

Space Center Houston

# Conrad Challenge

Presented by **equinor**



# 2026-2027 Student Guide





# The Conrad Challenge Mission

Students between the ages of 13 and 18 are eligible to join and must participate as a member of a 2-5 student team. Teammates can be assembled by classmates and students from other institutions who meet the age criteria and other requirements. Teams may compete from anywhere in the world. Previous challenge participants are welcome to enter again as long as they meet the age criteria and all requirements.

Over the course of the year, teams may progress step-by-step through the Conrad Challenge process to design an innovation that solves an important problem and propose a workable business plan. The 2026-2027 Challenge comprises three stages:

## 1 Activation

### August 27-October 29, 2026 | Gather Your Team

- Assemble teams of 2-5 students
- Select a coach
- Complete registration via [Conrad Challenge Award Force portal](#)
- Brainstorm ideas
- Select an Innovation and Category
- Prepare a Lean Canvas

## 2 Innovation

### Deadline January 7, 2027 | Develop and Submit Innovation and Business Plan

- Write an Innovation Brief
- Record an Innovation Video
- Create a website
- Submit All Materials Online

## 3 Summit

### April 21-24, 2027 | Present at the Innovation Summit

- Top teams are named Finalists and are invited to the Conrad Challenge Innovation Summit at Space Center Houston
- Finalists will participate in power pitches, a public Innovation Expo, networking opportunities, NASA tours, community sessions and more.
- Finalists compete to earn scholarships, entrepreneurial support and the title of Pete Conrad Scholar

# Activation Stage

Embark on a journey to collaborate, to innovate, and to change the world.

## Overview

### 1 Gather Your Crew

- Create a team of 2-5 students. Invite students from other schools, cities, states or even countries to collaborate without borders. Having the right team members is a key ingredient for successful teams.
- Recruit a coach. This can be a teacher, parent, subject-matter expert or other qualified mentor over the age of 18.

### 2 Register Team

All team members and the coach must register through the [Conrad Challenge Award Force portal](#) under one account. As part of registration, team members and their legal guardians must review this Student Guide, [Rules and Regulations](#) and [Terms and Conditions](#) which apply to all participants.

### 3 Submit a Lean Canvas

Teams can utilize the Lean Canvas template to brainstorm ideas for their innovation. Teams will submit one Lean Canvas for their innovation.



# Activation Stage

## Deadline

October 29, 2026 by 11:59PM CT

## Checklist

1 ☐

Ensure all team members and their legal guardians read the [Rules and Regulations](#) and the [Terms and Conditions](#) to confirm that the eligibility requirements are met.

2 ☐

- Confirm coach selection.
- Discuss team goals, team member roles, and communication plans.

3 ☐

- Complete the Registration tab in the [Conrad Challenge Award Force portal](#)
- Register all teammates and the coach

4 ☐

Once these steps are completed, move on to the Lean Canvas tab to complete the questions provided.

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Save and submit your Activation Stage materials when you have completed these steps to the best of your ability.

For any questions, email  
[info@conradchallenge.org](mailto:info@conradchallenge.org)

# Lean Canvas

Brainstorm ideas, select an innovation, lay out the details and take an invaluable first step on the entrepreneurial journey.

## Overview

### 1 Ideate

As a team, brainstorm different challenges and explore innovative solutions. Resources on how to come up with viable ideas are available in the [Student Resources Library](#).

### 2 Complete the Canvas

A lean canvas is a widely adopted tool used by founders to quickly map out the fundamentals of a new venture in the early stages of the idea. Share early thoughts to 12 questions that outline the innovation, the market and the business model.

### 3 Name and Category

Finalize a name for the innovation and your team in the [Conrad Challenge Award Force portal](#). If the team has changed its name since the registration, go back to the previous tab and revise it. Both tabs should feature the same name.

Since submissions are approved on a rolling basis, it is best to submit projects as soon as they are ready. The sooner projects are submitted, the sooner a team can advance to the Online Innovation Stage and utilize the extra time to prepare for the Online Innovation Stage submission. Lean Canvases will be reviewed and teams will be notified if they can move ahead to the Online Innovation Stage. There is no entry fee for this stage.

# 12 Lean Canvas Questions

Briefly answer these essential questions about the innovation, the market and business model. Make a lean canvas for different ideas and analyze what stands out.

