



2012 *FIRST* Future Innovator Award Submission Category Descriptions

1. National Academy of Engineering (NAE) 14 Grand Challenges

- a. Submissions demonstrating innovative, unique solutions for any one of the fourteen Grand Challenges (<http://www.engineeringchallenges.org/>)

2. Emergency, rescue, and security response

- a. Submissions demonstrating innovative, unique autonomy, navigation, and/or mobility solutions for any one or all these responses, example responses are, but not limited to:
 - i. Natural disasters – earthquakes, hurricanes, tornadoes, tsunamis, etc.
 - ii. Uncontrolled environments – nuclear reactor meltdowns, chemically contaminated, etc.
 - iii. Manmade disasters – mining, nuclear power, terrorist, etc.

3. Robotics for mass market

- a. Submissions demonstrating innovative, unique solutions that revolutionize and/or utilize emerging new technologies in robotics to improve manufacturing and/or has the potential to create new businesses and/or jobs

4. Home, hospital, and public environments

- a. Submissions demonstrating innovative, unique solutions for any or all these environments, example environments are, but not limited to:
 - i. Earthquake cost effective water filtration systems
 - ii. Devices to assist people and/or the elderly with disabilities

5. Space solutions

- a. Submissions coordinated with NASA and/or other space agencies demonstrating innovative, unique solutions for identified problems using robotics such as on the moon, Mars, or other identified space bodies; satellite autonomous programming solutions; etc.