

# DESIGNING & OPERATING PRIZES FOR **IMPACT**

Marcus Extavour, Director of Technical Operations, Carbon XPRIZE  
marcius.extavour@xprize.org @extempo



**IMAGINE WHAT YOU COULD  
INCENTIVIZE?**

# HARNESSING ABUNDANT ENERGY RESOURCES



# FOR GLOBAL ENERGY ACCESS





**AGRICULTURE** × **WATER** × **ENERGY**



# PRIZES ARE POWERFUL TOOLS FOR INNOVATION

1. Very EFFICIENT
2. Highly LEVERAGED
3. Open to innovators EVERYWHERE
4. It's about MORE than the purse
5. Audacious but ACHIEVABLE target
6. Clear, MEASURABLE outcomes



**\$2.5M – Start-up**



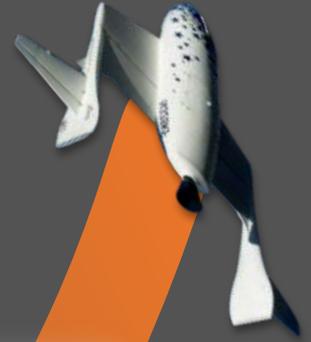
**\$10M - Purse  
Ansari Family**



**>\$120 Million  
Teams' spend**



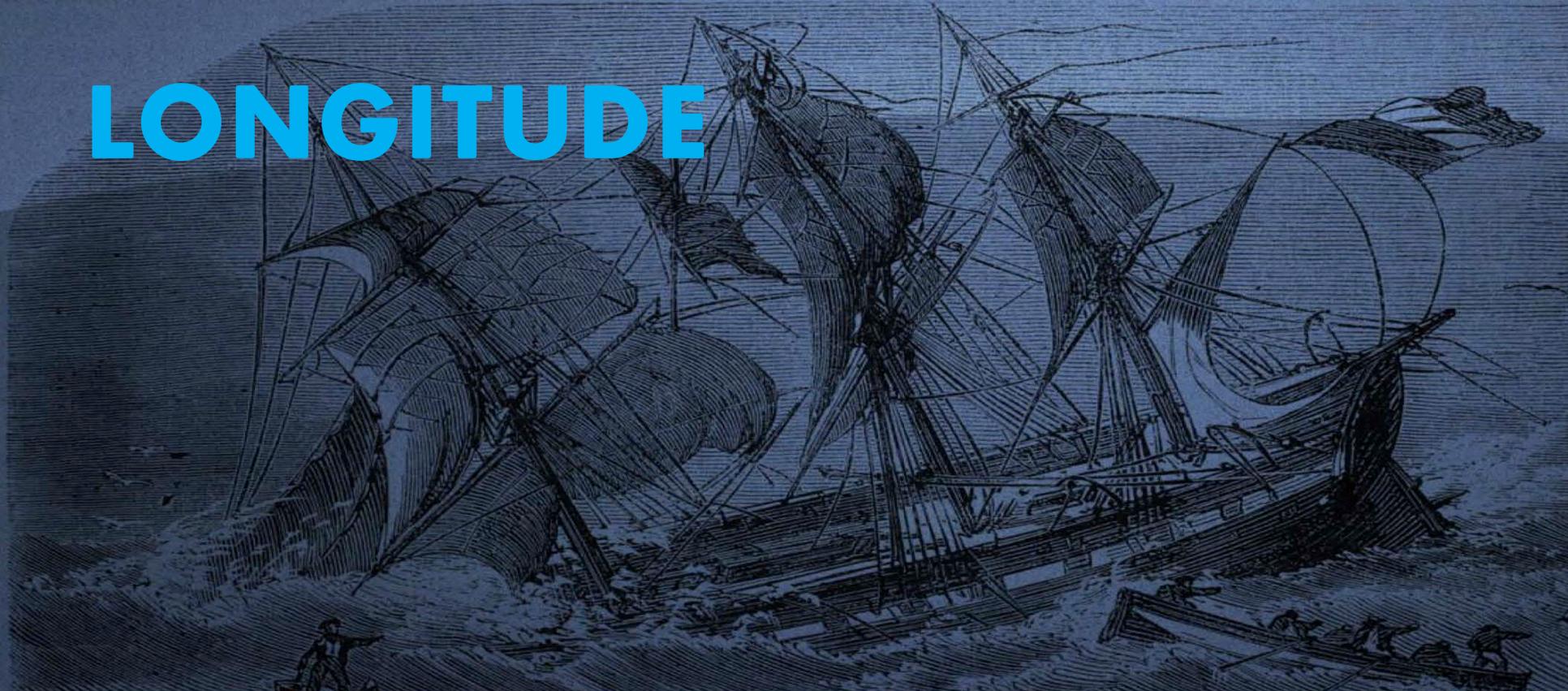
**~\$3 Billion  
Industry**



**PRIZES HAVE BEEN  
CREATING RADICAL  
CHANGE.**

**FOR CENTURIES**

# LONGITUDE



A 20,000 pound prize for a simple and practical method for the precise determination of a ship's longitude.

- Board of Longitude

1714

XPRIZE

# FOOD PRESERVATION



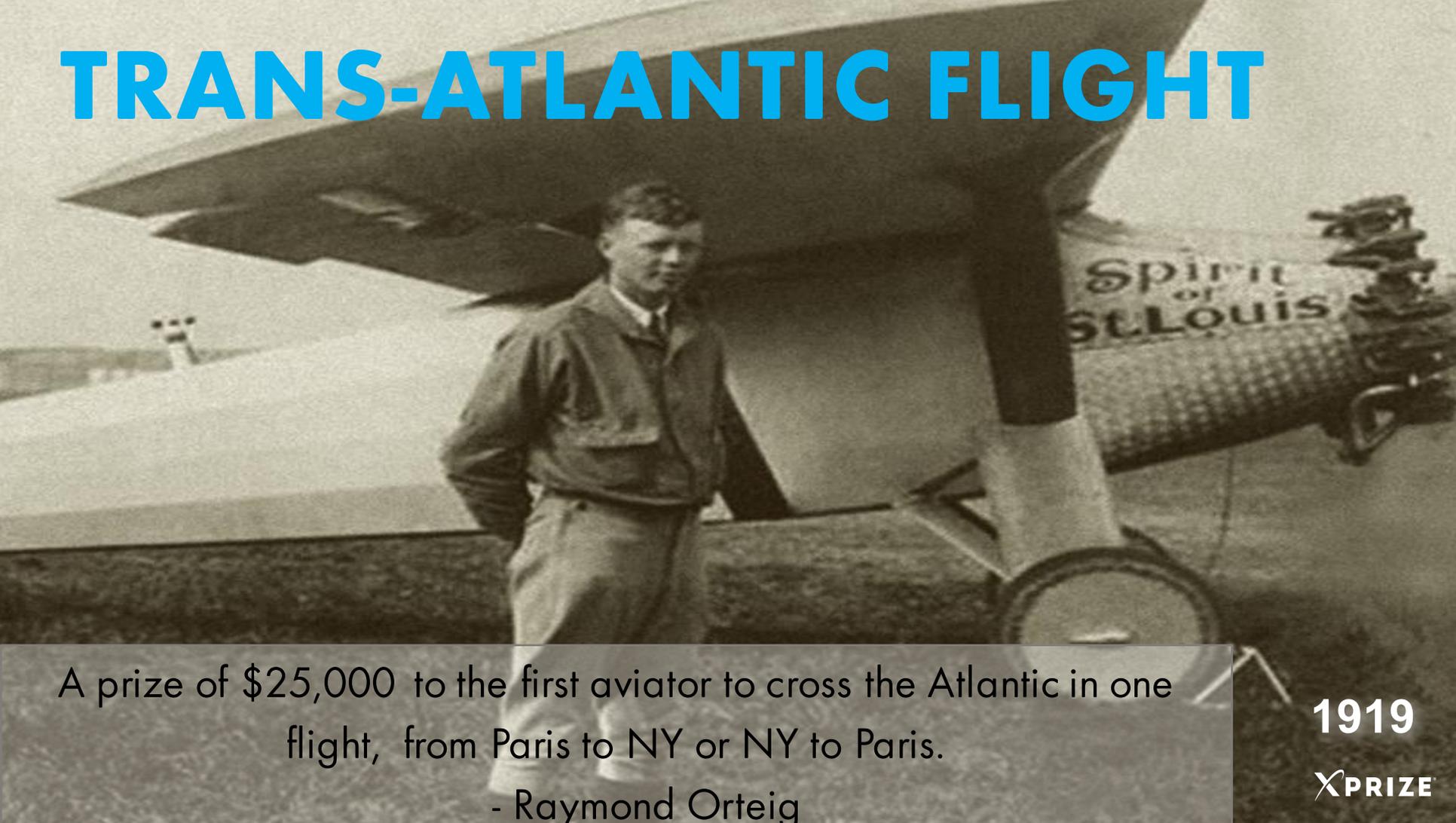
A cash prize of 12,000 francs for a new method to preserve food.

