



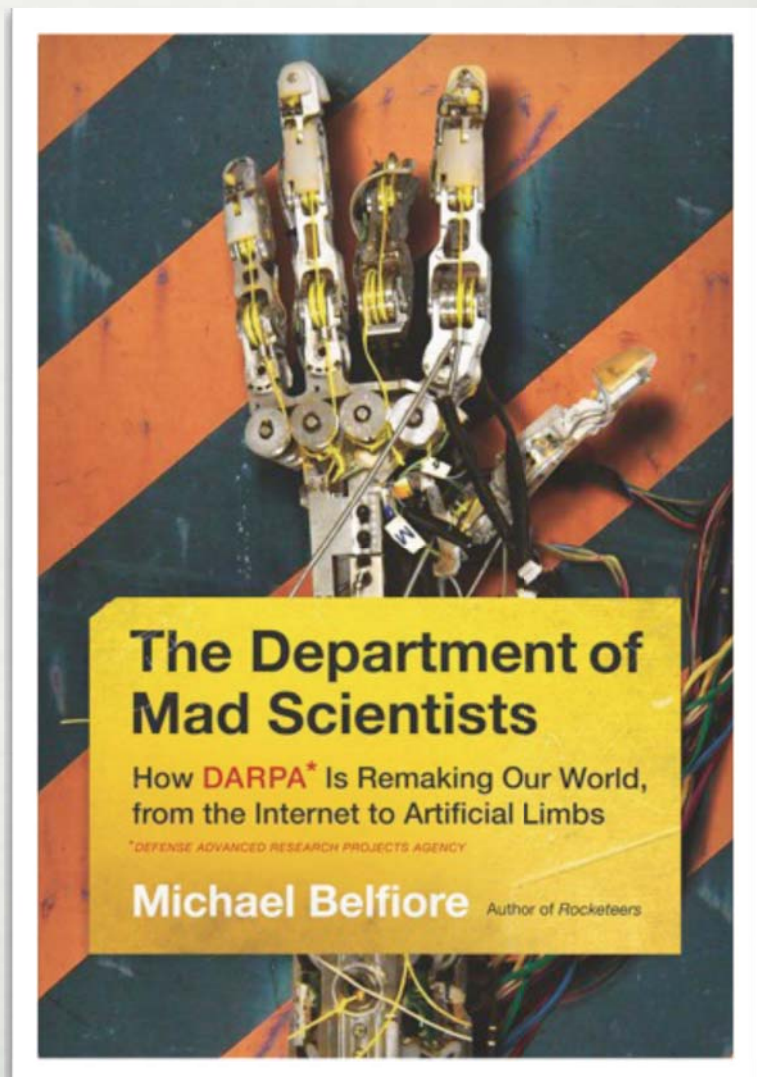
## INNOVATIVE PARTNERSHIPS FOR TECHNOLOGY BREAKTHROUGHS

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MICHAEL BELFIORE, AUTHOR, THE DEPARTMENT OF MAD SCIENTISTS  
QUIRR MEETING  
WASHINGTON, JUNE 15, 2011

# PERSPECTIVE

- ☐ AUTHOR OF BOOKS ON TECHNOLOGY INNOVATION
- ☐ CONTRIBUTOR TO SCIENTIFIC AMERICAN AND OTHER MAGAZINES
- ☐ PREDICTING TRENDS 5-20 YEARS OUT







