

THE 2014 SMARTER PLANET CHALLENGE:

STUDENT PROJECTS CHANGING THE WORLD

- ⇒ Do you have an innovative solution to a grand challenge that you can apply in your community?
- ⇒ Do you have the engineering and business skills in order to develop and implement it?
- ⇒ Will you share your expertise so that future students can learn from your project experience?

If you answered yes to these questions the **2014 SMARTER PLANET CHALLENGE** is for you. We are in search of creative team-based student projects for the Smarter Planet Challenge. The purpose of the competition is to identify student developed multi-disciplinary projects that solve real-world problems, are ready for implementation and can be used by faculty and future students as a classroom project.

Grand Challenges are ambitious but achievable goals that harness science, technology, and innovation to solve important national or global problems and that have the potential to capture the public's imagination. Grand challenges may be too big to solve in a single semester. So start with a grand challenge, then scope it down to a community or local need that you can propose a solution for and implement.

Students participating in the challenge will:

- *Contribute to the betterment of humanity by developing and implementing solutions to real-world challenges.*
- *Apply engineering and business knowledge in order to develop problem-solving projects.*
- *Gain critical teamwork and multi-disciplinary skill sets that are transferrable to the engineering workplace and provide a competitive advantage.*
- *Contribute to the educational experience by sharing their project knowledge with future students as potential classroom projects.*
- *Receive an IEEE IBM Students for a Smarter Planet Certificate of Participation*
- *Earn cash prizes. US\$5,000, \$4,000, \$3,000, \$2,000 and \$1,000 for the best student team proposals.*

Application Process:

To participate in the 2014 Smarter Planet Challenge, student teams must submit a project proposal and a video, which are described below. Please note that the projects are also evaluated on the completeness of each proposal. Be sure to read and understand the proposal requirements and include all of the required items.

The Project Proposal should not exceed 10 pages and must contain the following items:

- **Project title:** The name of the project.
- **Project Description:** Please provide one paragraph summary that describes the overall intent of this project.
- **How Does This Project Benefit Society?** What grand challenge would you like to solve? How can you take that challenge, adapt it for solving at a local level and make it actionable?
- ***Student Learning Intent:** What are the underlying technical, engineering, businesses and legal principles and concepts students would learn by completing the project.

- ***Target Student Audience:** Who is the intended audience? University first-year students, second-year students, etc.; primary school students or secondary school students.

* IBM's Students for a Smarter Planet and IEEE would like to use these projects to further other student learning. You should think about the skill levels and expertise needed by other students to replicate your project. The proposal must include the identification of the target student audience and the learning intent for students capable of completing a similar project at their institution. In addition, please be sure to include in your proposal the "Project Details" related to enabling other students to replicate your project.

- **Project Details:**
 - Introduce the grand challenge problem followed by the local, actionable problem the project is proposing to address and its solution.
 - Identify the specific activities that the students are required to perform. (This is to enable other students to replicate your project.)
 - Identify the required materials and resources.
 - Estimate the number of hours to prepare for and implement the project.
 - Identify the major skills students need in order to complete the project.
 - Provide a project plan (what step by step instructions are required for students to complete this project, milestones, materials needed, budget, etc.).
 - What steps are required for the professor/teacher to use this project in class?
- **Implementation Results/Plan:** If your project was developed and implemented at the time of submittal, include a summary of the results with your proposal. This should include when and where the implementation took place as well as the impact. Did your project achieve the objective? How many people participated or were impacted? If your project has not yet been implemented, share any plans you have for implementation.
- **Lead proposer:** Please provide name, address, phone number, e-mail address, field of major, year of study and institution.
- **Team members:** For each member, please provide name, e-mail address, field of major, year of study and institution.
- **Project Proposal Video** (see below).
- **Optional:** Teams may include an endorsement from faculty member(s).
- **Note:** *Projects created for other activities are eligible for submission as long as they are the result of all of the team members' original work.*

The Project Proposal Video should not exceed 5 minutes and must be suitable for viewing on a video sharing site like YouTube. The video should focus on the following items aligned with your written proposal:

- Introduce the Grand Challenge associated with your project.
- Explain how the local project connects to the Grand Challenge.
- Discuss the project details outlined above.
- Show something about the community, university, and each student member.
- Add credits at the end, showing team members and institutions involved.

Note: The video might be used by IBM's Students for a Smarter Planet or IEEE for promotional or educational purposes.

Eligibility:

- Teams must have a minimum of three members in any year of university study.
- The project teams must include members from more than one field of study (E.g. Business, Engineering, Health, Science, etc.).
- At least one team member must be an IEEE member ([IEEE Student Membership](#)).

Criteria:

- Teams should be able to execute projects completely within one standard course time frame (such as a semester or a quarter).

PROJECT TOPICS must be in one or more of the following areas:

[Big Data / Analytics](#): The amount of data in the world is growing every second, and taking on more forms—structured and unstructured, in motion and at rest. Big data holds valuable insights that can aid in decision making and transform a business. But without analytics, big data is just noise.

[Cloud](#): The conversation around cloud computing has shifted. No longer just a delivery system for IT services, cloud is increasingly seen as a growth engine for business.

[Cyber Security](#): IT systems must now supply enormous amounts of data to users around the globe, who access it from both their organizational and personal handheld devices. This evolution in business brings the challenge of securing systems and data in a multi-perimeter world.

[Mobile](#): A mobile enterprise can attract new customers, and transform a business and IT infrastructure. Develop mobile apps to boost enterprise efficiency, and improve customer service and interactions.

Judging Criteria:

Project proposals will be evaluated in the following areas:

- **Basic Requirements:** Have all of the required aspects of eligibility been met?
- **Feasibility:** Does the data and proposal content support the project objectives and how likely is it that a completed project will accomplish or solve the stated problem?
- **Achievability:** Will the target audience of students be capable of performing the project tasks and completing the project within a reasonable amount of time as part of an existing course?
- **Project Proposal Format:** Are the proposal and video presented in a professional manner? Are all of the items listed above in the "Application" section included in the proposal? Note: the video and the proposal will receive equal weight in the scoring process.
- **Relevance:** Does the project align to one or more of the four topics?
- **Student Learning:** What did you learn about working as a team? What did you learn about your topic and its usefulness?

To submit a completed application:

Create a single document in Word or PDF format, no more than 10 pages in length and post a Video, no more than 5 minutes in length and submit the PDF and the **video file** to <https://smarterplanetideas.myreviewroom.com>. Once you go to this link you will be required to create an account or you may link to your Facebook account if you have one.

Once logged into the website you will be required to:

- 1) Identify Team Members,
- 2) Upload project document/application and
- 3) Upload a video or enter a (public) YouTube link.
- 4) Submit application (you can only complete this task after completing steps 1-3)

If there are any problems please contact us at smarterplanetchallenge@ieee.org

Submissions accepted now through 1 October 2014.

Final Notification of award status will be sent no later than 1 December 2014.