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CALIFORNIA



SPACE  
AUTHORITY



# New Space Professionals & *The Workforce of Tomorrow*

California Space Authority  
California Space Education & Workforce Institute  
Next Generation Exploration Conference-2  
NASA Ames  
February 13, 2008



# Yes, we're talking about you

- **“New Space Professional”** – Persons who consider themselves “new” to the space industry (e.g. new hires, young professionals, aspiring students).
- **Space Enterprise** – All civil, commercial and national security space in all sectors, public, private, etc.

*“The California space enterprise community includes those participating in “activities that involve sub-orbital, orbital, lunar, planetary or deep space systems, operations, or related services, including supporting activities such as technology development; manufacturing; operation of ground systems, ranges and test sites; space-related education and training and government support”*

*-Space Enterprise Definition, 2004 California Space Enterprise Strategic Plan*

## Who we are...

CALIFORNIA



**SPACE  
AUTHORITY**

- **California Space Authority (CSA)** is a 501c6 organization that works to enhance California space enterprise through programs, outreach, advocacy and more. CSA is designated as the state of California's spaceport authority.



- **California Space Education & Workforce Institute (CSEWI)** is a 501c3 organization that works closely with its parent organization, CSA, to enhance and retain a robust space workforce.



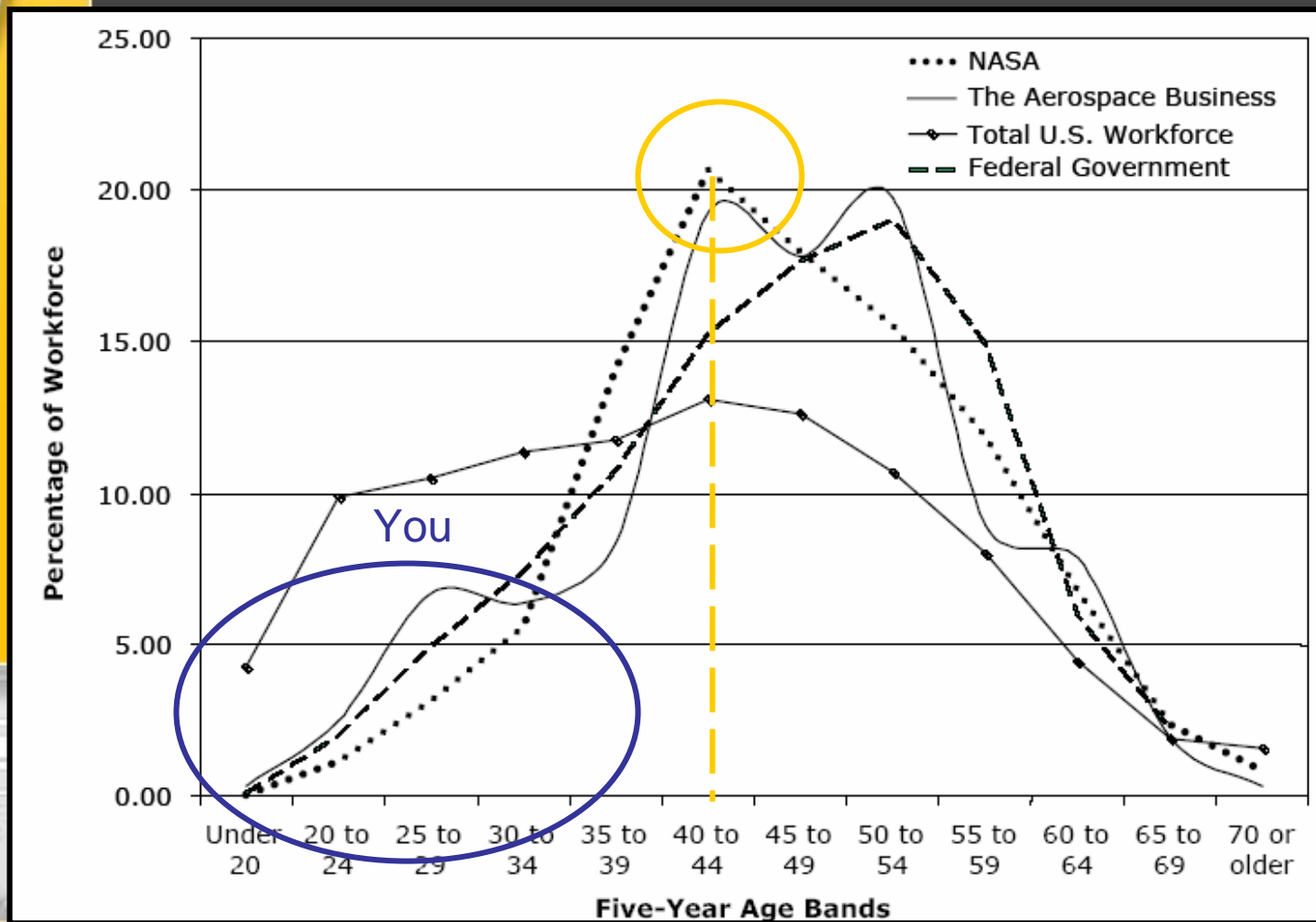
# So Who's Going to Take us To the Moon?

Recent U.S. space exploration plans specified a phase-out of the space shuttle by **2010** and development of a new human launch vehicle to support human space missions as early as **2014**, and a human return to the Moon between **2015** and **2020**.



# Space Workforce Demographics

SOURCE: Garth Henning and Richard Leshner, NASA, presentation to the Committee on Meeting the Workforce Needs for the National Vision for Space Exploration, February 22, 2005.