EARTHRISE, DECEMBER 1968

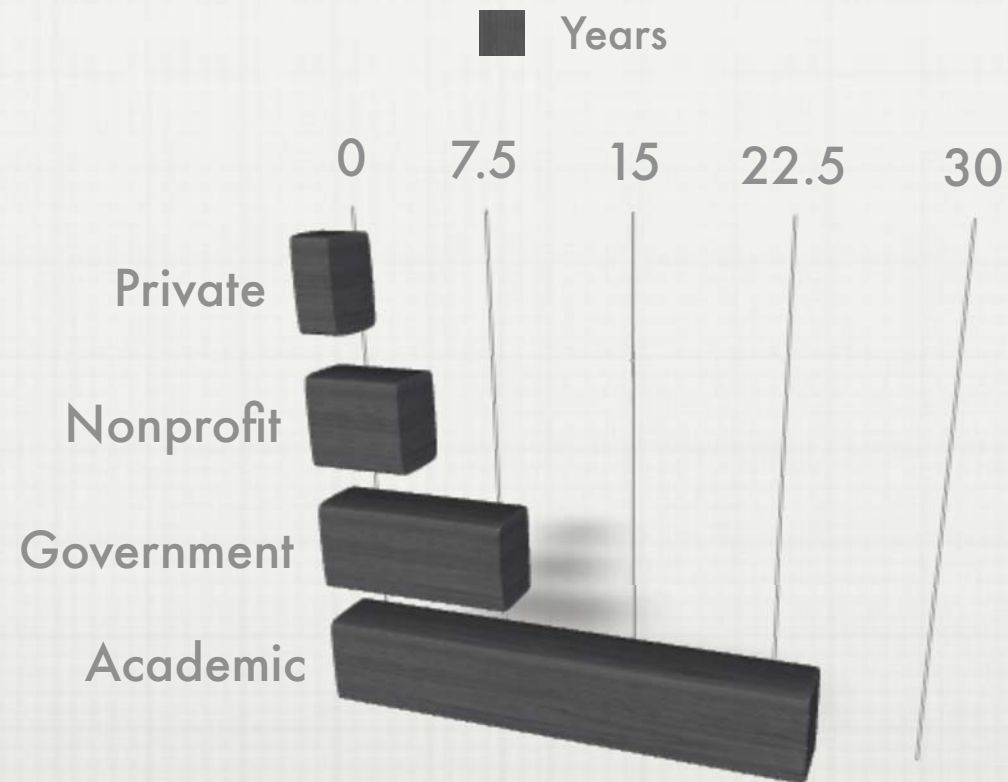
# INNOVATIVE PARTNERSHIPS

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- ☐ CREATED FOR EACH NEW PROJECT
- ☐ INCLUDE NEW PLAYERS
- ☐ LEVERAGE THE STRENGTHS OF DIFFERENT ORGANIZATION TYPES

# R&D TIMEFRAMES

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# DARPA VS. NASA

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- |  |  |
|--|--|
| <input type="checkbox"/> TERM LIMITS         | <input type="checkbox"/> LIFETIME EMPLOYMENT   |
| <input type="checkbox"/> NO INTERNAL LABS    | <input type="checkbox"/> BIG INFRASTRUCTURE    |
| <input type="checkbox"/> SINGLE MISSION      | <input type="checkbox"/> CHANGING MISSION      |
| <input type="checkbox"/> STREAMLINED         | <input type="checkbox"/> LARGE BUREAUCRACY     |
| <input type="checkbox"/> CONTRACTOR DIRECTED | <input type="checkbox"/> AGENCY DIRECTED       |
| <input type="checkbox"/> R&D FOCUSED         | <input type="checkbox"/> R&D PLUS OPERATIONS   |
| <input type="checkbox"/> PERMISSION TO FAIL  | <input type="checkbox"/> FAILURE NOT AN OPTION |



# URBAN CHALLENGE

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- ☐ 53 TEAMS, 6 FINISHERS
- ☐ NON-TRADITIONAL PLAYERS
- ☐ \$2.5 MILLION PURSE
- ☐ WELL-DEFINED GOAL
- ☐ FIRM DEADLINE
- ☐ NEW CAPABILITY CREATED