## 1. Problem

What is the customer need the innovation will address? Is there a social or environmental challenge the team aims to take on? (40 words)

## 2. Existing Alternatives

How is this problem solved today? Consider other products in the market. (40 words)

## 3. Solution

What are the key characteristics of the innovation? (40 words)

## 4. Key Metrics

What are the most important numbers that track the innovation's success? (40 words)

## 5. Unique Value Proposition

What makes the innovation different from what's already in the market? (40 words)

## 6. High-Level Concept

What is the tagline of the innovation? (10 words or less)

## 7. Sustainable Advantage

Why will it be difficult for others to copy this innovation? (40 words)

## 8. Channels

How will the innovation be sold to customers? How will it be delivered? (40 words)

## 9. Customer Segments

Who is the target audience that is served by the innovation? Describe them. (40 words)

## 10. Early Adopters

Who will be the very first customers? Describe them. (40 words)

## 11. Cost Structure

What are the most significant costs? (40 words)

## 12. Revenue Streams

How will the innovation make money to fund operations on an ongoing basis? (40 words)

# Challenge Categories

After selecting the best Lean Canvas, pick the category that best fits the innovation.



## Aerospace and Aviation

Student solutions have included: improving storage efficiency aboard the International Space Station and warehouses via sustainable RFID technology; an autonomous magnetic takeoff and landing system.



## Cyber-Technology and Security

Student solutions have included: a mini-black box allowing people to access high-performance computing in harsh environments.



## Energy and Environment

Student solutions have included: a low-cost portable water filtration system to help people in underserved areas; an unmanned surface vehicle (USV) to regularly monitor the water quality of lakes and ponds.



## Health and Nutrition

Student solutions have included: a cloud-based web and mobile app that generates insights about cancer mutations from biomedical literature; a nutrition bar used as a meal supplement for astronauts.



## The Water Challenge

Only around 3% of water is fit for human consumption, but everyone deserves fair and free flowing water. This year, teams can address this deep area of need: helping communities worldwide secure safe and sustainable water sources. Student solutions should include: innovations to improve water equity, efficiency, and purity.

# Lean Canvas

## Deadline

October 29, 2026 by 11:59PM CT

## Checklist

1 ☐

- Generate a creative and catchy name for the innovation
- Update name in the Registration tab too.

2 ☐

- Choose the Challenge Category that best fits the innovation

3 ☐

- Answer the 12 Lean Canvas questions within the word limit

4 ☐

- Submit the Lean Canvas in the [Conrad Challenge Award Force portal](#)

5 

Once these steps are completed, the Lean Canvas will be reviewed for completeness and feasibility. During this time, teams may begin designing the innovation.

For any questions, email  
[info@conradchallenge.org](mailto:info@conradchallenge.org)

# Innovation Stage - Online

Teams will begin designing, creating and sharing their plan for success.

## Overview

### 1 Write Brief

The Innovation Brief is the most important submission item reviewed by the Judges in this stage. Answer 10 essential questions that tell the story, describe the innovation and its impact, detail progress, explain the market and propose the business model.

### 2 Complete Video

The Innovation Video is a 3-5 minute demonstration of the innovation. In the video, teams will give a tour of an Innovation Model. Teams may use sketches, 3D models, storyboards, wireframes, physical prototypes or any other visual artifact to achieve this.

### 3 Create Website

All teams must create a website that describes their team, innovation and intended impact to the general public.

**Submit and complete payment by January 7, 2027, 11:59pm CT**

**The entry fee is \$499 USD.**

Financial aid is available for teams. Aid decisions are based on the quality of the application and the level of demonstrated need. [Apply Here.](#)

Once submitted, a group of Judges will score each submission in the [Conrad Challenge Award Force portal](#) according to the Scoring Guide and provide each team with coaching comments for their innovation. In February 2027, Judge coaching comments will be released and Conrad Innovator and Finalist teams will be announced. Judges include accomplished entrepreneurs, business people, educators, scientists, engineers, investors, venture capitalists, and subject matter experts from around the world.

# Innovation Brief

Share concise explanations about the team's story, innovation, progress, market and business model. The brief is a combined maximum of 3,000 words.

## 1. Elevator Pitch (150 words)

Pitch the innovation, along with its impact, customers and business potential.

