PRIZES AS A TOOL FOR ENGAGING RESEARCHERS AND STUDENTS

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Spirit
of
St. Louis

The New York Times.

LINDBERGH DOES IT! TO PARIS IN 33½ HOURS; FLIES 1,000 MILES THROUGH SNOW AND SLEET; CHEERING FRENCH CARRY HIM OFF FIELD

COULD HAVE GONE 500 MILES FARTHER

Gasoline for at Least That Much More Flew at Times From 10 Feet to 10,000 Feet Above Water.

ATE ONLY ONE AND A HALF OF HIS FIVE SANDWICHES

Felt Asleep at Times but Quickly Awoke—Glimpses of His Adventure in Brief Interview at the Embassy.

MAP OF LINDBERGH'S TRANSATLANTIC HOP, SHOWING THE SPEED OF HIS FLIGHT

CAPTAIN CHARLES A. LINDBERGH

LEVINE ABANDONS BELLANCA FLIGHT

LINDBERGH TRIUMPH THRILLS COOLIDGE

CROWD HEARS THUNDEROUS WELCOME

Breaks Through Lines of Soldiers and Police and Surging to Plane Lifts Weary Flier from His Cockpit

AVIATORS RESCUE HIM FROM FRENZIED MOB OF 25,000

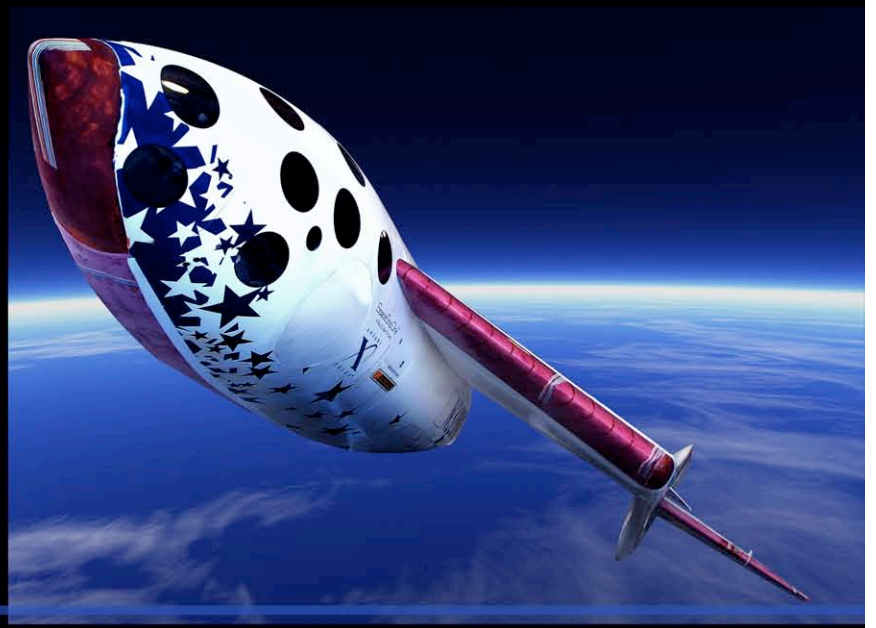
Paris Boulevards Ring With Celebration After Day and Night Watch—American Flag Is Called For and Wildly Acclaimed.


The mission of the X PRIZE Foundation
is
to bring about radical
breakthroughs
for the benefit of humanity.

Ansari X PRIZE

The Teams

- 26 teams from 7 nations spending over US$100 million to win US$10 million purse.



ARCA

Space Transport Corp.

