

How To Guides

Volume # 6: Design Process

OVERVIEW

Design Process is the fifth section of the [Description](#). Up to this part of the project, teams have been using steps of the engineering design process in developing their project. In the previous section, Breakthroughs, teams suggested an investigation to test their future technology. Part of the engineering design process is modifying the technology based on evidence gathered during testing. Teams do not do the actual testing for this competition but can list other ideas or features for different modifications to what they have envisioned. This section focuses on those ideas or features. Teams describe 3 ideas the team thought of for the future technology: not 3 other projects. Teams describe why each of those ideas were not used. Teams also explain why the team chose the breakthroughs they envision in the future technology rather than the other ideas or features.

***“Design Process:** Describe three alternative ideas or features the team considered for this ExploraVision project. The ideas and features should be directly related to the project, not a list of other projects you may have submitted. Describe why the team rejected each feature and idea in favor of the ones in the submitted ExploraVision technology. Describe how your future technology feature is better than the rejected design feature.”*

RUBRIC

This section is worth 10% of the entire project. It will be worth ten points based on the following criteria:

- Did the team describe three alternative ideas or features the team considered for this future technology (not 3 different projects)? (3 pts)
- For each of the three ideas or features, did the team describe why they rejected that idea or feature in favor of what the team chose to submit? (3 pts)
- Did the team describe how the future technology idea or feature is better than the rejected ideas or features? (4 pts)

STEPS

Below are suggested steps teams can use as they write about their Design Process.

1. Refer to some of the original ideas when the team was brainstorming.
2. Choose three ideas the team discussed that are related to the future technology the team chose.
3. Explain why each of the ideas or features were not used.
 - a. Some considerations may include, but not limited to: the cost, materials currently available, size, the time it takes to produce, where it can be used, environmental impacts, ethical use, etc.
4. Explain why the idea or feature (the breakthrough the team used) is better than each of the three ideas.
5. Write about the ideas/features under the heading of Design Process using the chosen description format.
6. Any research that is used must be cited in the bibliography. Keep adding to the list of resources throughout working on the sections rather than waiting until the end of the project.