight

Sample Resources

- [Base Robot Designs](#)
- [Robot Design/Testing Worksheet](#)

- [Teaser](#)
- [Images](#)
- [Books by Yoshihito Isogawa](#)
- [Technic Builder's Guide](#)
- [Pre-Season Building Challenges](#)

- [SPIKE Prime/Robot Inventor](#)
- [EV3 Lab/EV3 Classroom](#)
- [Pre-Season Navigation Challenges](#)