



Society for the Advancement of Chicanos
and Native Americans in Science



Society of Hispanic Professional
Engineers



Society of Mexican American Engineers
and Scientists

SACNAS-SHPE-MAES Consortium

Mike Acosta
National President of MAES

White House Initiative on
Educational Excellence for Hispanic Americans
Summit
September 11, 2008



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Presentation Outline

- Consortium Overview
 - Member Organizations (SACNAS, SHPE, MAES)
 - Crisis, Need, Solution
 - Strategic Implementation Plan (three Phases)
 - Partnerships with other Organizations
- U.S.-Mexico Foundation for Science (FUMEC)



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Consortium Member Organizations

- The SACNAS-SHPE-MAES STEM Consortium was formed in 2007.
- This Consortium consists of the three national technical membership organizations.
 - SACNAS
 - President, Dr. Aaron Velasco
 - President Elect, Dr. J D Garcia
 - SHPE
 - President, Diana Gomez
 - MAES
 - President, Mike Acosta
- These membership organizations contribute to the collective broader impact of a cross-cultural educational enrichment system along the K-20 STEM pathway, by providing a diverse array of educational outreach programs as well as career and leadership opportunities.



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Crisis

- Jobs requiring technical training is growing 4x faster than the labor pool
- U.S. STEM workforce rapidly joining baby boom retirement wave
- Federal agencies with large STEM workforce hard hit by government succession crisis
- Global competition decreases ability to attract foreign-born scientists and engineers; however increases outsourcing of STEM talent
- Increased young Hispanic demographics
- Anemic growth in STEM pipeline producing next generation of talent
 - Continued lack of Hispanic persistence through college
- US has a Leaky STEM pipeline – Re-engineering required
 - **Need for strategic expansion of STEM pipeline and capacity to increase Hispanic talent**



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Need

***Need for a strategic expansion of STEM
pipeline and capacity to increase Hispanic
technical talent***



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Solution

- Phase I:
 - Establish a National STEM Consortium with the capacity to identify and implement solutions for the growing crisis
- Phase II:
 - Broadening relationships with federal agencies with STEM portfolios
 - Developing capacity within organizations to increase participation in national STEM policy making and priority setting
 - Building on and expanding existing relationships with colleges and universities, including HSI's
- Phase III:
 - Creation of SACNAS-SHPE-MAES STEM Institute of Excellence



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Phase I: Consortium

- Three largest membership-based Hispanic technical organizations
 - Over 12,000 members throughout the United States and Puerto Rico at over 200 college and universities and corporate America and federal agencies
 - Active members at grass-roots level throughout continuum from pre-college, college/graduate, professional/executive levels (industry, academia and government)
 - Each offer over 34 years of culturally-relevant outreach, educational enrichment and career development within the Hispanic community



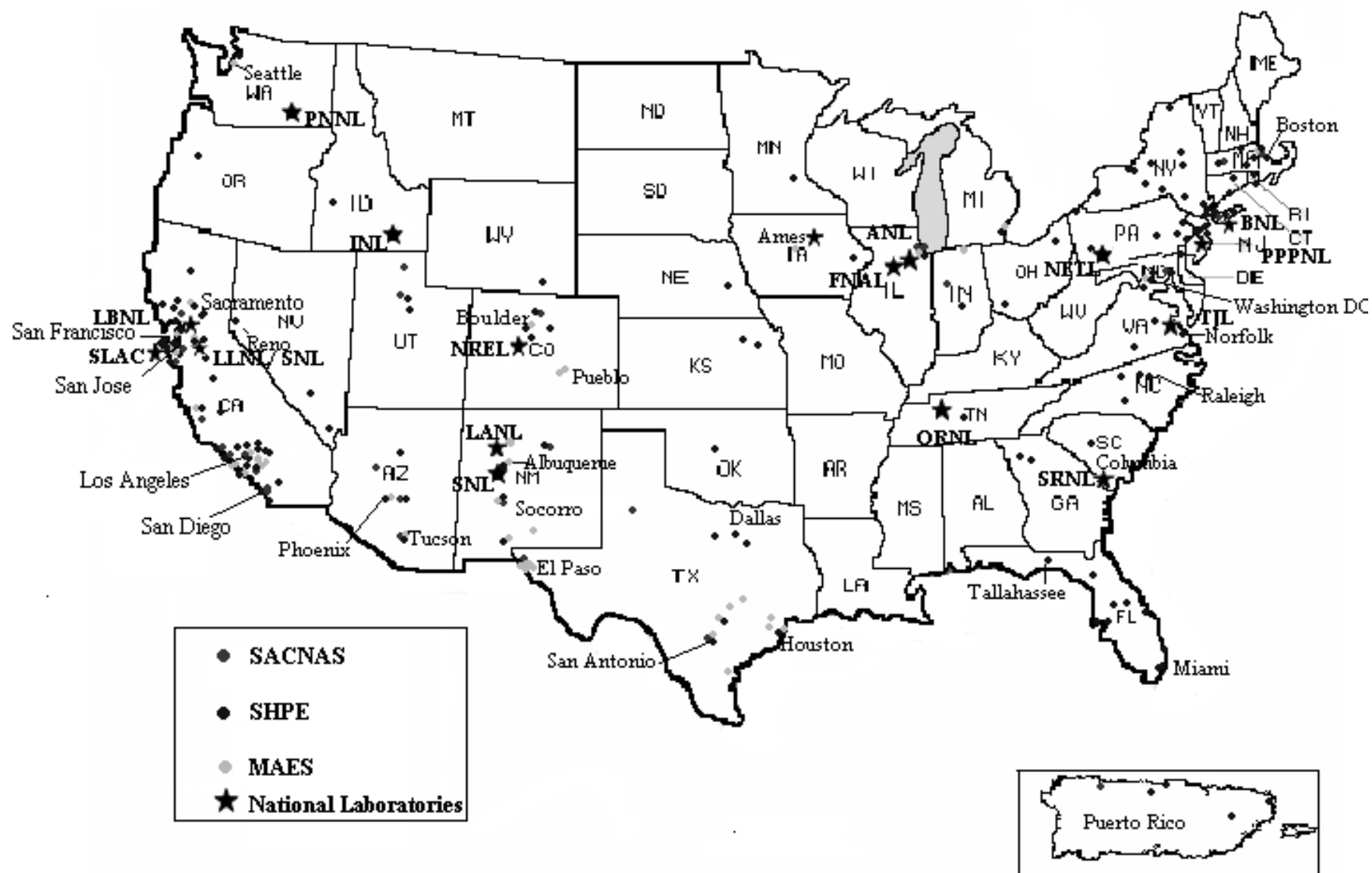
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Phase II: National Strategic Advocacy Plan

