



OPPORTUNITIES IN OPEN INNOVATION AND COMMUNITY APPLICATIONS

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Open Innovation

Ideas for
Internal
R&D



**NASA's network of
scientists, decision-
makers, stakeholders**



New Uses
and New
Markets

- **Crowdsourcing**
Solicits products, services, ideas, or content contributions from many people for distributed problem solving
- **Challenges**
Use focused problem statement to competitively obtain solutions and/or stimulate innovation from broad public
- **Prizes**
Competitively award prizes to stimulate innovation with potential to advance NASA's mission
- **Citizen Science**
Public participating voluntarily in scientific process

“discover and demonstrate innovative and practical uses of Earth observations”

Enable near-term uses of EOs:

- **formulating new applications**
- **integrating EOs and related products in practitioners’ decision making**
- **transition the applications for sustainable use**

Complete the integration and transition of use of Earth science products for sustained use

ARL 9

-

ARL 8

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ARL 7

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ARL 6

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Develop and prototype capability of Earth science product to enhance decision-making

ARL 5

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ARL 4

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ARL 3

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Establish information content, characterize decision support need, and assess proof of concept of application idea

ARL 2

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ARL 1

Information Gathering

Are you interested in identifying existing data or technology

Are you trying to gather new data

Collect insights, resources, and ideas FOR FREE on internal challenge platform.

Is data collection straightforward, can be accomplished on existing platforms

Are you trying to develop new data gathering platform

NASA@WORK



NASA TECHNOLOGY TRANSFER PROGRAM

Prototyping and Integration

Would you like to develop a software application, an algorithm for data analyses, or a hardware tool?

Do you have more targeted tasks?

Launch challenges for curated communities through NASA Tournament Lab or on challenge.gov. Partner with external organizations for technical, financial, other support

Microtasks or repetitive tasks?

Logo designs, user dashboards?

Run micro-purchase challenges from \$200+ to obtain solution within weeks!



Challenge.gov Government Challenges, Your Solutions





Annual Hackathon in over 200
locations in around the world

October 18-20, 2019

Virtual Participation Options Available!

Integrate NASA Earth science data and citizen science data to learn more about the ***connections between human, animal, and environmental health.***

Build a tool for beach-goers to monitor for hazards including ***sun exposure and presence of harmful algal blooms*** and to alert them of precautionary measures for protection on their swim- and surf-filled adventures!

Develop an app or platform to ***crowd-source information for comparing changes in environmental factors,*** such as temperature, relative humidity, air pollution, ***with occurrence of symptoms of allergies and respiratory diseases.***

Community Applications

Identifying new communities and partnerships to test applications of data products



Opportunities for Commercialization

Sharing new capabilities and identifying new markets to develop sustainable solutions



scaling

THANK YOU

Applied Sciences Program

Lawrence Friedl

Health and
Air Quality Team

John Haynes

Sue Estes

Helena Chapman

NASA Prizes and Challenges

Amy Kaminski

Karen James

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Lynn Buquo

Steve Rader



QUESTIONS?

Open Innovation tools can *complement* current efforts to discover and demonstrate innovative and practical uses of Earth science data to enhance decision-making, improve quality of life, and strengthen the economy.

Ideation



Scientific



Software



Technology and Hardware
Demonstration



Design and Communications



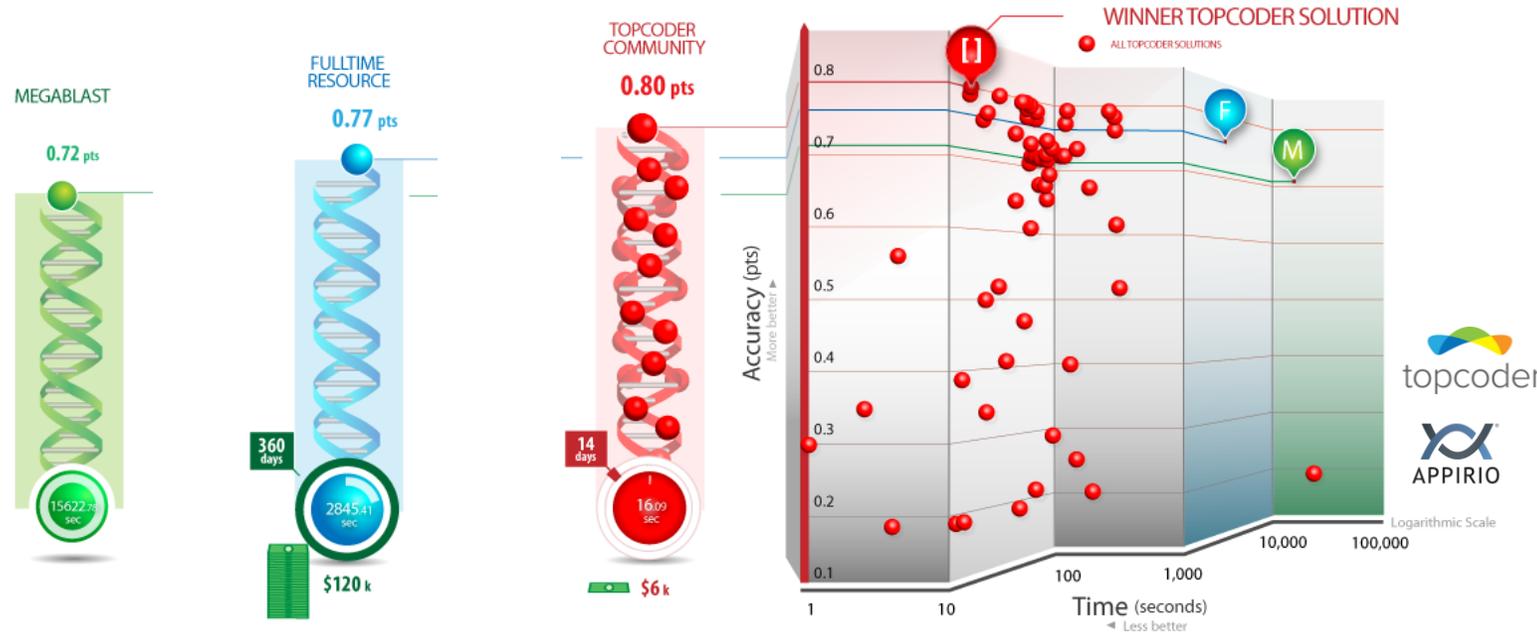
Entrepreneurship



Data Analytics and
Visualization

GOAL: Create better algorithm for sequence annotation than established methods such as BLAST

COMPETITION: Ran 2 week prize competition on Topcoder with pot of \$6000



4.3 hours
\$2M+
Multi-year
Development

47 min.
\$120K
1 year
Development

16 sec.
\$6K Prize
14 Day
Challenge



**HARVARD
BUSINESS SCHOOL**



GOAL: Create a 2-3 minute animation/video from storyboard for REALM project, based on RFID technology

PRIZE: \$3000 on [freelancer.com](https://www.freelancer.com)



