

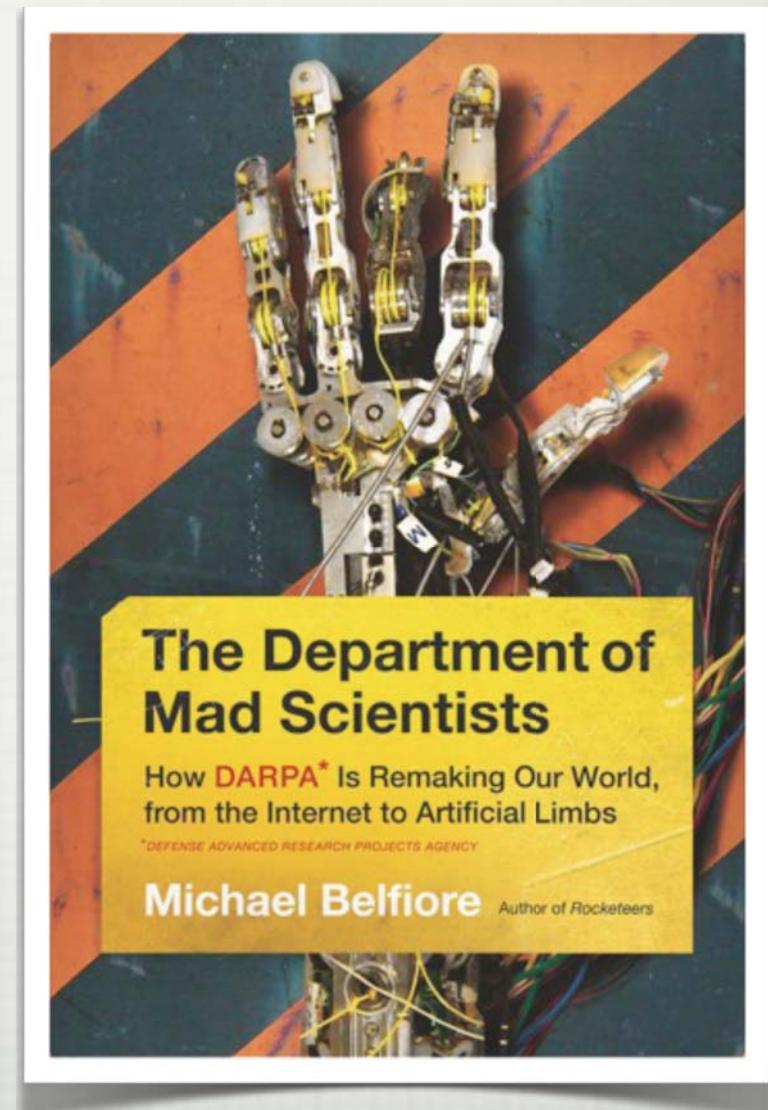
## INNOVATIVE PARTNERSHIPS FOR TECHNOLOGY BREAKTHROUGHS

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MICHAEL BELFIORE, AUTHOR, THE DEPARTMENT OF MAD SCIENTISTS  
GUIRR 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