-French Military

1795

XPRIZE

# TRANS-ATLANTIC FLIGHT



A prize of \$25,000 to the first aviator to cross the Atlantic in one flight, from Paris to NY or NY to Paris.

- Raymond Orteig

1919

XPRIZE



# ANSARI XPRIZE

- Fly 100 km altitude
- Twice in 2 weeks
- 3 person crew
- Privately funded
- \$10 Million purse



# XPRIZE CONTINUES TO MAKE HISTORY

AWARDED: \$34 Million

ANSARI XPRIZE

PROGRESSIVE  
AUTOMOTIVE XPRIZE

NORTHROP GRUMMAN  
LUNAR LANDER XCHALLENGE

WENDY SCHMIDT  
OIL CLEANUP XCHALLENGE

NOKIA  
SENSING XCHALLENGE

WENDY SCHMIDT  
OCEAN HEALTH XPRIZE

ACTIVE: \$94 Million

Google  
LUNAR XPRIZE

QUALCOMM  
TRICORDER XPRIZE

GLOBAL  
LEARNING XPRIZE

nrg | cosia  
CARBON XPRIZE

BARBARA BUSH FOUNDATION  
ADULT LITERACY XPRIZE  
PRESENTED BY  
DOLLAR GENERAL  
LITERACY FOUNDATION

Shell  
OCEAN DISCOVERY XPRIZE

IBM Watson AI XPRIZE

# EXPONENTIAL TECHNOLOGIES

## SENSORS



## ARTIFICIAL INTELLIGENCE



## ROBOTICS



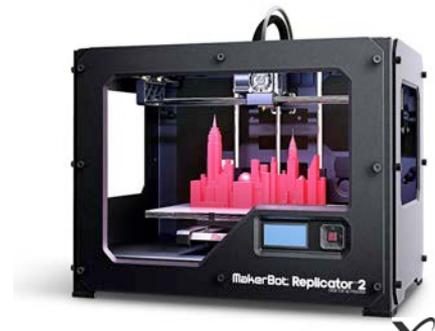
## SYNTHETIC BIOLOGY



## VIRTUAL REALITY

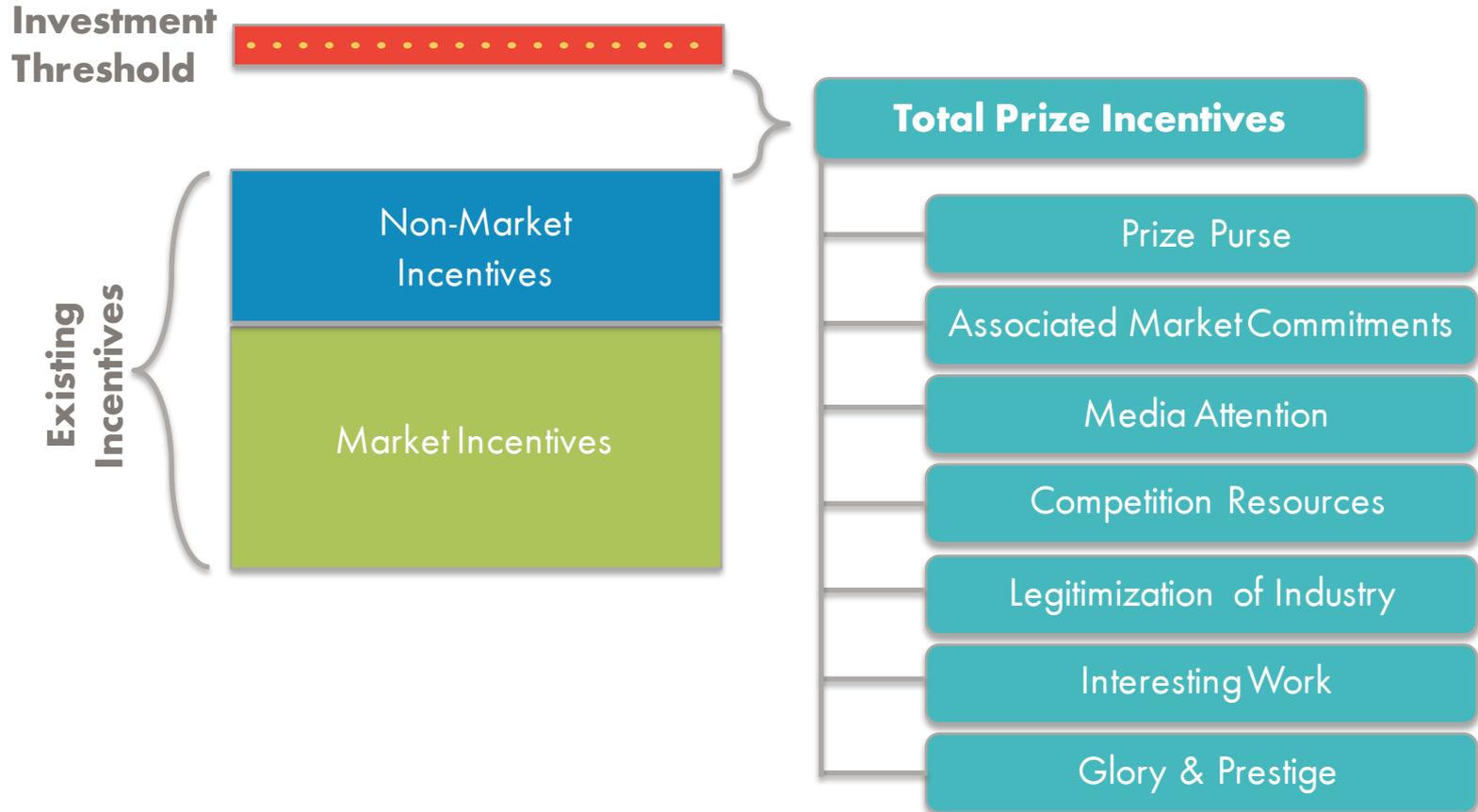


## 3D PRINTING

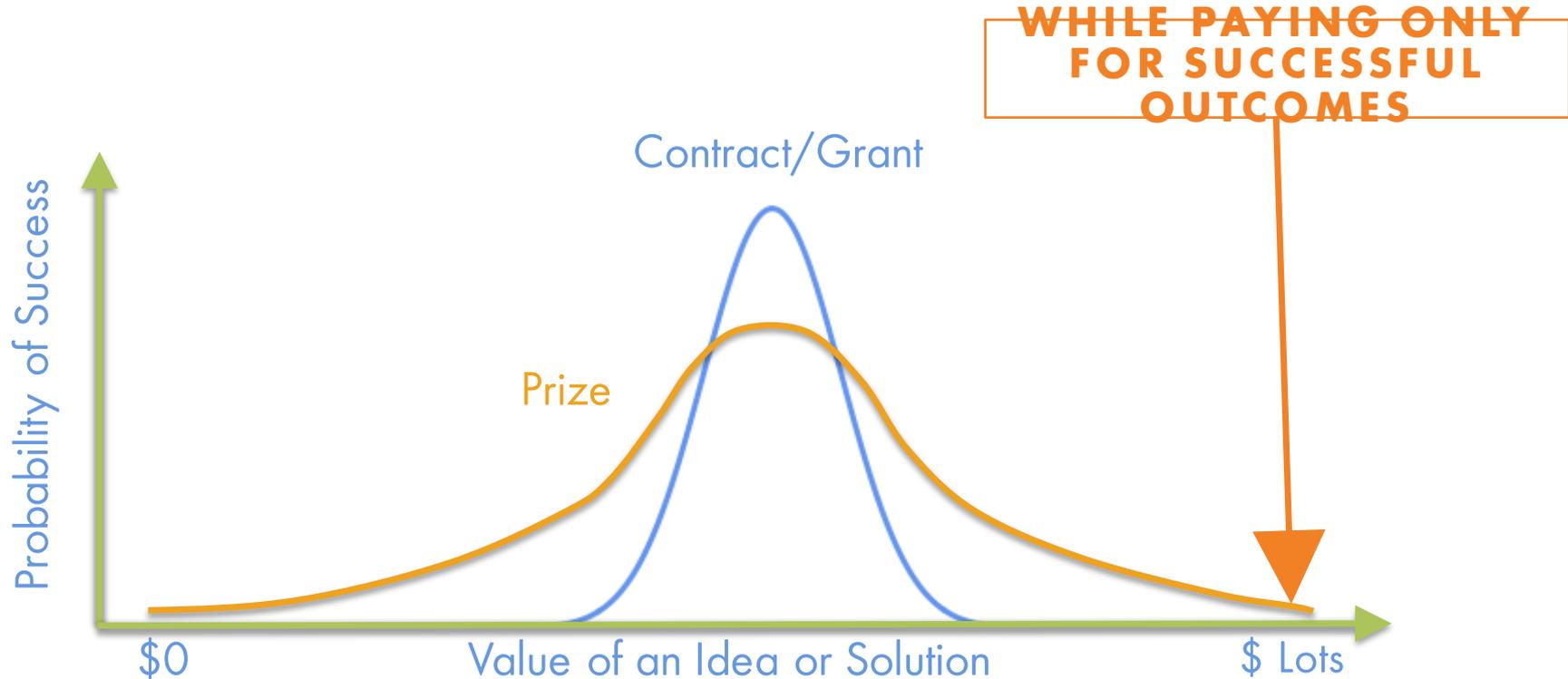