DaVinci Project

Canadian Arrow

Rocketplane

Armadillo Aerospace

Starchaser

Pablo DeLeon

Spirit of St.Louis
SpaceShipOne
JUO76CM

NORTHROP GRUMMAN LUNAR LANDER CHALLENGE
LAS CRUCES, NEW MEXICO
X PRIZE
FOUNDATION


Google™
LUNAR XPRIZE

FUNDAMENTALS OF THE GOOGLE LUNAR X PRIZE

Fig. 1 **LAUNCH**

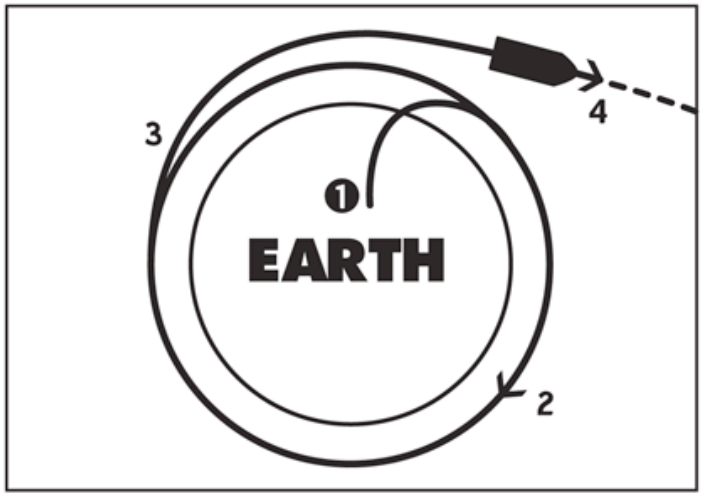


Fig. 2 **LUNAR LANDING**

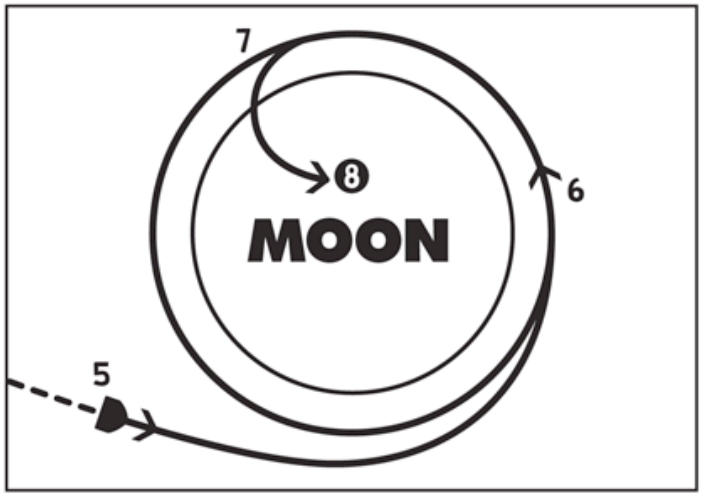


Fig. 3 **LOCOMOTION**

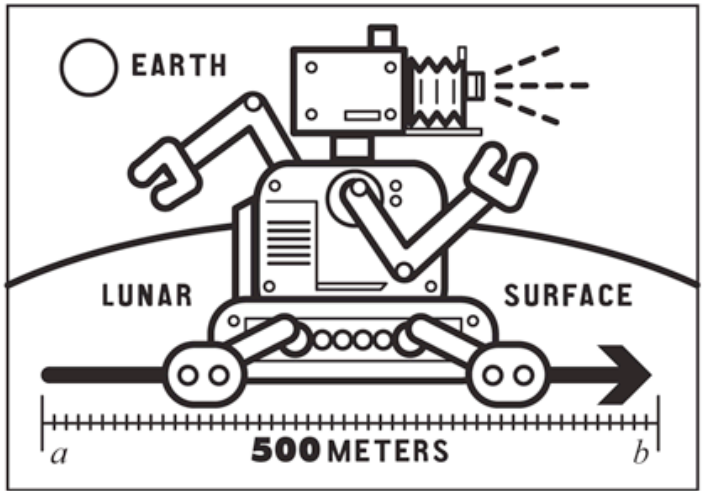
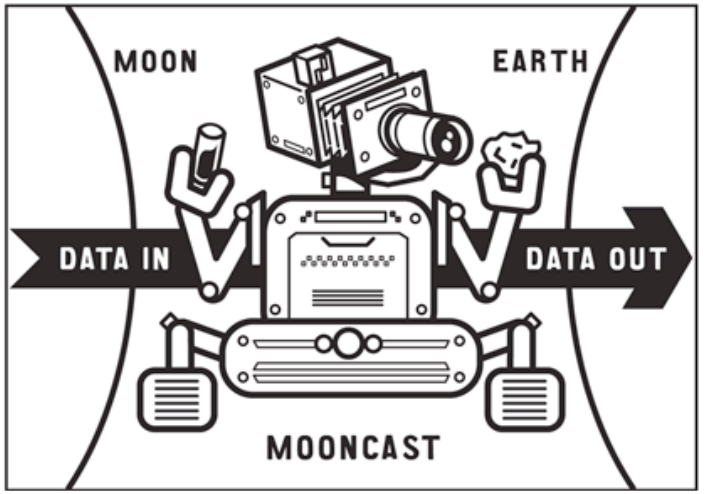