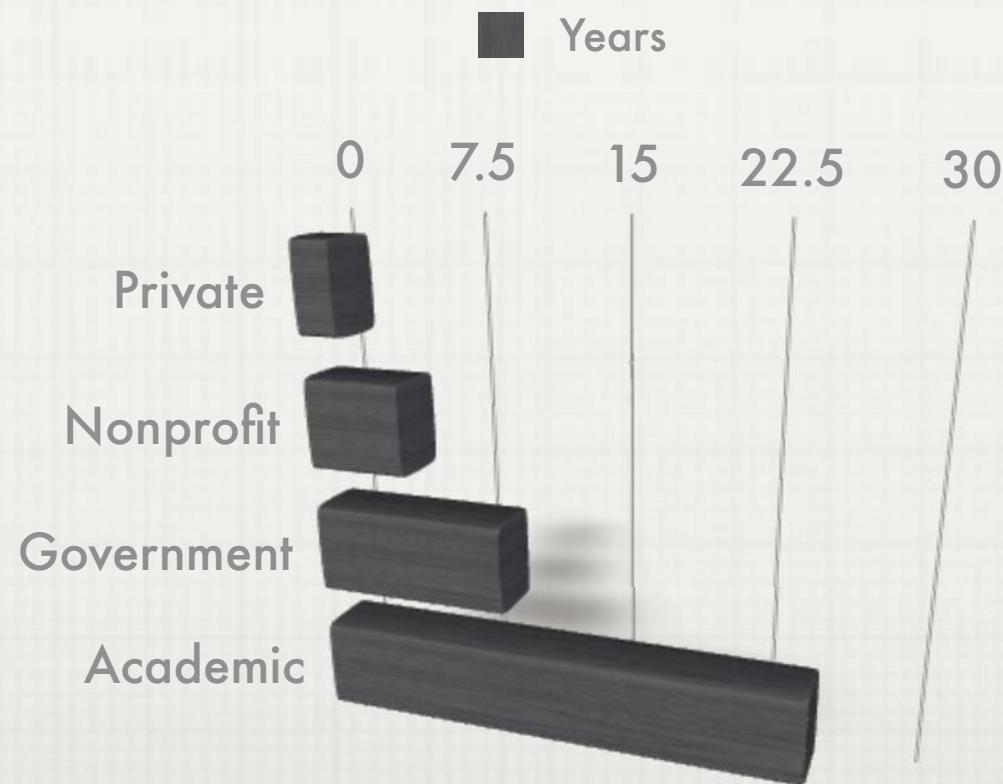
# INNOVATIVE PARTNERSHIPS

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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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- TERM LIMITS
- NO INTERNAL LABS
- SINGLE MISSION
- STREAMLINED
- CONTRACTOR DIRECTED
- R&D FOCUSED
- PERMISSION TO FAIL
- LIFETIME EMPLOYMENT
- BIG INFRASTRUCTURE
- CHANGING MISSION
- LARGE BUREAUCRACY
- AGENCY DIRECTED
- R&D PLUS OPERATIONS
- FAILURE NOT AN OPTION

# URBAN CHALLENGE

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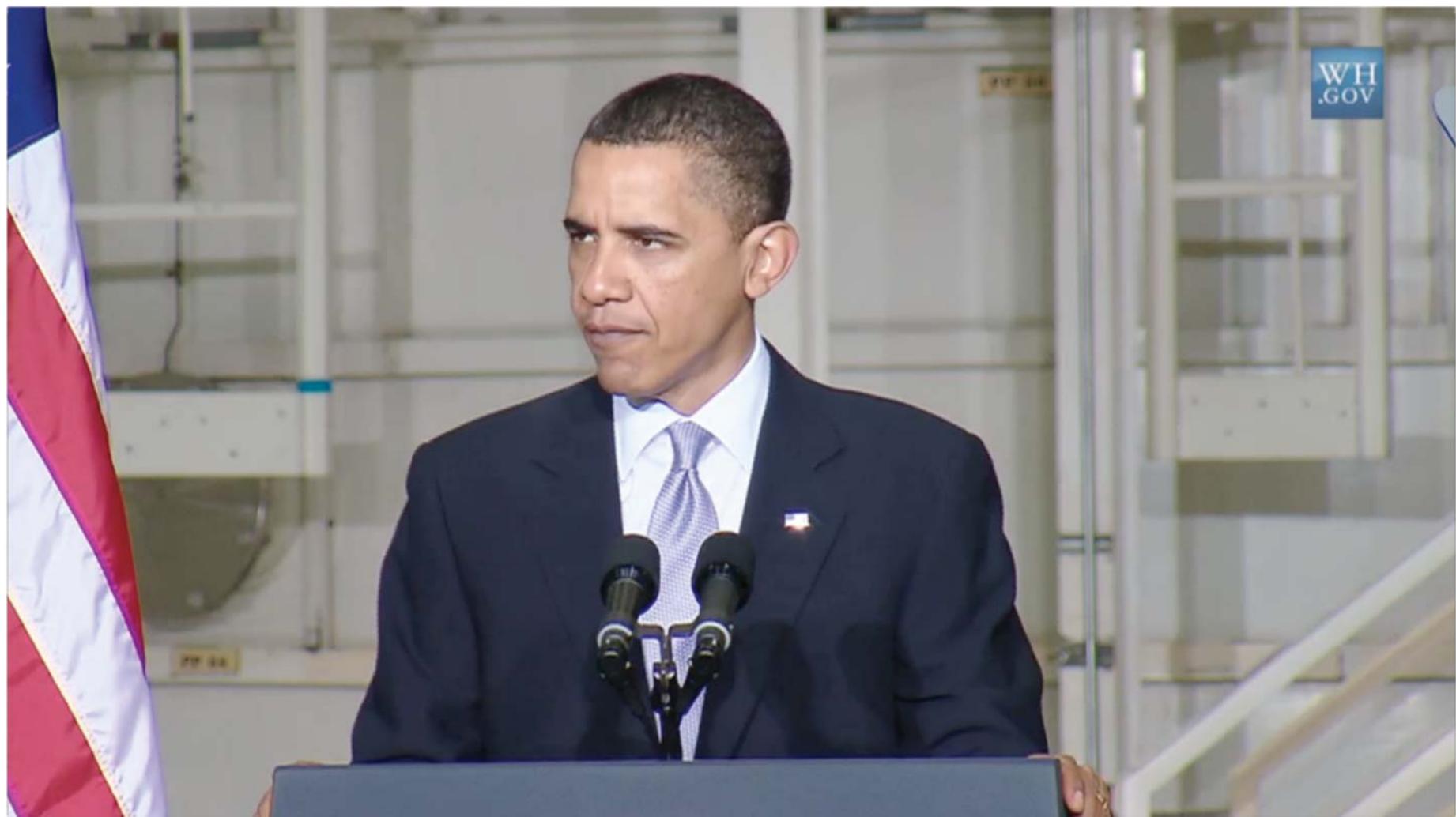
- 53 TEAMS, 6 FINISHERS
- NON-TRADITIONAL PLAYERS
- \$2.5 MILLION PURSE
- WELL-DEFINED GOAL
- FIRM DEADLINE
- NEW CAPABILITY CREATED