- Increase membership knowledge, engagement, and participation in national STEM policies, priorities, and agenda
- Build and expand on existing relationships with colleges and universities (including HSIs)
- Increase capacity and resources invested by the federal government to fill and expand the pipeline
 - Currently working with the following federal agencies: DOE, NSF, NIST, and with the U.S. Congress
 - Will work with other federal agencies/entities in the future
- Monitor and ensure accountability for equal access and opportunity in federal STEM initiatives



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Phase III: SACNAS-SHPE-MAES STEM Institute of Excellence

- Build infrastructure to develop and reinforce the educational pipeline and extend it to the executive level in STEM
- Undertake research that identifies underlying factors that contribute to achievement and document proven strategies
- Facilitate and support collaborations with school districts, college and universities (including HSIs), community based organizations and federal agencies with STEM portfolios
- Ongoing analysis of activities to assure continued improvement
- Develop and integrate research, programs, and recommendations into overall national strategy



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Partnerships with other Organizations

- HSI's (Hispanic Serving Institutions)
 - Prime example is UT-El Paso, a leading educator of Hispanic technical talent and a leader in STEM educational outreach programs for pre-college students
 - HSI's in U.S. with large Hispanic populations; for example, California, Texas, New Mexico, Arizona, Colorado, New York and Puerto Rico
- Other major universities and colleges
 - For example, Cal State University System and The University of Texas System



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Partnerships (continued)

- Federal entities
 - U.S. Congress (Congressional Representatives and Senators)
 - The Congressional Hispanic Caucus
 - Federal agencies
 - Identified in the America Competes Act: DOE, NSF, NIST
 - Other federal agencies: Department of Education, NOAA, etc
- Other national, regional and community partners



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For More Information

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www.shpe.org

www.maes-natl.org

Consortium Questions

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The United States-Mexico Foundation for Science
Fundación México-Estados Unidos para la Ciencia

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Promoting Bi-National Collaboration



FUMEC Mission

- The Foundation's goal is to promote bi-national collaboration in science and technology to solve problems and address opportunities of mutual interest.
- The Foundation was created in 1992 as a bi-national nongovernmental body, to promote and support science and technology collaboration between both countries.



FUMEC Leadership

- The **Board of Governors** directs and oversees FUMEC activities. It is integrated by eight members from each country that represent the academic community, the business sector, and government.





FUMEC Strengths

- FUMEC has been able to involve key groups from academic, business and governmental communities of both countries.
- The Foundation's flexibility facilitates the involvement of key stake holders.
- FUMEC's endowment ensures operational stability and provides seed resources that act as a platform to multiply bi-national capacities and resources.



Creation of Programs

- The programs at FUMEC build bi-national cooperation in areas of mutual interest to both countries such as: border issues, health, environment, security, labor, STEM education, economic development.
- Science, technology and the development of specialized human resources are key factors to the success of these endeavors.



Programs

FUMEC has three primary program areas:

- Environment and Health.
- Industrial Sustainable Development.
- Enhancement of Human Resources in Science and Technology.
 - STEM Educational Programs: K-20



FUMEC Border Office

- FUMEC Border Office is located at UT El Paso
- STEM Educational Programs for pre-college students along the U.S.-Mexico border region
- Mathematics Olympiad Competition Program
 - Pilot Program being established in El Paso, Texas with high school and middle school students
 - Plan to establish this program in other border regions in Texas and other border states in the future.
- Project Lead The Way
 - Programs to prepare high school and middle school students for higher education in Engineering/Science
 - Plan to establish in communities in the border region



National STEM Educational Endeavors

- FUMEC is committed to contributing to and participating in National STEM Educational endeavors.
- FUMEC has established effective partnerships with federal entities and other non-profit organizations.
- FUMEC welcomes opportunities to establish new partnerships in these STEM endeavors.



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(www.fumec.org)

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