Fig. 4 **DATA COLLECTION AND TRANSMISSION**

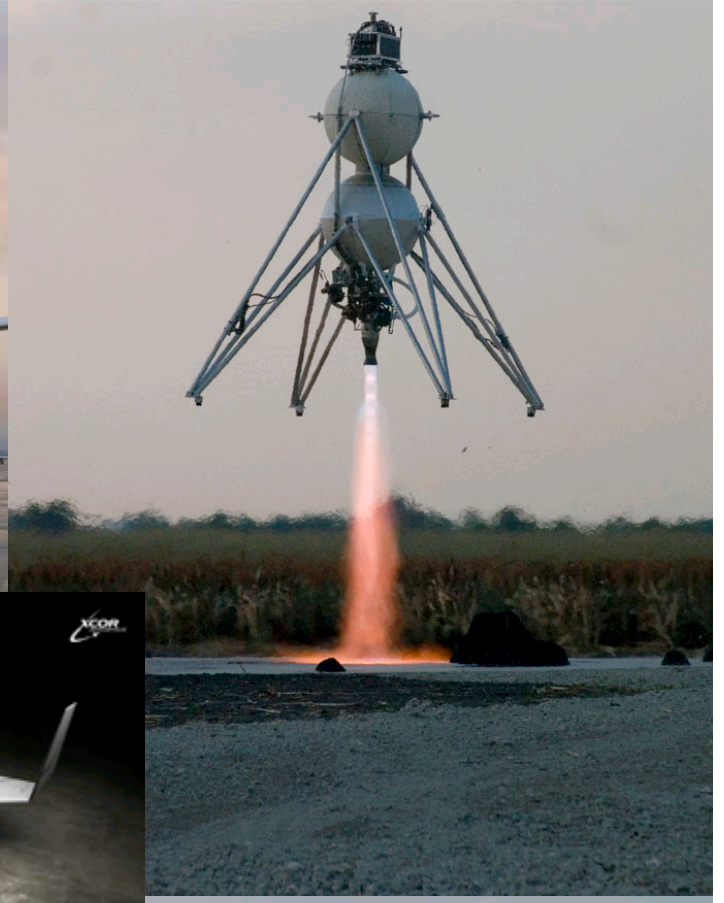


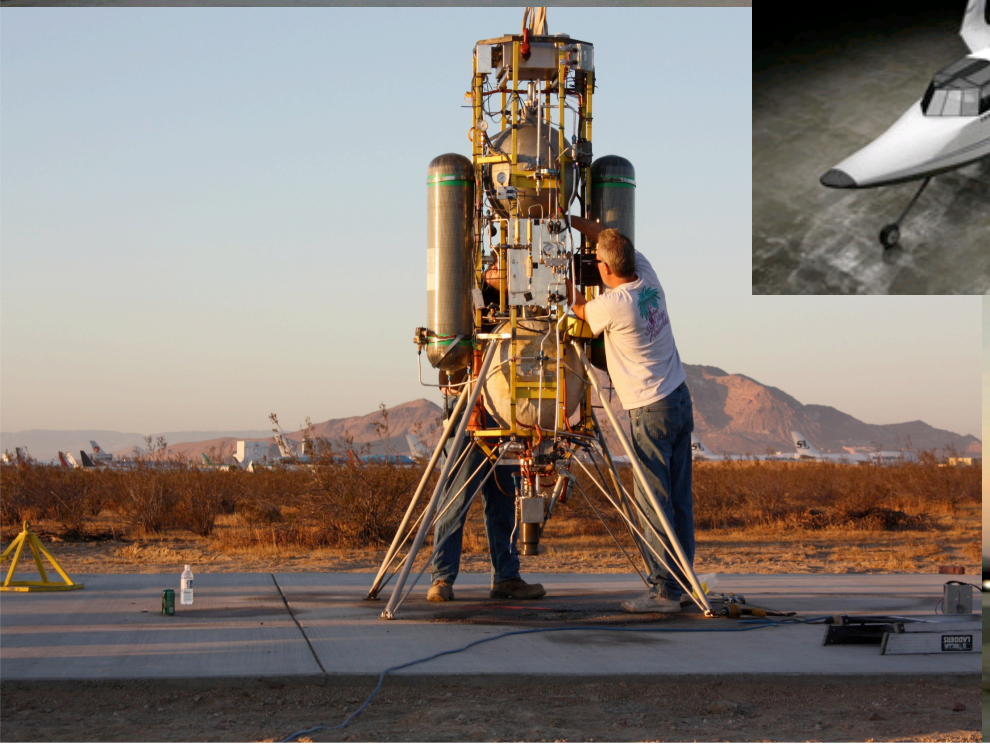
Why use open innovation for suborbital REM?

