



Failure Modes and Effects Analysis

It’s useful to know the most likely ways your robot could fail and what each type of failure would do to performance. A Failure Modes and Effects Analysis (FMEA) is a common strategy for identifying potential problems.

Test drive your robot through a practice competition field. Record potential failures in a table like the one below. The more test trials you conduct, the better your data will be.

Failure modes are the “why it fails”. You can identify the probability that it will occur as (1-not likely, 2-30% chance, 3-60% chance, 4-almost certain). Also you can define the severity as:

- 1. No degradation in system performance
- 2. Slight performance degradation
- 3. Serious performance degradation
- 4. System failure

Failure Mechanisms	Failure Modes	Probability of Occurance	Severity

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