



## **Pete Conrad Spirit of Innovation Award 2008-2009 Competition Rules**

Award Topics: Personal Spaceflight, Lunar Exploration, and Renewable Energy

### **Competition Timeline:**

- September – Competition launch and submissions open
- January 9<sup>th</sup> – Initial submissions due
- February 1<sup>st</sup> – Finalists notified and public voting begins.
- February 23<sup>rd</sup> –Finalist Phase A Development Plans due
- April 2<sup>nd</sup>-4<sup>th</sup> – Conrad Award Innovation Summit and final competition

### **Eligibility Rules:**

1. Entrant teams can be composed of no more than 5 students.
2. Entrant teams must have 1 official adult advisor above the age of 18.
3. All team members must be enrolled in high school (or the equivalent home schooling level) for the fall 2008 semester.
4. No team member can be over the age of 18 as of the submission deadline (January 9<sup>th</sup>, 2009). In other words, no team member can have hit his or her 19<sup>th</sup> birthday by January 9<sup>th</sup>, 2009.
5. The Conrad Foundation reserves the right to disqualify a team at any point in the registration, submission, or judging process if it is found that they do not meet one or more of these rules.
6. Students may participate on 1 team in any of 3 challenge areas:
  1. **Personal Spaceflight** – assuming you can go to space, create an innovative concept and business plan for personal spaceflight.
  2. **Lunar Exploration** – assuming you can go to the Moon, create an entrepreneurial enterprise for lunar exploration.
  3. **Renewable Energy** – In response to Al Gore's challenge to America, create a new, clean, carbon-free way of using renewable energy to change everyday life.
7. Each team advisor must acknowledge that they have read and understand the terms and conditions set forth in the competition rules in order for the team to be eligible for any awards.

### **Initial Submission Rules:**

1. Entrants must register their team via the Pete Conrad Spirit of Innovation Award website.
2. Entrants must submit their concept electronically via the Pete Conrad Spirit of Innovation Award website.
3. Submissions **MUST** be received no later than midnight Eastern Standard Time, January 9<sup>th</sup>, 2009.
4. Submissions must be entirely the work of the student team members. The advisor may guide the team but may not do any writing of the submissions, and may not have excessive influence on the concept design (the determination of excessive influence is up to the sole discretion of the award management team).
5. Submissions must not copy other materials without properly citing the source.
6. Initial entries **MUST** include:
  1. **“Technical Concept Report”** – this report must be in an MS Word compatible format. The report should focus on explaining the concept's Innovation, Practicality, Completeness, Marketability, and Relevance. Background references for any specific details are expected in this document, all references must be properly cited. The report can be a maximum of 10 single space pages plus up to 2 pages of appendices. The report must include:



1. *Executive summary* – a brief outline of all aspects of the concept. 1 single spaced page maximum.
  2. *Background information* – information and resources on why the concept is important and how it will be used in the selected industry. 2 single spaced pages maximum.
  3. *Concept details* – a description of all details about the concept: its originality, how it is used; measurements; rules of use; etc. Details should show that the concept is significantly different from others that might be similar to it. The description must also show that the product is of use to the selected industry and that it does not violate any physical or common sense laws. Details should be written concisely. Limit to 7 single spaced pages maximum.
  4. *Appendix* – up to 2 single spaced pages can be added for appendices that can include charts, images, bibliography, etc. Any graphics referenced in the document should be added as an Appendix.
2. **“Business Concept Report”** – this must be in an MS Word compatible format. This report is to show that the team understands the business aspects of their concept and have thought about how it would be sold commercially. The report should be no more than 6 single spaced pages in length and should include:
1. *Market* – who their concept will be sold to, and how it will be sold.
  2. *Value* – the price range of the concept. Details should include benefits to all associated parties, budgetary breakdowns of its development costs and selling price. If the concept has multiple parts, a value for each part should be described. Special notice should be given to what makes this product unique to the marketplace.
  3. *Selling points* – a set of key points that explain what makes their concept unique and better than anything similar that is on the market.
  4. *Competitive Reference* - an assessment of if there is anything similar to what they are doing already in the marketplace. If so, what, and how is the team product different/better.
  5. *Exit Strategy* – if the concept were to become viable in the commercial marketplace, what is the exit strategy for the team (for example, selling IP rights to a larger entity, creating a company, etc).
3. **“Graphical Concept Representation”** - This can be from a computer graphic program (CAD, Photoshop, etc...), drawing, 3-d computer model, or photographs of an actual prototype or model. The final product must be uploaded as a part of the team’s submission documents. It must be in a JPEG, GIF, TIFF, or PDF format.
7. Submissions will only be considered if all three files (Technical Report, Business Report, and Graphical Representation) have been uploaded by the submission deadline.
  8. All text in submissions should be no smaller than 10 point font with no less than ¾ inch margins on all sides.
  9. The Conrad Foundation will post each team’s name, members, city and state to the website. Each team has the option of posting their submission details to the public profile sections of the Conrad Award website. It is the responsibility of each team to determine how much detail about their concept is publicly viewable. The Conrad Foundation accepts no responsibility for any damages due to publicly posting a team’s concept information. For further information on possible implications with respect to patenting your concept see the “Resources” page of the Pete Conrad Spirit of Innovation Award website.