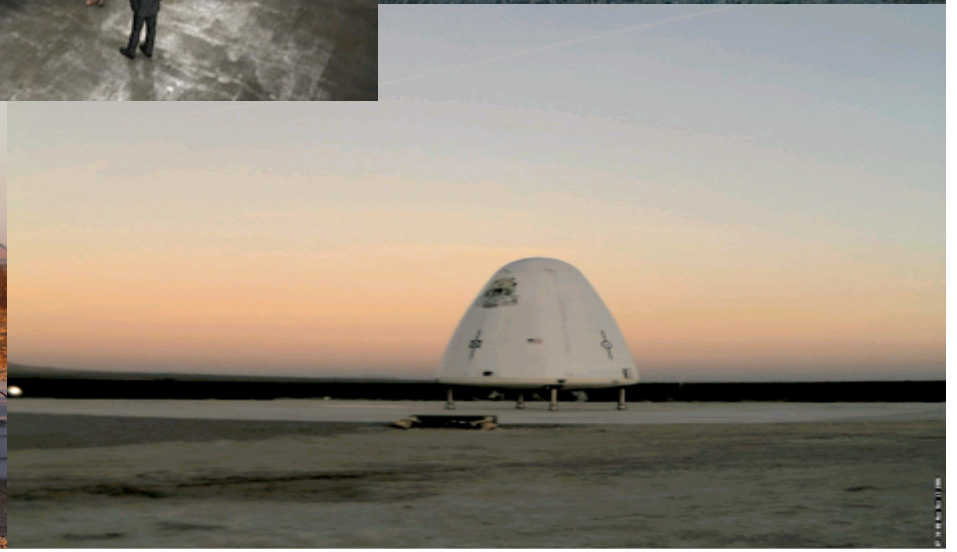
- *Attract talent from unlikely sources*.
- *Support fixed price innovation* by *attracting outside investment*.
- *Allow for parallel innovation while spreading risk*.

- *Leverage competition to pick top performers.*
- *Focus the attention of the media and the uninvolved public*

The Current Market







Some ideas for REM prizes

- Payload Carrier Challenge
- Science Fairs
- First Light Photography Challenge
- Free Fall Mixology
- Open Mashup Challenge

Payload Carrier Challenge

- Proposed extension of Northrop Grumman Lunar Lander Challenge
- First to demonstrate operations to 200,000 feet with a 25kg payload at least 3 times within 3 days wins

Science Fairs

- Add a new category or twist to the classic high school science fair
- Top proposals with meaningful ground science offered an opportunity to develop their experiment for flight