# 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

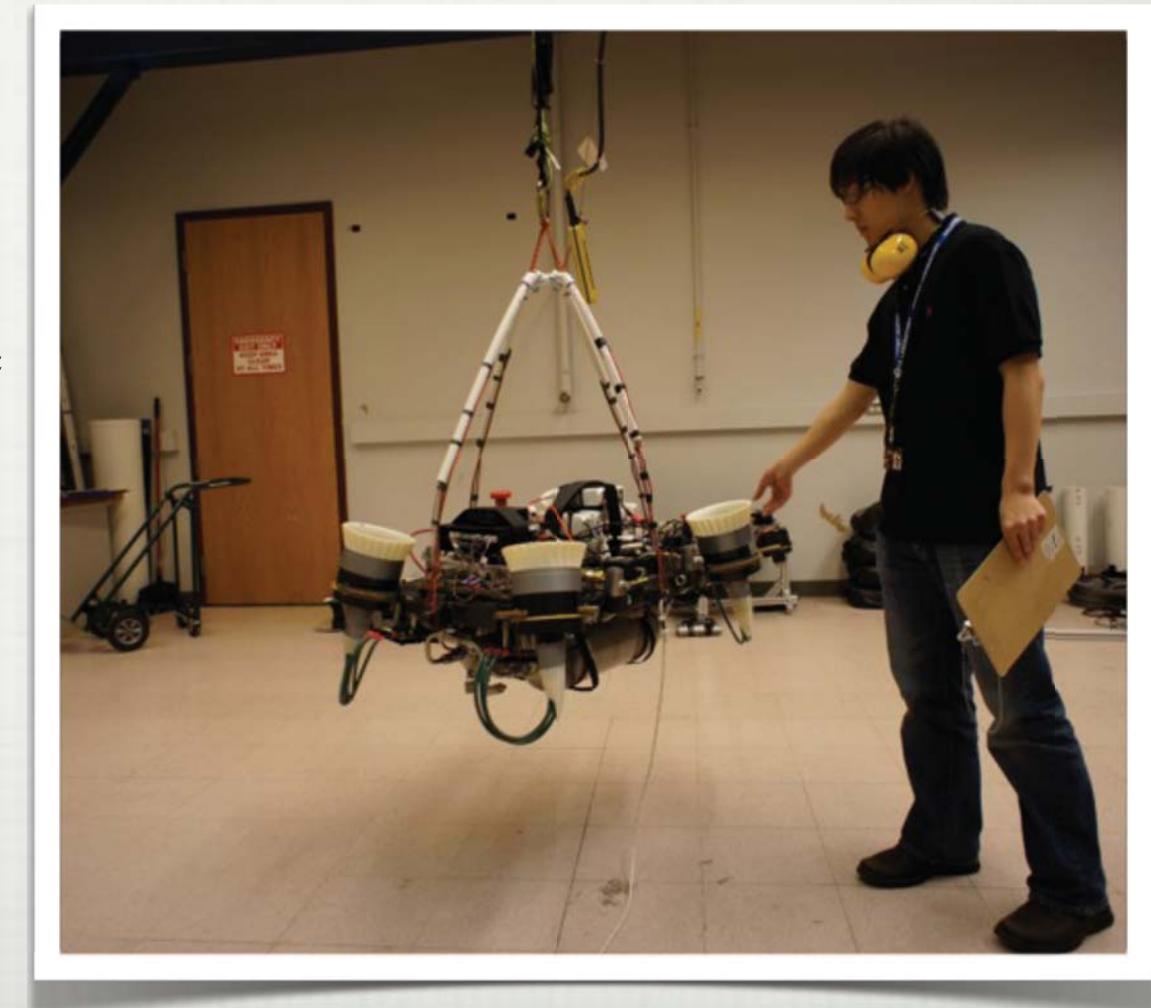