### **Judging Rules:**

Submissions will be judged in two rounds:

1. **Round 1: On Line.** An expert judging panel will judge all eligible electronic submissions and select the finalists. Finalist teams will be chosen on the sole discretion of this judging panel. First round submissions will be evaluated from 1 to 5 (1 being poor, 5 being best) on:



1. **Innovation** – how new or unique is the idea?
2. **Practicality** – is the idea based on sound principles? How useful is the idea?
3. **Completeness** – how complete is the idea, have any major areas been overlooked?
4. **Marketability** – How well does the team understand the market for their idea?
5. **Relevance** – How important is the idea to the industry?

The overall score for each submission is the sum of the 5 categories (perfect score = 25), averaged over all the judges. The top scores will be selected as finalists and invited to compete in the final award program held at NASA – Ames Research Center on April 2-4<sup>th</sup> 2009. Other teams not selected as finalists but receiving high scores will be recognized as semi-finalists and receive honorable mention recognition.

2. **Round 2: Innovation Summit.** The finalists will be judged at the Innovation Summit and online from three judging groups – a technical expert panel, a business expert panel, and the public. Each panel will score teams as follows:
  1. **Technical Expert Panel** – A panel of experts in the selected industry will judge the finalists' presentation & display in the following areas:
    1. *Science/engineering understanding* – how well do the students explain the basic science/engineering principles behind their concept? Are there any areas that they do not seem to understand about the benefits or difficulties of creating their concept? Is there any specific technical detail they have neglected? (5 points)
    2. *Industry need* – how well does the team understand the industry and its need or use of the concept? Is this a concept that can be sold? (5 points)
    3. *Overall Presentation of Concept* – how well does the team present? How convincing are they that this is a good technical concept? (10 points)
    4. *Overall Presentation of Display* – how well created is the display. Does it explain the science/engineering behind their concept? (5 points)
    5. The score from the technical panel will be a summation of their scores in each of the 5 categories (perfect score = 25). These will then be averaged over the entire judging panel.
  2. **Business Expert Panel** – A panel of businessmen, entrepreneurs, and professors will judge the finalists' presentation & display on a 1 to 5 scale in these areas:
    1. *Design* – how well designed is the concept? Will it be easy to market? Are there any technical flaws that could lead to poor business returns? (5 points)
    2. *Budget* – How well does the team understand the cost of creating their concept? (5 points)
    3. *Market* – Does the team understand their target audience and the market for their product? What would the cost be to the consumer? Who are their potential competitors? How many products would they expect to sell? What is the sales strategy? (5 points)
    4. *Overall Presentation of Concept* – how well does the team present? Are they able to show that theirs is a good business concept? (5 points)
    5. *Overall Presentation of Display* – how well does their display sell their concept? (5 points)
    6. The score from the business panel will be a summation of their scores in each of the 5 categories (perfect score = 25). These will then be averaged over the entire judging panel.
  3. **Voting Public** – any member of the public will be able to vote on the teams. Voting will be conducted in two ways:
    1. **On-site** – attendees of the final awards program will be able to vote on the teams' displays and explanations of their concepts. The public will be asked to rate each team on a 1 to 10 scale (with 10 being the best).
    2. **On-line** – anyone will be able to go online and view each finalist's concept video and read their concept documents. Each online voter will rank the teams on a scale from 1 to 10.
    3. All public votes will be averaged with a perfect score being 10.



The final score will be the summation of the three judging panel scores (overall perfect score = 25 + 25 + 10 = 60). Final competition winners will be selected solely upon their overall team score.