First Light Photography Challenge

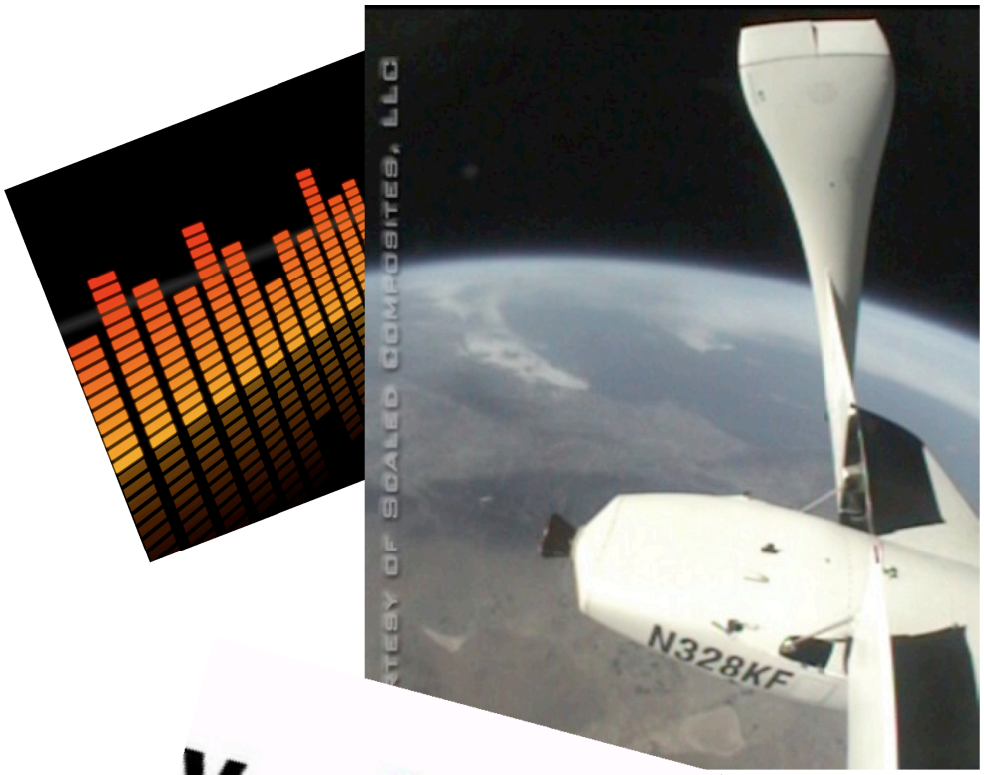
- Prize(s) for first flyers to successfully photograph objects or phenomenon of public or scientific interest
- e.g., comets, aurorae, eclipses, ISS

Free Fall Mixology

- Sponsored by a culinary school or drink company
- Competitors propose novel mixed drinks for free fall preparation and consumption
- Top recipes offered the opportunity to fly

Open Mashup Challenge

- Flight provider makes internal and external video footage available for graphic and audio mashups
- Top ranked films put online for public voting



Prizes: An old tool for a new age

- Identify excellence
- Influence public perception
- Identify and mobilize n talent
- Strengthen markets an communities
- Educate and improve skills
- Mo

Prizes are booming: Large prizes today surpass $375M.
The entire prize sector worth ~$2B.

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“…in these great challenges, the victors may claim the glory, but the world will claim the spoils.”

