Key Takeaways

It is for a good cause, to solve problems and better man kind

it is set up in a way that gives people clear, menaingful and relevant challenges to solve

**WHAT IS SPACE APPS?**

The International Space Apps Challenge is a two-day hackathon where teams of technologists, scientists, designers, artists, educators, entrepreneurs, developers and students across the globe collaborate and use publicly available data to design solutions for pre-set challenges in 1 of 4 themes.

**Length: 2 days**

**Who:**

* **T**echnologists, scientists, designers, artists, educators, entrepreneurs, developers and students
* nearly 13,000 scientists, designers, educators, developers, entrepreneurs and students

Sponsored By Nasa

**Where:**

* All across the globe
* Was held in 135 cities around the globe

**How:**

* collaborate and engage with publicly available data to design innovative solutions for global challenges.
* used publicly available data to create solutions for global challenges.

**Why:** to design innovative solutions for global challenges.

**When:**

**Result:** Over 900 projects aimed at solving the myriad issues surrounding planetary and space exploration

**Themes (Challenge Themes)**

The participants were tasked with coming up with solutions to 35 challenges across four categories: Outer Space, Earth, Humans and Robotics. Each category had a range of challenges for particpants to solve. For example Outer space had [10 Challenges](https://2015.spaceappschallenge.org/challenge/category/outer-space/)

1. Outer Space
2. Earth
3. Humans
4. Robotics

**Challenges**

* Each Theme had a number of varied challenges for participants to solve. For example Outer space had [10 Challenges](https://2015.spaceappschallenge.org/challenge/category/outer-space/) and where as varied as creating an asteroid mission, to finding ways to send messages to astronauts in space, to developing a camera that could orbit in deep space.
* Further more each group of challenges for each theme could be filtered by difficulty ( easy, intermediate, advanced)

**Example Project:**

The challenges included such topics as finding ways to show the value of asteroids as an exploration destination; mapping of drinking water resources; the benefits and feasibility of allowing astronauts to print their own food; and designing a drone for moving items around a manned spacecraft or station.

**Peoples Choice Finalist**

* They had a people's choice award that got the community involved in voting.
* each team had its own hashtag
* total of 156,007 votes cast for the 15 projects

https://2015.spaceappschallenge.org/award/#peopleschoice

**Hackathon Structure**

The challenges were announced a month in advance, so people could start thinking up ideas for the competition. Additionally, NASA provided data and tools that could be used in the projects. This year, the Space Apps Challenge kicked off at the Global Mainstage in New York with a Data Bootcamp focusing on "Women in Data" and featuring NASA Astronaut Cady Coleman and NASA Chief Scientist Ellen Stofan, among other notable speakers.

At the culmination of the hackathon, venues chose up to three projects (two global nominees and one people's choice award) for consideration in the global judging process. You can get involved in the award process by taking to social media and voting for your favorite People's Choice award.

**Virtual Participation**

* Virtual Participation is open to anyone anywhere on Planet Earth
* worked together and independently around the world and collectively you submitted 120 diverse projects for judging at the end of the Space Apps weekend.
* The NASA judging team reviews all virtually submitted projects. All your descriptions were carefully read, your code was reviewed and your videos were watched! two projects were selected to move onto judging at the global level:
* **How can you participate in the Space Apps Virtual Event?**
  + You don't have to be at a local event to participate in Space Apps… you just need a computer, an Internet connection and a desire to collaborate with others to build applications.You will connect online with global dispatch to find a team that needs your specific skills and expertise to help solve a challenge. All from the comfort of your own home.
* **What can you do?**
  + Create your own team and form a global team to solve a challenge!
  + Find a challenge you want to work on and locate a team that needs your skills (that team may even be at your wait listed location)!
  + Find a challenge you want to solve yourself and do it!
  + Find a challenge that you and your friends or co-workers are excited about and solve it!
* **How to get involved**
  + Become a ViP (a Virtual Participant). Register by clicking that green button on the top right-hand side of this page, just over the header image.
  + Review the challenges. The sooner you figure out what you want to do, the more time you have to meet awesome people and make awesome projects.
  + Want to start a new team? 1) Make it official by creating a Project. 2) add your info into the Matchmaking section on the Hackpad of your chosen Challenge page. 3) Build your team - invite friends, tweet about it, check the Matchmaking section for people that want to work with you.
  + Want to find a team to join? 1) Add your information into the Matchmaking! section of the Hackpad of your chosen Challenge page. 2) Search the Matchmaking!! section for teams that are looking for you.
  + Team communication. Each team will create its own means of communication (if you're starting a team, you'll want to figure this out). We've found that this works a lot better than trying to force everyone to do it the same way.