### **Fundraising and Sponsorship Opportunities Rules**

1. All registered teams are provided resources and opportunities to acquire sponsors and funds to support their project and school through the Pete Conrad Spirit of Innovation Awards. Each team will be provided with an online profile and donation section on the awards website to solicit support.
2. All funds donated will be divided as follows:
  - 70% of the donations go directly to the school or organization of the team being supported - to be disbursed as outlined below.
  - 20% of the donations supplement the Educational Grant prize pool for the competition awards,
  - 10% of the donations go to the Conrad Foundation to support the administration of the Pete Conrad Spirit of Innovation Awards.
3. ***In the case of teams NOT SELECTED as finalists***, this funding mechanism will only be available through January 31<sup>st</sup>, 2009. Funds raised will be disbursed within 30 days of this date to the team's school or organization in the care of the team's advisor. By accepting these funds the school and advisor agree to prioritize the use of these funds in the following order:
  - Firstly, funds are to be used to send the team to the Innovation Summit as observers if team members wish to attend.
  - Secondly, funds are to be used to cover the costs of any expenses incurred in developing their Conrad Awards competition entry.
  - Thirdly, funds are to be used to encourage continued excellence in science and technology by the school or organization.
4. ***In the case of teams SELECTED as finalists***, this funding mechanism will be available so long as the team is continuing the development of their concept. Funds raised by finalist teams will be disbursed to the team's school or organization in the care of the team's advisor as follows:
  - Initial disbursement of funds will occur within 30 days of the Innovation Summit (April 4<sup>th</sup>, 2009) according to the team's accepted Phase A development plan (see Finalist Rules #3). Any funds in excess of those requested in the team's Phase A plan will be held in escrow by the Conrad Foundation.
  - Additional disbursement of finalist team funds will occur upon completion of the team's Phase A report. Upon such completion, the team has the option of:
    - 1) Continuing the development of their submission concept. In this case, the team is required to create a Phase B plan following the same process as that of the Phase A plan. Funds will then be disbursed according to this plan.
    - 2) Concluding work on their Conrad Awards submission concept, at which time all remaining funds will be disbursed to the team's school or organization in the care of the team's advisor to encourage continued excellence in science and technology.
5. All donations are tax deductible for the donor according to IRS 501.c.3 rules.
6. All funds will be provided as checks to the team's school or organization in care of the team's advisor.

### **Finalist Rules:**

Finalists will be notified no later than February 1<sup>st</sup>, 2009. This section is only applicable to teams selected as Award Finalists. Detailed instructions will be provided in a finalist information packet upon their selection. All Finalists MUST:

1. **Create a presentation** (due by April 2<sup>nd</sup> at the Innovation Summit) – finalist teams will have 10 minutes to present their concept and 5 minutes to answer questions from the judges. Presentations should explain both the technical and business aspects of the team's concept.



2. **Create a tradeshow style display** (due by April 2<sup>nd</sup> at the Innovation Summit) – each team’s displays should include a prototype, model, or mockup of their concept. They should present their concept as though it were a tradeshow booth with potential customers being the audience. All finalist displays will be provided a 10’x10’ pipe & drape area for their display. A table and chairs will be provided. Electricity will be available upon request.
3. **Post-Competition Phase A Concept Plan** (due no later than February 23<sup>rd</sup>) – finalists must create and submit a Phase A plan for continuing their concept development after the Pete Conrad Spirit of Innovation Award Innovation Summit over the summer. Phase A plans should include:
  1. **What will be done:** research, experiments, attendance at a conference/symposium, development of a prototype, etc.
  2. **Itemized Budget:** details about the cost of each individual item needed to complete the Phase A plan.
  3. **Timeline:** what will be done when, all phase A plans should be conducted over the following summer with the exception of presenting at conferences or symposia that may be in the following fall or winter.

Phase A plans will be reviewed by the Conrad Foundation and returned with comments and suggested edits before being accepted by the foundation as a final proposal. Upon being accepted, the team’s profile (see #4 of this section) will become publicly viewable. Portions of the Phase A plans will be posted to the public profile; however, the exact wording of the concept detail is the responsibility of each finalist team. If a team gets support through the public financing efforts (see Prize Rules #5) they will be able to conduct their Phase A plan after the Innovation Summit. Upon completion of the Phase A plan teams must submit a final report summarizing the progress made in Phase A. If there is still additional funding that has been raised, teams can then submit a phase B plan following the same process. All funding of Phase A plans will be coordinated with the teams advisor.