# A&D Workforce Demographics

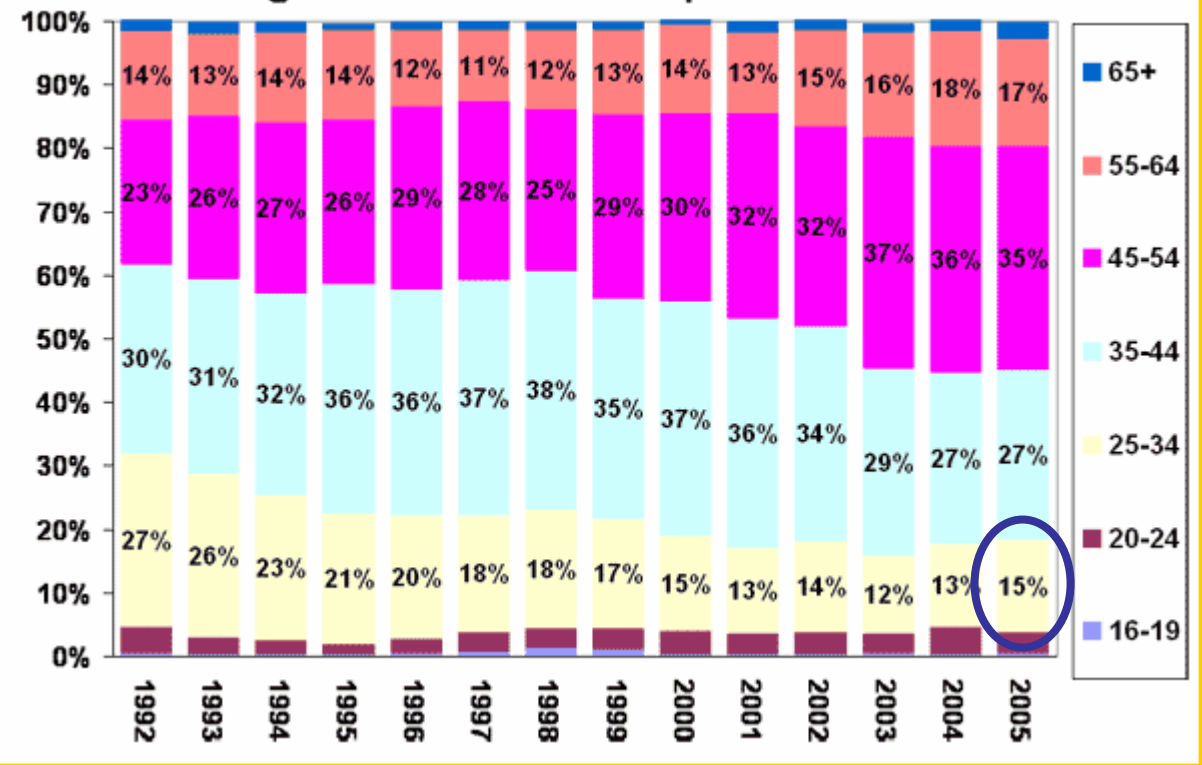
	Average Age		% Women		% Minority	
	2006	2005	2006	2005	2006	2005
All	45.0	44.0	26.0	24.6	25.1	27.8
Engineering	44.0	42.8	10.8	12.4	18.2	19.1
Computer Science/IT	42.0	43.4	31.9	21.7	21.7	23.9
Engineering Tech/Aides	43.0	43.3	13.5	14.3	20.8	24.6
Program Management	48.0	46.9	17.4	17.5	10.4	9.1
Production/Touch Labor	45.0	45.7	25.6	20.8	33.4	35.6

SOURCE: 2007 Workforce Study, Aviation Week



# A&D Workforce Demographics

### Age Distribution of Aerospace Workforce



SOURCE: Aerospace Industries Association, Aerospace Research Center 2008





# More Factoids

- "Gen-X gap": The substantially smaller number of NASA workers in the 25- to 29-year age band who will be the workforce that will have to implement the exploration vision over the next 15 years.
- NASA Age Distribution:
  - average age: 45.8
  - **24 percent are under 40,**
  - 67 percent are between 40 and 59
  - 9 percent are 60 or older
- Eligible to retire:
  - Current:
    - 12% engineers
    - 21% scientists
  - 2011:
    - 28% engineers
    - 45 % scientists

SOURCE: Issues Affecting  
the Future of the U.S.  
Space Science and  
Engineering Workforce  
(Nat'l Academy of Sciences,  
2007)



# If we're going to the Moon...





# Get Involved – CSA & CSEWI offer plenty of opportunities

>>>Play....

# CA Space Enterprise Strategic Plan

Join a Collaborative  
Seasoned Space  
Professionals

- Space Business Development (BDRG)
- California Space Base Vitality
- Space Research & Technology Development



California Space Enterprise  
**STRATEGIC PLAN**  
2007-2010





# Aerospace Community Development Program

## **BE A LEADER**

- **E-mentoring**
  - Find a mentor
  - Be a mentor
- **Speakers Bureau**
  - Talk to students about your passion, your job, life...

## **BE HEARD**

- Aerospace Survey of New Space Professionals
  - Tell us about your work
  - Attraction & retention
- Young Spacers, Your Own Blog
  - On Being Young & Working in/on Space
  - [www.csewi.org/blog](http://www.csewi.org/blog)



# Join CSA

## Our Current Members Include:

- Buzz Aldrin
- Michael Melvill
- Burt Rutan
- Space X
- Boeing

## Benefits:

- Updates on CA Space enterprise news + events
- Space advocacy opportunities
- Invites to our events (and discounts to them)
- Networking with companies + seasoned professionals
- Leadership opportunities



# Questions?

## The Team

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[www.InnovateCalifornia.net](http://www.InnovateCalifornia.net)



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