**DRIVE SUCCESS**  
**THROUGH DESIGN**

# PRIZE COMPETITIONS: STACKING INCENTIVES



# PRIZES DEMOCRATIZE INNOVATION AND ENCOURAGE NEW IDEAS



# ASK WHETHER A PRIZE CAN HELP

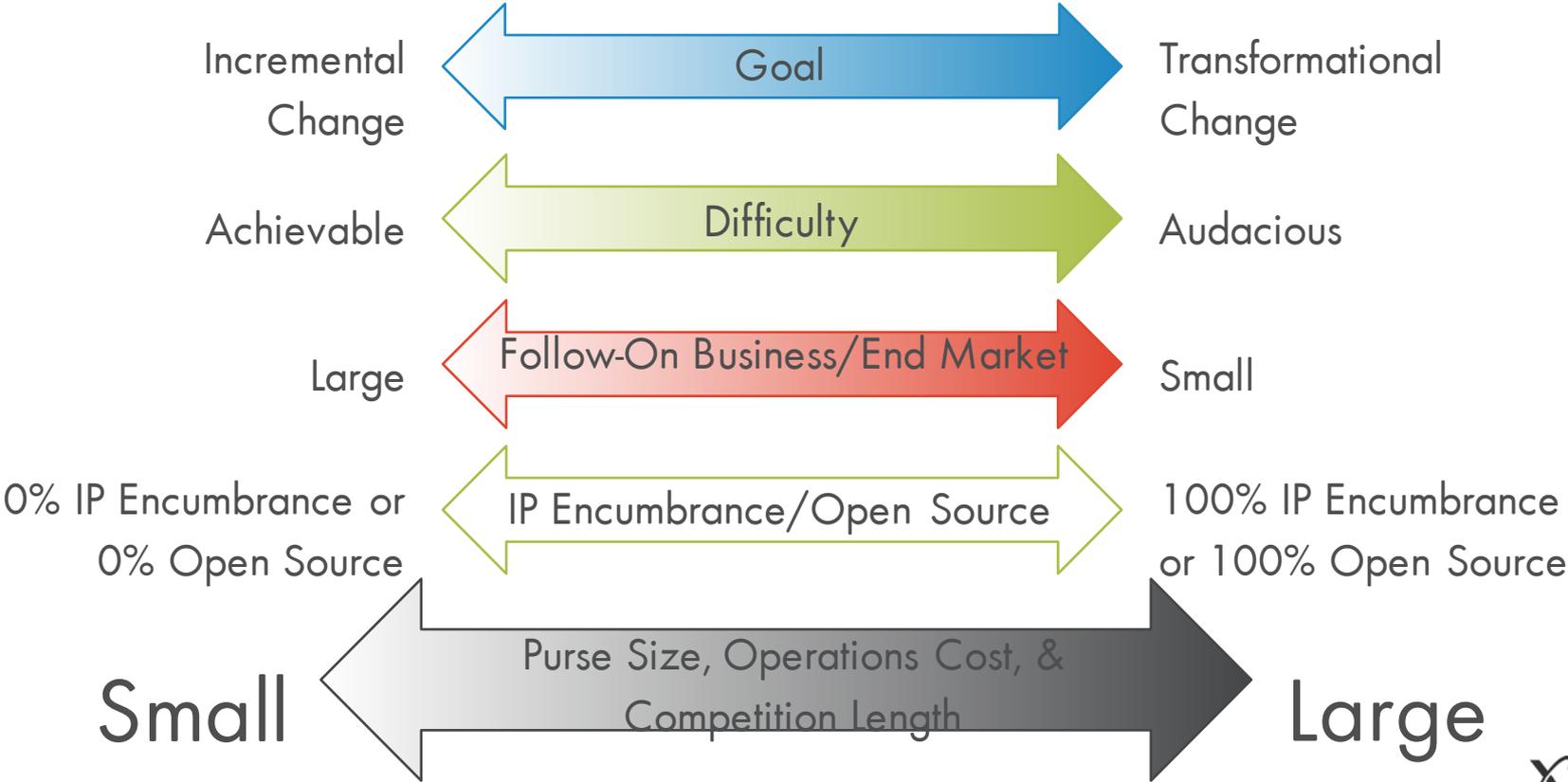
## Most successful when:

- Market failures prevent solutions
- Legal or social constraints prevent change
- **Society believes a problem can't be solved**
- Capital is not sufficiently available
- **Market adoption and distribution is stalled**
- Unawareness inhibits attempts at a solution
- The challenge requires outside innovators

## Not as useful when:

- **Solution requires new physics**
- Progress is already moving unimpeded
- Significant capital is flowing into the market
- **No or small follow-on market exists (and you cannot help build one)**
- Another prize is already in place

# FIND THE SWEET SPOT ON THE KEY SPECTRA



# INCENTIVIZING INNOVATION

- **Define the problem, not the solution.** Solution-agnostic.
- **Define an audacious but achievable target.** Bold, emotional
- **Offer a clear measure of success.** Data, objective, credible.
- **Tell great stories.** Excite, inspire, media moment, narrative.
- **Design for after the prize is won.** Intentional post-prize activity.
- **Make it rewarding and simple.** Motivating team participation.