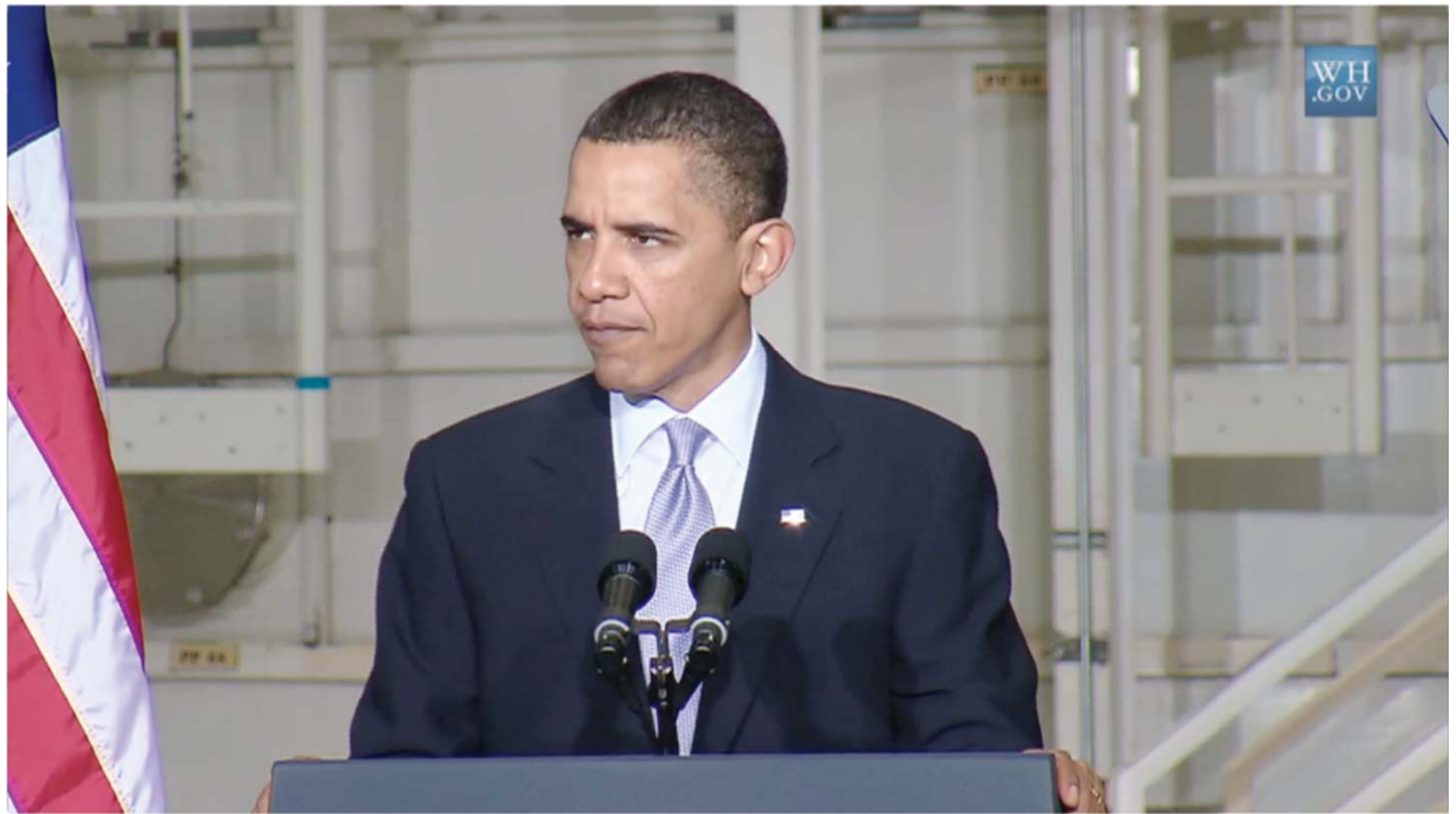


# SPACE 2.0

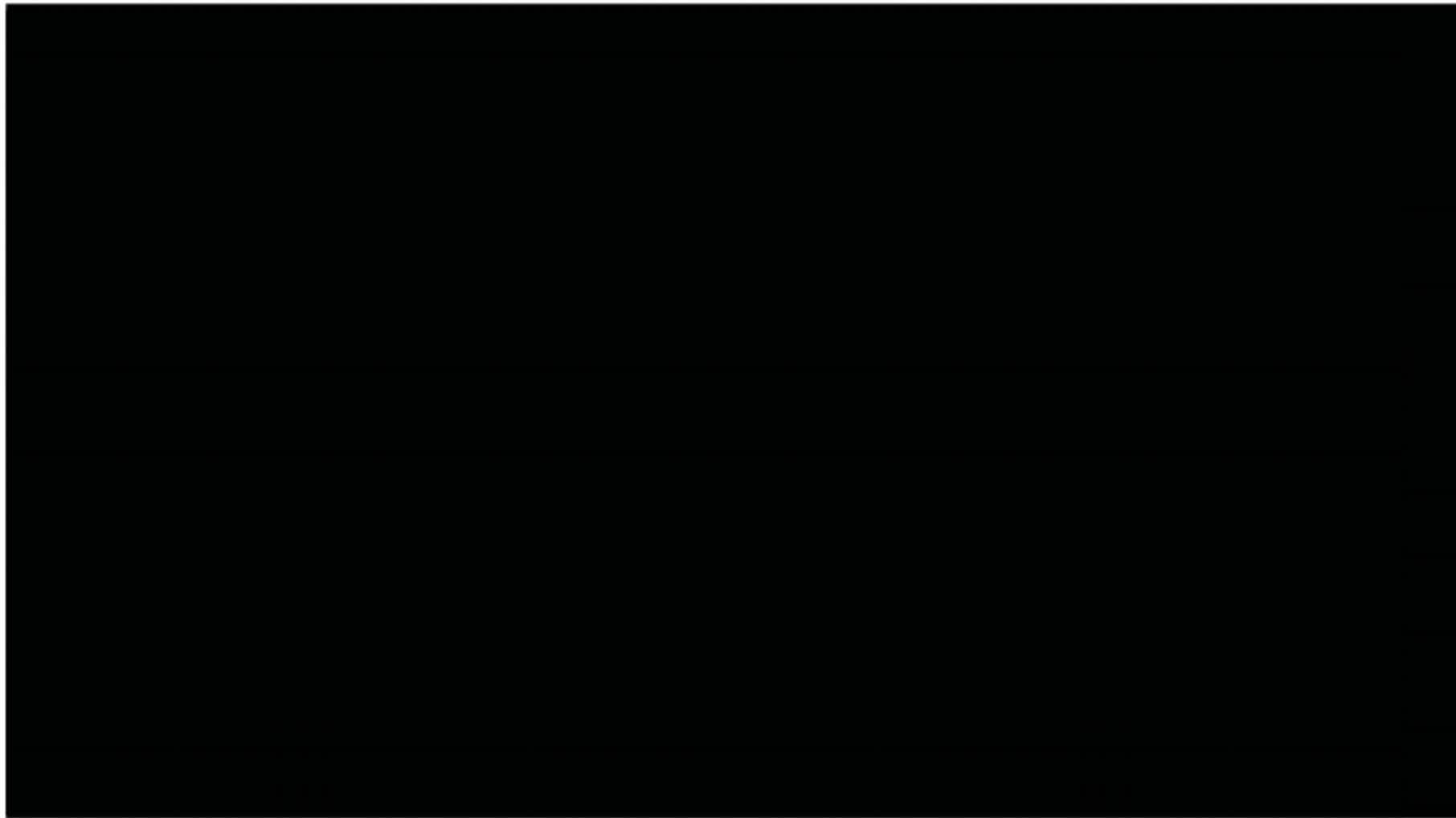
- ☐ NOT JUST A GOVERNMENT PROGRAM
- ☐ COMPETITION BRINGING ECONOMIES OF SCALE
- ☐ NEW PLAYERS DRIVING GREATER INNOVATION
- ☐ PRIVATE-SECTOR TIMESCALES FOR DEVELOPMENT