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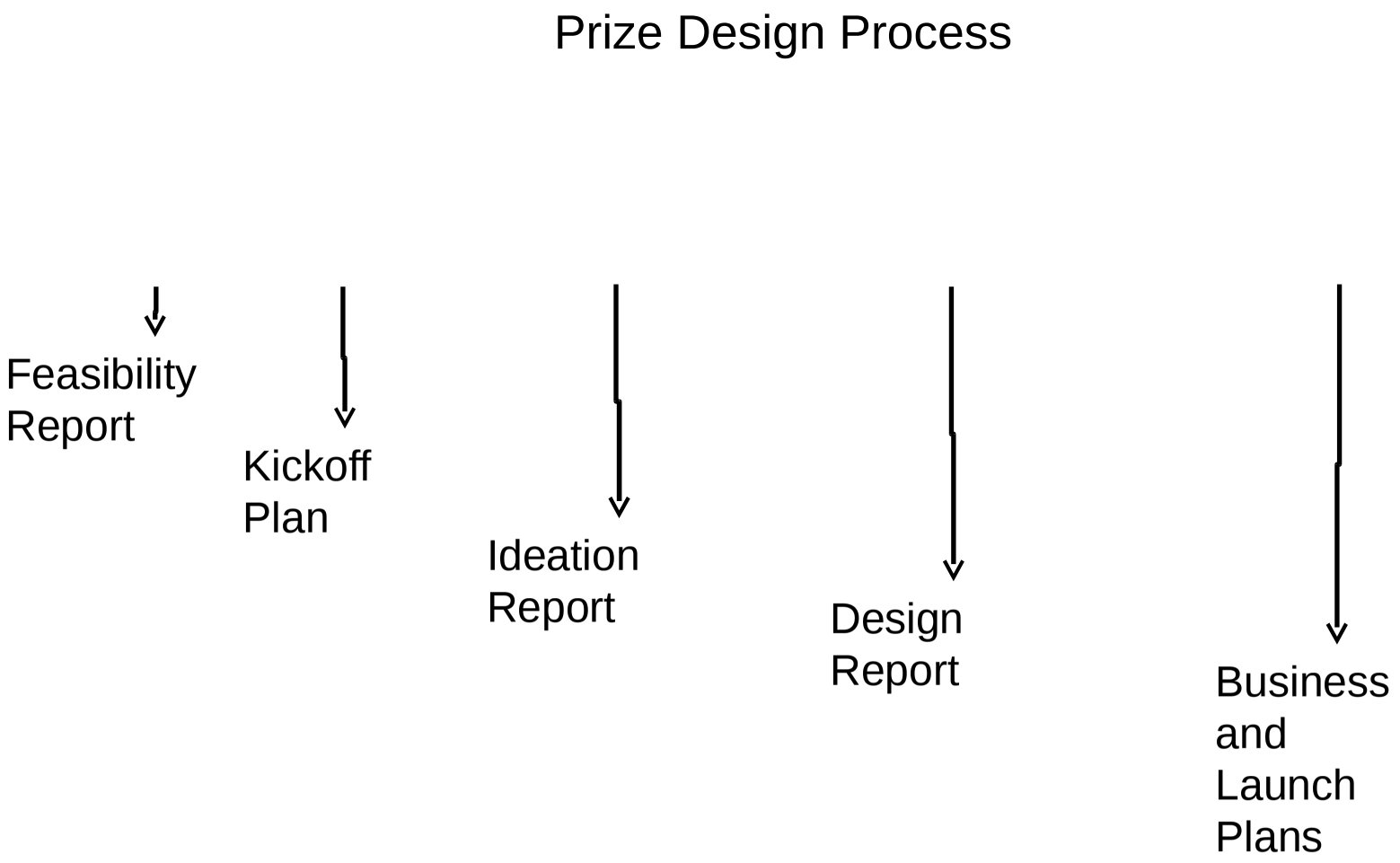
Prize Development Services

- $10M+ award
- Humanity's "grand challenges"
- 3-8 year competition
- Multiple structures

- Custom design
- Focus on client challenge

- $250K-$2.5M award
- Well-defined technical/behavioral challenges
- 1-2 year, date-certain competition

Prize Design: A 5 Step Process



X PRIZE Key Elements

Market Impact Elements	Prize Model Elements	Operational Elements
Grand Challenge	Measurable	Marketable
Addresses Market Failures	Achievable	Telegenic
Transformative	Audacious	Leverage
		Operable/Fundable

Competition Types

Prize Type	Description	Example
Date Certain	All teams must compete on a certain day or time-window	Progressive Insurance Automotive X PRIZE
Date Certain Repeating	If the prize is not won the first attempt, it can be repeated	Northrop Grumman Lunar Lander Challenge
Past the post	First team to meet/beat a specific metric, can be backed by a specific deadline	Netflix Prize
First to Achieve	First team to solve the challenge wins.	Goldcorp Challenge
Standing contest	Any team to meet/beat a specific metric, consistent challenge	Internal employee safety “contests”

Possible Prize Concepts

- Fluid flow in microgravity
  - Model Oscillatory Slosh (i.e. Falcon 1 example)
- Medical research
  - Biomedical research
- Small satellite control and panel development