PRIZE PURSE MATTERS,  
BUT IT'S NOT ALL ABOUT THE **MONEY**

# THE MAGIC OF PRIZES:

## OPERATIONAL INCENTIVES

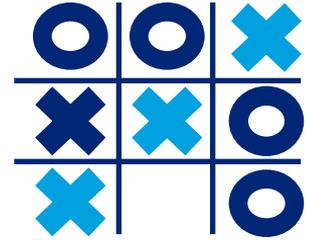
# WHY DO TEAMS COMPETE?



**Money**



**Resources**



**Fun**



**Credibility/Ego**



**Passion**



**Competitive Spirit**

# SOFT INCENTIVES

- The cause
- Making a difference in the world
- Interesting work



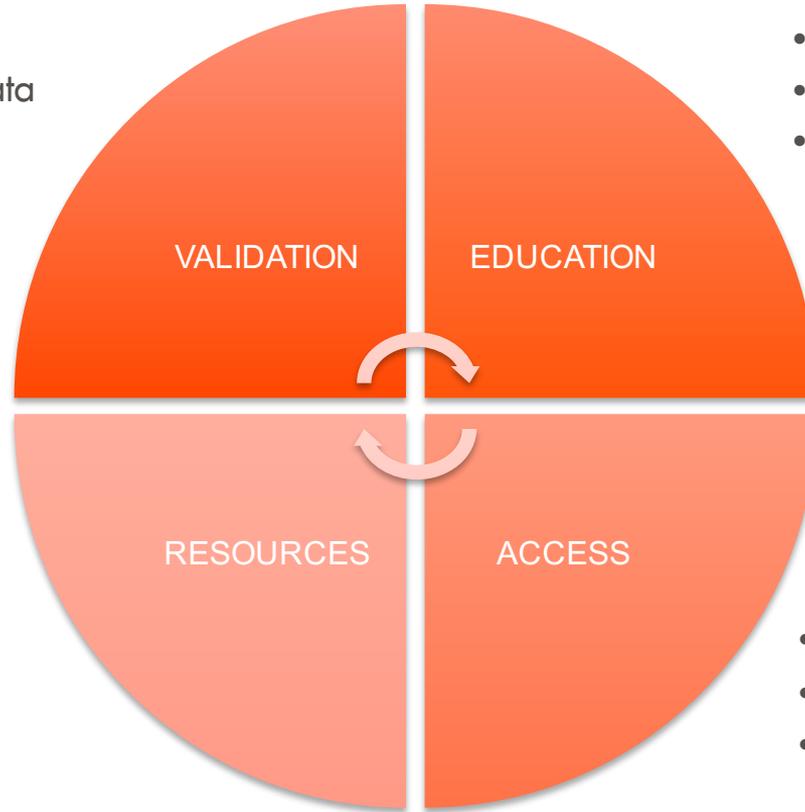
- Glory and prestige
- Pride
- It's fun!
- Attention

- Industry
- Company
- Building a market (during and after the competition)

- Experts
- Networking
- Collaboration
- Community
- New team members

# HARD INCENTIVES

- Industry validation
- Third-party verified data



- Business plans
- Pitch sessions
- Crowdfunding
- Market studies

- Testing
- Expertise
- Media exposure
- Brand promotion

- Capital infusion
- Partnership opportunities
- Regulators

# WHAT DO YOU PRIZE?

Marcus Extavour, Director of Technical Operations, Carbon XPRIZE  
marcius.extavour@xprize.org @extempo