SPACE POLICY SPEECH, APRIL 2010

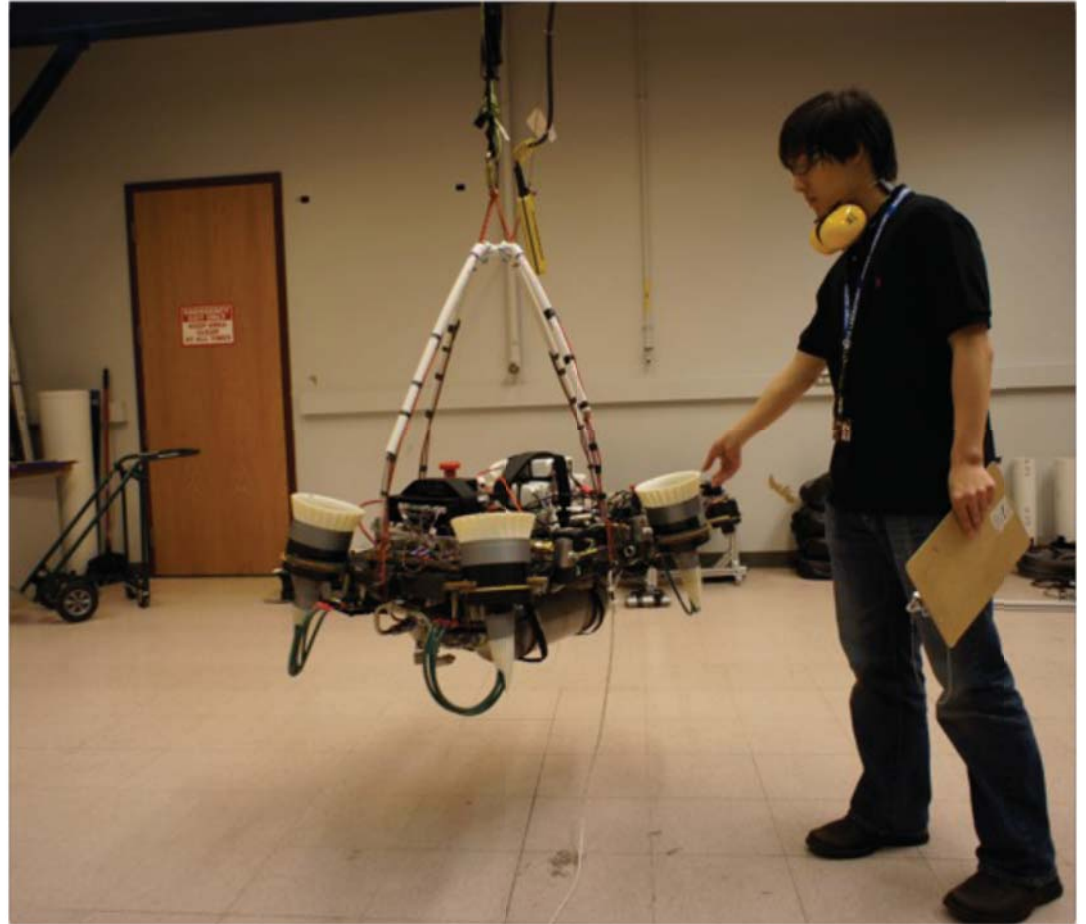


## SPACEX ROADMAP

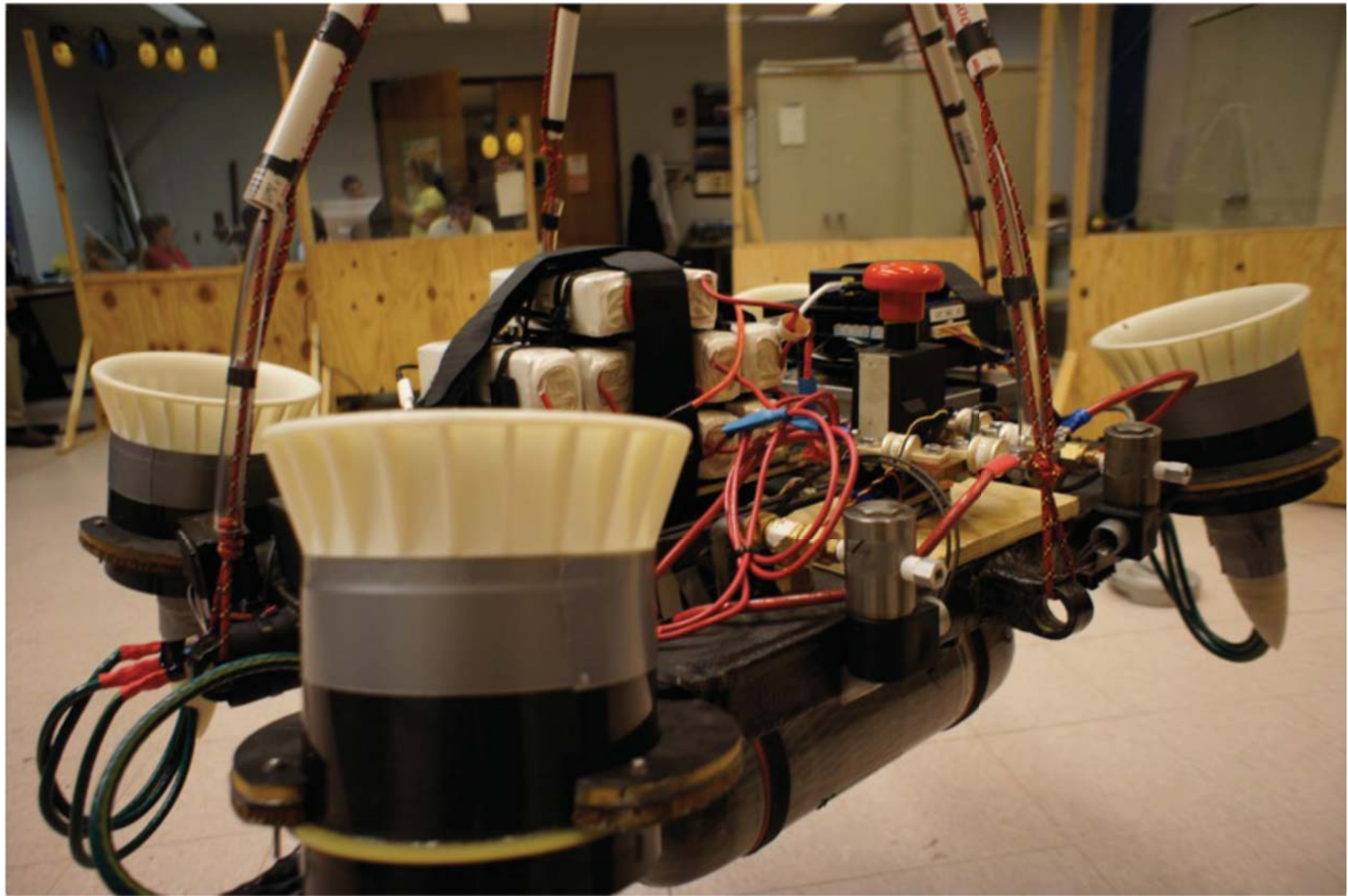
# GOOGLE LUNAR X PRIZE

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- ☐ 29 TEAMS
- ☐ \$30 MILLION PURSE
- ☐ INNOVATIVE PARTNERSHIPS
- ☐ 90% PRIVATE INVESTMENT







NEXT GIANT LEAP TERRESTRIAL TESTBED



NEXT GIANT LEAP DESCENT TEST, MAY 2011





ASTROBOTIC MOON ROVER PROTOTYPE





ASTROBOTIC FIELD TEST, APRIL 2011

# PAST VS. FUTURE

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- ☐ VERY EXPENSIVE  
APOLLO-STYLE  
GOVERNMENT  
PROJECTS
- ☐ ONE-SHOT  
ACHIEVEMENTS THAT  
MAY NOT REPEAT
- ☐ SMALL TEAMS  
WORKING WITHIN  
INNOVATIVE  
PARTNERSHIPS
- ☐ SUSTAINABLE R&D  
THAT BUILDS NEW  
CAPABILITIES

# FOR UPDATES...

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- ☐ MICHAELBELFIORE.COM
- ☐ GOOGLE "AUTHOR AND SPEAKER ON INNOVATION"