



# HelperBot Challenge

## BRIEF:

You have just been given an opportunity to submit an idea to apply for a highly sought after developer position with the world-famous HelperBot company. HelperBot company produces a range of robots that have as their main purpose to help people in everyday tasks. Some of the robots are used in family homes, some are used in offices, and others are specifically designed to help people with disabilities to perform everyday tasks. Each year, HelperBot runs a competition, facilitated by RoboCupJunior New Zealand, to identify new talent to join its team.

Some examples that are already in production are:

- Vacubot - a vacuum cleaner robot
- Mowerbot - a lawn mowing robot
- Mopperbot - it mops the floors
- Poolbot - cleaning the swimming pool
- Windowbot - cleaning windows

There have been some other prototypes that are in production but need to be re-looked at by the R&D (research and development) team to improve them to a community testing stage.

These are

- Weedbot - designed to weed the garden but in the testing phase it weeded out all the prize orchid plants of the CEO of the company.
- Hairbot - designed to cut hair but it left the test subject with a bald patch right down the middle of their head!

## SUBMISSIONS:

Part of your submission, for a position with the research and development department, is to work as part of a team to design, prototype and test a new helper robot. You may redevelop one of the company's current robots and add additional features, continue development of an idea that needs improvement (eg the Hairbot) or develop a totally new idea.

There are a number of teams (you may work as a team of one - see marking sheet) applying for these sort after roles. On a set date (to be confirmed) all teams will be presenting (by video due to a world-wide pandemic) their idea for a helper bot. This presentation can be no longer than 5 minutes. In the video you need to include the following:

- A very brief introduction to each of the team members saying what their role in the team was and how you worked together as a team.
- The reasons why you think your team's robot would be a useful addition to Helperbot's product range.
- Evidence of the research and planning process. E.g., photos or screenshots of your design journal (with voice-over to explain).
- Photos of robot prototypes during the development stage
- Video footage of your robot in action - if possible show your robot working in a variety of contexts.
- Evidence of the programming (eg screenshots with voice-over discussion).

Remember this video is your one chance to 'sell' your idea to the directors of the company and score a position with the company. Success will ensure your future as a world-famous robot designer and builder.