**FAQ**

**HOW DO I CHOOSE A CHALLENGE?**

You can choose any challenge that captures your imagination and uses your skills. Local events will choose a subset of projects to help focus their teams, but you can work on any of the offered projects (or create-your-own if you need to).

**HOW DO I FIND A TEAM?**

When you arrive at your event, there will be a number of focus challenges, and teams will be created from participants interested in working on particular projects. Virtual participants will join an 'on boarding session' online during the weekend where they can find collaborators from local events or among other virtual participants.

**CAN I START NOW?**

You absolutely can start now even though we hope you will do most of the work over the weekend so that you can work collaboratively with others. The idea is not for you to just build the best app ever. It's to create a team who will do something better than any of us can do on our own.

**HOW WILL I SUBMIT A SOLUTION?**

Registered participants will be able to submit their projects online for judging at www.spaceappschallenge.org during the event weekend from 11-12 April 2015.

- who ran it

- who paid for it

- how did they handle the multiple countries/ locations/languages etc

- what did their event look like (virtual, in-person participation?)

- winners/prizes?

- how did they promote it?

- anything else relevant?

Basically I want you to reverse engineer this event.

There is two reasons I want you to do this. 1) because we need to know how competitors handle projects like this. And 2) because I think it will be good learning for you to look at a project like this one holistically.

**Outer space category examples**

**OUTER SPACE**

The 10 challenges in this category included things as varied as creating an asteroid mission, to finding ways to send messages to astronauts in space, to developing a camera that could orbit in deep space.

**Challenge:** Visualize the Asteroid Skies

**Project:** Asteroid Movement Simulation

This team used the data saved in NASA databases to create a visualization tool that allows users to track how each asteroid moves in the solar system. Check out the demo here.

**Challenge:** [Print Your Own Space Food](https://2015.spaceappschallenge.org/challenge/print-your-own-space-food/)

**Project:** [3D Food Printer in Space](https://2015.spaceappschallenge.org/project/3d-food-printer-in-space/)

This team developed a concept for creating food with a 3D printer. Cartridges would contain vitamins, proteins, minerals, color and sweeteners. The printer would include software with a pre-programmed menu that provides astronauts with daily meals consisting of 2,600 calories.

**EARTH**

This theme featured [nine challenges](https://2015.spaceappschallenge.org/challenge/category/earth/) covering topics affecting our planet. Some of the topics in this category included clean water, food issues, open-source air traffic tracking, and observing volcanoes and icebergs from space.

**Challenge:** [Clean Water Mapping](https://2015.spaceappschallenge.org/challenge/clean-water-mapping/)

**Project:** [Whered the Water Go](https://2015.spaceappschallenge.org/project/whered-the-water-go/)

An Android app that can be used to access, update and modify data that tracks sources of fresh water on the planet.

**Challenge:** [Volcanoes, Icebergs, and Cats from Space](https://2015.spaceappschallenge.org/challenge/volcanoes-icebergs-and-cats-space/)

**Project:** [NatEv Explorer](https://2015.spaceappschallenge.org/project/natev-explorer-natural-events-explorer-project/)

A Web-based app featuring a 3D globe with the most interesting/dangerous events in a user's location. The goal is to inspire users to explore additional data from the NASA Earth Observatory system and register new discoveries.

**HUMANS**

In this category, the [11 challenges](https://2015.spaceappschallenge.org/challenge/category/humans/) focused on space and the human experience. For example, some of the options included a game that explores lava tubes on Mars, wearables, and what can be learned from metabolic observations of space explorers.

**Challenge:** [Survivor: Mars Lava Tubes](https://2015.spaceappschallenge.org/challenge/survivor-mars-lava-tubes/)

**Project:** [Lavamatic](https://2015.spaceappschallenge.org/project/lavamatic/)

An educational game that uses crowd-sourced data to explore lava tubes on Mars.

**Challenge:** [Space Wearables: Designing for Today's Launch & Research Stars](https://2015.spaceappschallenge.org/challenge/space-wearables-designing-todays-launch-research/)

**Project:** [AirOS](https://2015.spaceappschallenge.org/project/airos/)

An augmented reality platform that uses gestures and voice to monitor a user's vital signs and situation, and increases the user's senses through external sensors.

