

Conference on Quality in the Space and Defense Industry

March 18 -19, 2013

Cape Canaveral, FL

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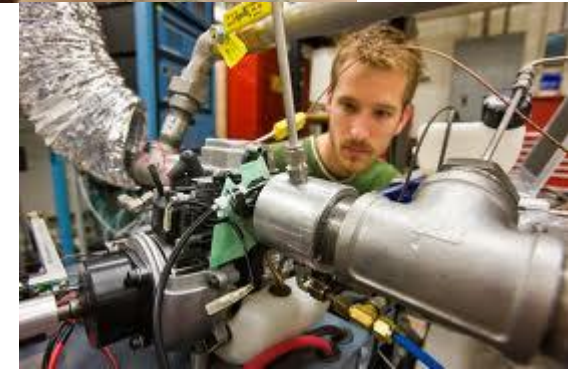
Education for the Next Economy

About NextEd:

- Employer-Education Partnership
- K-12, Community College, Universities
- Affiliate of Sacramento Metro Chamber
- Serve as Capital Region P-20 Council
- STEM, Pathways, Career Exploration, Policy
- Advance Regional Economic Objectives

Fueling the Talent Pipeline

Public and private aerospace employers require a robust pipeline of home grown talent to fill research and technical careers



The USA – A talent magnet

- Top flight talent from overseas
- Flee oppression
- Seek opportunity –academically and economically

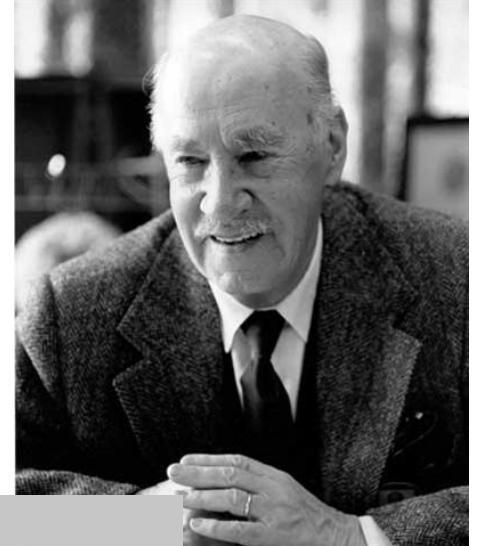
Theodore Von Karman

- 1930 Moved to US from Germany –
Guggenheim Lab Cal Tech
- 1936 Founded Aerojet in Azusa, CA
- 1944 JPL
- 1946 Scientific Advisory Group to US
Armed Forces



Igor Skorsky

- 1919 Moved to US from Soviet Union
- 1929 Merged with United Technologies Corp in Stratford, CT
- 1934 Clipper for Pan Am
- 1939 VS-300 (helicopter)



Wernher Von Braun

- 1945 Operation Paperclip – 80 former Nazi Scientists
- 1950 Marshall Space Center, Huntsville, AL
- 1958 Jupiter C – Explorer 1 satellite
- 1960 Director MSC – Saturn - Apollo



1991 to 2001

- Russian Brain Drain
- Sergey Brin – Founder of Google
- 30% of Microsoft products developed by Russian émigrés



Post 2001

- Affluent Chinese
- 80% seek better education for their children
- Education in China: competitive, scarce, politicized



Supply and Demand

Aging Workforce

40% of Aerospace = 65 or older by 2014



Domestic Competition

- Its not just Rocket Science
- Healthcare
- Bioscience
- Energy
- IT



International Competition

- Economic Opportunity
- Personal Freedom
- Political Stability



Leaky Domestic Pipeline

US Education System

- Science and Math: 25th out of 34 industrial nations
- HS Graduation: Nevada = 62%; Iowa = 88%
- Suburban districts – academic programs, not STEM pathways
- Must Improve Achievement, Graduation AND Persistence
- Social Equity vs. Economic Competitiveness
- World Class Universities

Solution = You

- National and State Policy
- Regional Leadership
- Local Education Engagement



National and State Policy

- Education is the *Economic* Issue of our time
- Economic Competitiveness v. Social Equity
- Prioritize education policy for high flyers AND challenged students
- Subsidize STEM Education
- Fund federal research



Regional Leadership

- Regions are the units of economic competition
- Engage, Challenge, Organize Regional Business Leaders
- Prioritize STEM Education



Local Education Engagement

- Out of School
- In School
- At Work



Out of School

- After School Mentorships
- Teacher Externships
- Competitions
 - Example: AIA Team America Rocketry Challenge



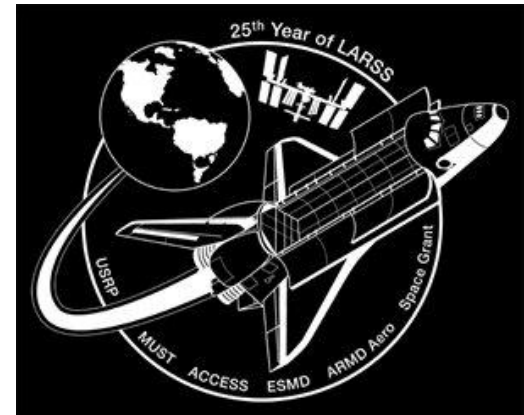
In School

- STEM Pathways
- Career Academies
- Example:
 - Project Lead The Way



At Work

- Site Tours
- Internships
- Career Exploration
 - Example: Langley Aerospace Research Student Scholars (LARSS) Program Graduate, Undergraduate, HS Seniors



Don't Fly Solo

- Intermediaries
- Partnerships
- Associations
- Chambers of Commerce



Leadership

- Programs
- Policy
 - Example: Silicon Valley Education Foundation



Launching the 21st Century American Aerospace Workforce

- AIA Report: December, 2008
- Showcases industry engagement
- Policy Recommendations
 - Establish Competitiveness Agenda
 - Prioritize STEM, Coordinate Across Agencies.
 - Teach Skills, Applied Learning
 - Recruit, Develop STEM Teachers
 - Tax Incentives, Employer Engagement



Aerospace Soars Above the Competition!

[Video](#)



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Thank you

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