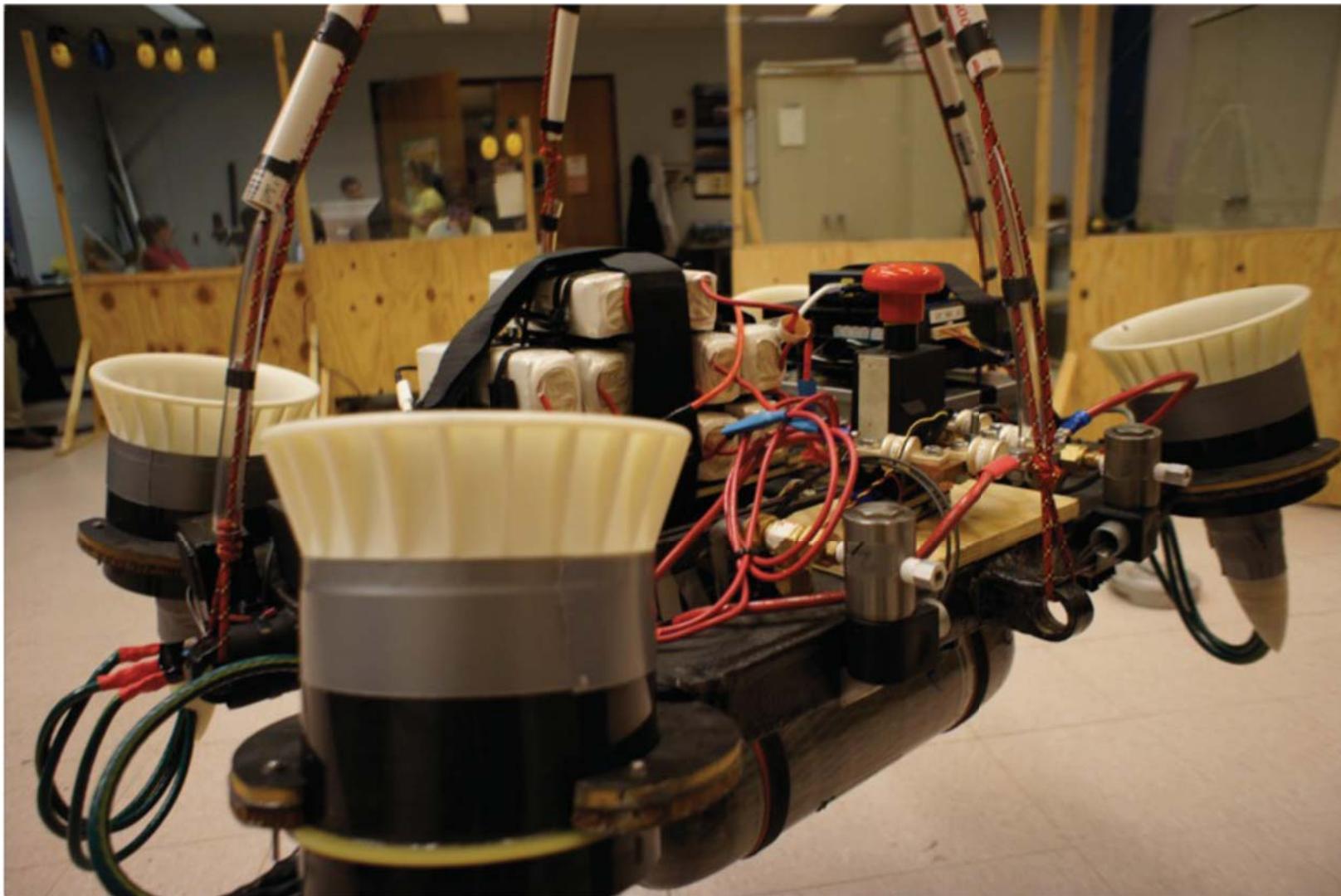
## SPACEX ROADMAP

# 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"