**ROBOTICS**

This category only had [five challenges](https://2015.spaceappschallenge.org/challenge/category/robotics/), but they all included ways in which robotics can help in space. It had everything from building and programming your own robot, to using sensors to monitor for danger, to creating drones for space.

**Challenge:** [Spacecraft Thermal Power Consumption](https://2015.spaceappschallenge.org/challenge/spacecraft-thermal-power-consumption/)

**Project:** [RoboKitty](https://2015.spaceappschallenge.org/project/robokitty/)

Managing a robot through a mobile app that uses heat sensors to evaluate power consumption and lost energy in the environment. (No video is available for this project)

**Challenge:** [Robotic Observatory](https://2015.spaceappschallenge.org/challenge/robotic-observatory/)

**Project:** [ScopeNet](https://2015.spaceappschallenge.org/project/scopenet/)

A low-cost solution designed for hobbyist astronomers that provides the ability to automate and share telescopes online.

**OVERVIEW**

The International Space Apps Challenge is an international mass collaboration focused on space exploration that takes place over 48-hours in cities around the world.

The event embraces collaborative problem solving with a goal of producing relevant open-source solutions to address global needs applicable to both life on Earth and life in space.

over 25 challenges in four areas: Earth, Outer Space, Humans and Robotics.

NASA is leading this global collaboration along with a number of government collaborators and over 100 local organizing teams across the globe.

**INTERNATIONAL**

The exploration of space is, by necessity, a unified international effort - and diversity of experience and perspective inevitably produces a better product.

We are very intentional to make the Space Apps Challenge valuable to and accessible to the international community, and the experience continues to teach us numerous lessons about how to make it more truly international.

**SPACE APPS**

The Challenge exemplifies the principles of transparency, participation and collaboration by utilizing openly available data, supplied through NASA missions and technology, and the talent and skill of passionate volunteers from around the planet to advance space exploration and improve the quality of life on Earth.

**CHALLENGE**

The idea of a Challenge is so compelling because it acknowledges the fact that the world is facing serious challenges - and that we all have to work together to approach them.

While there local hosts may offer prizes and the global award includes an opportunity to attend a NASA launch, the main challenge we focus on is enabling 48 hours of highly engaged collaboration- and discovering what we can create when that happens.

**JUDGING**

**LOCAL JUDGING**

Judging will occur at each location under the direction of the local hosts, who can determine judging categories and processes. Each local event can nominate up to two projects to advance to global judging. Each location can decide on their own judging criteria, but here are some elements you may want to invite your judges to consider:

**Impact:**

How much impact (quality and quantity) can this project have? Does it solve a big problem or a little problem?

**Creativity:**

How creative is the approach? Is the project new and something that hasn’t been attempted before? Is it something that isn't being addressed by the market?

**Product:**

How well does this project fit the needs of the challenge it addresses? How user friendly is the technology? Is it a complete solution or does it have a long way to go?

**Sustainability:**

How good is the plan for next steps? How prepared is the project team to continue their work beyond the event? Is the project organized in a way so others can take the project to the next level?

**Presentation:**

How well did the team communicate their project? Are they effective in telling the story of the project and why it is important?

In addition, each local event may select one People's Choice nomination to forward to the Space Apps team. People's Choice can be selected in a process determined by the local hosts, such as by popular vote of the local participants at the event or using local judging panels. The local nominations that move forward for global judging will be required to provide a one-minute video within one week of the event to be used in the global judging process.

**GLOBAL JUDGING**

In the global judging round, a panel of NASA judges will select winners in each of the five finalist categories: Best Mission Concept, Best Use of Hardware, Best Use of Data, Most Inspiring, and Galactic Impact.

The judges will review the finalists based on a short project description, a one-minute video, and project page links. Any code developed during the event weekend must be open source. To be eligible for global judging your project page must include a link to the code in a public repository.

Global winners will be eligible to attend a NASA launch event. Winners and one guest will be required to pay their own expenses. NASA will supply transportation to and from the launch site.

**PEOPLE’S CHOICE**

The top 15 People’s Choice candidates will be announced on the Space Apps website. The public can vote for their favorites via social media. NASA’s Space Apps team will collect social media analytics to determine the winning team. The winning team will be determined based on a formula that will take into account the number of tweets, unique users and timeline deliveries.

NASA’s Space Apps team will make every effort to notify global winners within one month following the April event.