## 2. Team (150 words)

- How did the team form?
- What role will each team member play?
- What motivated the team to create the innovation?
- What special capabilities, resources or experiences do the team members bring?

## 3. Opportunity (300 words)

What issue or pain point does the innovation address?

## 4. Key Metrics (750 words)

- Describe the innovation, its design and its technology. How does it work?
- What is new or proprietary about the innovation?
- How does it meet needs and resolve pain points?
- What impact does the innovation create for individual users and humankind? Describe this qualitatively and quantitatively.
- How can new or proprietary aspects be protected and made valuable by one or more methods such as a patent, trade secret, copyright or otherwise competitively defensible configuration?

## 5. Validation/Progress (450 words)

- How have you validated the innovation, technology, or processes?
- What progress has the team made in developing the innovation?

## 6. Market (300 words)

- Describe the customer and the target segments.
- What is important to them?
- What is the size of the opportunity?
- Is the buyer or payer different from the customer in this market?
- Describe the industry ecosystem.

## 7. Competition (300 words)

- What competes with the innovation and how does the innovation compare?
- What are the advantages and disadvantages of the innovation?
- What is the positioning?

## 8. Go-To-Market (150 words)

- How will the team attract and sell to customers?
- Who are the best initial or pilot customers?
- Is the market best served through direct sales, distribution, licensing, strategic partnerships or other strategies?

## 9. Business Model (300 words)

- What are the key revenues and costs?
- What are the pricing and costs to deliver one product or service unit?

## 10. Fundraising (150 words)

- What funds are needed to get started and how will those funds be used?
- How much will it cost to develop the product and roll out?
- What different sources will be pursued for funding and why are these a fit?

### Reference Attachment

Add a list of the references cited throughout the Innovation Brief. Research sources may include websites, videos, news sources, scientific papers, interviews and other citable sources.

### Additional Attachments

Include up to two optional attachments that provide additional context to the Judges. These visual aids or resources should supplement the responses above.

# Innovation Video

## Overview

In a 3 to 5 minute Innovation Video, teams will demonstrate the innovation and how it works. Models, prototypes or graphics can be used to explain its technology, use, features and impact. Teams may introduce themselves, discuss their motivation or founding story, customers, partners, impact and vision. Teams are encouraged to tell a convincing and credible story. Judges will watch the video to understand the innovation and evaluate its potential.

## Requirements

### 1 Model

Feature a model of the innovation, such as a sketch, 3D model, storyboard, wireframe, physical prototype or other visual artifact.

### 2 Video

Create a video no more than 5 minutes in length.

### 3 Video Link

Upload a direct link to the video on YouTube or Vimeo. The link must be accessible; either “unlisted” so that those with the link can view it, or “public”.

### 4 Video File

Upload the video in the MP4 file format, which should be smaller than 800 MB.

# Innovation Website

## Overview

With a website, teams will broadcast to the public what they are working on, including its feasibility and potential impact. The Judges will review each website to understand not only the team's vision and technology, but also how they plan to communicate the idea to the world.

## Requirements

### 1 Story

Tell the team's story to the public, explaining its mission, vision and values.

### 2 Model

Display a model of the innovation with imagery that explains its benefits.

### 3 Brand

Communicate the team's brand, which is comprised of the name, logo, color scheme, voice, design, and more.

### 4 Link to Site

Make the site accessible by direct link so the Judges can see it. Teams may choose to hide the site from being findable on search engines.