4. **Create and update an online team profile** (initial profile updates due no later than February 23<sup>rd</sup>) – finalists will be provided with their own online team profile pages (similar to MySpace or Facebook) that will publicly present their team and concept. The team profile is the single source of online public voting. Finalists are expected to update their profile to include:
    1. **Videos** – a minimum of 1 video (1 to 5 minutes in length) is required to be uploaded to the team profile. Videos should include information to help the public know the team and understand their concept. Any videos posted with inappropriate content will be immediately removed and will result in the disqualification of the team.
    2. **Pictures** – the graphical representation from a team’s initial submission will be used on the team profile. However, the team is expected to create and upload at least 1 additional image to the profile page.
    3. **Logo** – each finalist team will create a team logo to be included on the team profile page. This logo will also represent the team in the final competition materials.
    4. **Concept Information** – the team profile will include descriptive information about each team’s concept. The amount of detail in this section is up to the discretion of the team. Teams should post enough detail to encourage support and votes from the public; however, publicly disclosing too much information about a product may have implications on patenting your concept (for more information see the “Resources” section of the website). Each team will have the ability to edit the information as they see fit to best describe their concept to the public.
    5. **Phase A Plan Information** – portions of the Phase A plan will be publicly available on the team profile. Each team will have the ability to edit the publicly viewable portions of their phase A plan.
    6. **Blog** – the finalists will be required to post team blog entries on a weekly basis beginning the week of their acceptance as a finalist. Teams can post as many blog entries as they would like, but must post at least 1 per week. Blogs can discuss anything that the team would like to mention in
-



connection with their journey through the Conrad Award process. Blog entries can be as short or as long as wanted.

5. **Attend the finalist program** – at least one member of the team (accompanied by the advisor, or another adult chaperone) must attend the Innovation Summit that will be held April 2-4, 2009 at NASA Ames Research Center, Moffett Field, California.

### **Prize Rules:**

All finalists will receive recognition and other awards for their participation in the competition. First, second, and third place teams will also receive cash grants. First place teams will be inducted as Conrad Laureates and invited to participate as advisory board members for the Conrad Foundation upon their graduation from high school. Details of the prizes include:

1. **Finalist Travel Expenses** – finalist teams will receive a \$2000 travel stipend. This stipend is meant to assist the team in attending the final event and creating their tradeshow display. Any additional expenses incurred are the responsibility of the team.
2. **Finalist Team Commemorative Plaque** – all members of the finalist teams will receive a commemorative plaque at the award ceremony.
3. **Award Medals** – 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup>, place teams will be given medals for their concepts.
4. **Discretionary Educational Grants** – the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place teams from each competition category will receive discretionary educational grants to be divided as follows: 50% to the team's school or sponsoring organization (club, group, etc.); 25% to the team's advisor; and 25% to the team members. Grants include a MINIMUM dollar value of:
  1. 1<sup>st</sup> place - \$10,000
  2. 2<sup>nd</sup> place - \$6,000
  3. 3<sup>rd</sup> place - \$4,000

The total prize purse will be supplemented by additional funding from the public support received through the team profile pages. 20% of the public support (described in #5 below) will be added directly to the discretionary Educational Grant prize pool.

5. **Public Support** – All teams have the opportunity to raise funds as described in the “Fundraising and Sponsorship Opportunities Rules.” The public will have the ability to view team profiles and, for teams accepted as finalists, review portions of their Phase A plans (described in “Finalist Rules” #3). Visitors to the profile pages then have the opportunity to support teams by donating to help the team continue the development of their project, or help the team's school continue excellence in science and technology.
6. **Innovation Summit Opportunities** – The Conrad Award Innovation Summit provides numerous resources to teams including: workshops in business and science/engineering, opportunities to discuss team concepts with professionals and entrepreneurs, ability to visit state of the art NASA facilities and learn about current and future science and technology career paths.
7. **Post-Competition Events** – Conrad Award Laureates and 2<sup>nd</sup>, and 3<sup>rd</sup> place teams will be invited to participate in a number of events throughout the summer to present their concept and meet industry entrepreneurs, businessmen, scientists, and engineers.
8. **Recognition** – the first place teams in each category will be recognized as the Conrad Laureates for that year. Second and third place teams will be recognized as such, and the other teams invited to the final competition will be recognized as Conrad Finalists. All finalist teams will be recognized year round and their profile pages will remain active to continue building support for the development of their concept into a real commercial product. Other teams with high scores but not selected as finalists will be recognized as semi-finalists.



The Conrad Foundation reserves the right to use all information including but not limited to team concepts, videos, pictures, and names on promotional materials as seen fit. The Foundation will not use team information for any purpose other than promoting the competition without consent of the team.

The Conrad Foundation reserves the right to update competition rules at any time for any reason. All registered teams will receive notice via email of any changes to the rules.