# Coaching and Scoring Guide

| Theme                                                                                                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>30%</b><br><b>Innovation</b><br>Is it unique?<br>Is it impactful?                                     | <ul style="list-style-type: none"> <li>• <b>Originality:</b> Is the idea truly new or a novel combination of existing technologies and does it show creative or scientific inspiration?</li> <li>• <b>Impact Potential:</b> Does it transform an industry or deliver real benefits to customers or society?</li> <li>• <b>Ambition Level:</b> Is the innovation incremental, bold, or audacious compared to current solutions?</li> <li>• <b>Verification:</b> Has an online search confirmed its uniqueness and ruled out duplicates?</li> <li>• <b>IP Defensibility:</b> Can the concept be protected (patent, trade secret, copyright, first mover, contracts, ecosystem capture) to secure its value?</li> </ul>                                |
| <b>20%</b><br><b>Storytelling and Professionalism</b><br>Would a reasonable investor want to learn more? | <ul style="list-style-type: none"> <li>• <b>Investor Appeal:</b> Does the pitch spark a reasonable investor's interest to learn more?</li> <li>• <b>Clarity of Opportunity:</b> Is the problem, motivation, and value proposition clearly and compellingly described?</li> <li>• <b>Credibility Boost:</b> Do the video and website reinforce the team's expertise and trustworthiness?</li> <li>• <b>Narrative Structure:</b> Is there a logical, engaging flow across all materials (brief, video, website)? Does it create excitement, curiosity and belief?</li> <li>• <b>Polish &amp; Consistency:</b> Are writing, visuals, and organization professional and investor-ready?</li> </ul>                                                      |
| <b>20%</b><br><b>Practicality</b><br>Will it work?                                                       | <ul style="list-style-type: none"> <li>• <b>Feasibility:</b> Can the solution be developed within a reasonable time frame and budget?</li> <li>• <b>Realism:</b> Are the chosen technologies or methods appropriate and attainable? Consistent with technological and scientific principles?</li> <li>• <b>Proof of Concept:</b> Is viability demonstrated (e.g., tested component technologies, prototype, demo, similar devices, or graphic mock-up)?</li> <li>• <b>Evidence Base:</b> Does the submission include data, expert testimony, similar applications or research establishing feasibility?</li> <li>• <b>Next Steps:</b> Is there a clear plan for further testing or development to validate the concept or begin a pilot?</li> </ul> |
| <b>20%</b><br><b>Marketing Strategy</b><br>Does the team understand key markets?                         | <ul style="list-style-type: none"> <li>• <b>Market Insight:</b> Has the team identified target markets and customer segments?</li> <li>• <b>Entry &amp; Adoption:</b> Is there a defined strategy for market entry, growth, or partnership?</li> <li>• <b>Ecosystem Awareness:</b> Does the team understand industry partners, licensing opportunities, competitive landscape, and who the buyers are?</li> <li>• <b>Differentiation:</b> Are the innovation's advantages over existing solutions articulated?</li> <li>• <b>Engagement Channels:</b> Does the website effectively showcase value, tell the story, and attract potential customers?</li> </ul>                                                                                      |
| <b>10%</b><br><b>Finances</b><br>Does the team understand costs and funding?                             | <ul style="list-style-type: none"> <li>• <b>Cost Estimation:</b> Are materials, components, operating costs, and R&amp;D expenses (e.g., grants, licenses, labor) realistically estimated?</li> <li>• <b>Revenue Projections:</b> Has the team outlined plausible revenue models given market and value potential—both per unit and overall?</li> <li>• <b>Funding Strategy:</b> Is there a credible plan for securing development and rollout capital?</li> <li>• <b>Budget Reasonableness:</b> Does the overall budget align with the scope and timeline of the project?</li> <li>• <b>Financial Viability:</b> Do cost, revenue, and value scenarios suggest a sustainable path forward?</li> </ul>                                              |

# Innovation Stage Submission

## Deadline

January 7, 2027 by 11:59PM CT

## Checklist

1 ☐

Follow the Innovation Brief word limits and Innovation Video length limit. The [Conrad Challenge Award Force portal](#) will show a warning about missing requirements.

2 ☐

Prepare and attach a list of references cited in the Innovation Brief in the attachment section.

3 ☐

Validate, publish and set viewing permissions for website and video links in the [Conrad Challenge Award Force portal](#).

4 →

Monitor email inboxes, since the Conrad Staff may be in touch with questions. Conrad Innovators and Finalists are announced in February.

For any questions, email  
[info@conradchallenge.org](mailto:info@conradchallenge.org)

# The Conrad Challenge Innovation Summit

Space Center Houston and NASA Johnson Space Center  
Houston, Texas | April 21-24, 2027

At the Conrad Challenge Innovation Summit, Finalist teams will deliver their Power Pitches to expert Judges and receive live feedback. Teams will share their innovations with Judges, VIPs, and the public at the Conrad Challenge Expo. Finalist teams compete for additional scholarships and the Challenge's top honor, the title of Pete Conrad Scholar. All Finalists will connect with speakers, experts and students from around the world, as well as enjoy the many opportunities Space Center Houston has to offer.



Space Center Houston

# Conrad Challenge

Presented by **equinor** 

“Whoopee!”