U.S.-Mexico Partnership on Education and Technology Transfer for the Aerospace Industry

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Innovations, sustainability and long term duration

- Establishment of a dual MS program in Industrial Engineering/Logistics. Currently it includes ASU and ITESM. The next phase include the expansion of this program to ITSON and other Mexican universities → This guarantees the long term continuation of the program.

- An informal MS - Ph.D. program between ASU and ITESM was started → Expansion of program to research activities

- Organization of workshops and projects → Development of closer ties with the aerospace industry

- Establishment of a steering committee for the development suppliers for the aerospace industry → Long term insertion in economic development activities
Students

• First Cohort
  • Luis Trevino (ITESM)
  • Luis Gaxiola (ITESM)
  • Manuel Romero (ITESM)
  • Elias Olivares (ITESM)
  • Gerardo Trevino (ITESM)
  • Guillermo Alvarez (ITESM)
  • Carlos Calleros (ITESM)

• Second Cohort
  • Juan Ojeda (ITESM)
  • Brenda Perez (ITESM)
  • Mario Morales (ITESM)
  • Luis Mejia (ITESM)

• Third Cohort
  • Mario Coba (ITSON)
  • Cinthia Rangel (ITSON)

• Fourth Cohort
  • Rosa Gonzalez (ITESM)
  • Eileen Ruelas (ITESM)
  • Jose Camacho (ITESM)
  • Jorge Martinez (ITESM)
  • Sarahi Castro (ITSON)
  • Eduardo Serrano (ITSON)
  • Raul Esquivel (ITESM)

• Fifth Cohort
  • Laura Consuelos (ITESM)

http://eal.asu.edu/aerospace/Results/
## Students Stats

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Projects – First Cohort

- Study of current Air Cargo Infrastructure in Mexico: Current strategic needs for transportation activities, operational performance and national airport infrastructure
- The Aircraft Industry in Europe: Structure and potential opportunities for supplier development
- The passenger airline industry in Mexico
- Lean enterprise model proposal for the emerging Mexican aerospace industry
- Business Opportunities for supplier development in the Aircraft maintenance Industry

Projects – Second Cohort

- Development of Regional Clusters of Suppliers in Mexico for the Aerospace Industry (http://eal.asu.edu/logistika)

- Regional and Operational Aerospace supplier clusters in Mexico

- Titanium Distribution Center in Mexico

- Logistics study of a manufacturing facility based in Guaymas, Sonora, Mexico

Projects – Third & Fourth Cohort

- Determination of logistics costs to supply a plant in Mexico from United States by shipments consolidation
- Location of a Consolidation Center for Aerospace Industries in the USA served by a cluster of suppliers in Mexico
- An AHP Framework for locating Aerospace Facilities in Mexico
- National Aviation-ASU project for setting up a facility at Mexico
- Aerospace Supplier Developer & Incubator
- Vehicle Routing Problem: Improving Bashas’ Distribution

Students – Where are they now?

- Luis Trevino, FEMSA Logistica, Monterrey, NL
- Carlos Calleros, NEMAK, Monterrey, NL
- Elias Olivares finished his PhD at ITESM on May 2007
- Guillermo Alvarez finished his PhD at ITESM on May 2007
- ManuelRomero, self employment, Guadalajara, Jalisco
- Gerardo Trevino, PhD student at ASU
- Mario Morales, International Business Solutions, Mexico
- Juan Ojeda, Grupo Chamberlain, Nogales, Sonora
- Brenda Perez finished her Masters at ITESM on May 2007
- Luis Mejia, PhD student at ASU
- Rosa Gonzalez, PhD student at ITESM
- Eileen Ruelas, PhD student at ITESM
- Jose Camacho, PhD student at ITESM

http://ie.fulton.asu.edu/academics/specialprograms/usmexico/bios.php
Workshop
Workshop - Description

- The first US-Mexico Binational Aerospace Workshop for Supplier Development was organized by Arizona State University (ASU) in partnership with Monterrey Tech as part of the activities of the USAID-sponsored graduate program on logistics of the aerospace industry. The workshop was also co-sponsored by the Secretariat of Industrial Development of the State of Chihuahua; and it took place in the city of Chihuahua, Mexico on October 5th and 6th, 2006.

- One of the main objectives of the USAID-sponsored program on logistics is the improvement of the global competitiveness of an integrated North American aerospace industry, for the benefit of the economy and the welfare of North America.

- The Workshop included participation of OEM’s, representatives from the Mexican Federal Government, government of a selected group of Mexican States; developers, international and Mexican suppliers.

http://eal.asu.edu/aerospace/
Workshop - Results

- Identification of Current Obstacles for the Development of Aerospace Suppliers in Mexico

- Certification of Special Processes
- Lack of commitment from OEM’s
- Lack of information on capabilities/players
- Raw materials. Supply Chain Management. (Expensive and time consuming)
- Capital Cost in addition to cost of money + payback

http://eal.asu.edu/aerospace/Results/
Workshop - ... Results

- Identification of Strategic Aerospace Industry Issues for an Industry-Government-Academia Consortium

- Consortium Objectives:
  - Lower entry barriers through info sharing
  - Develop infrastructure
  - Provide training
  - Networking opportunities for the community
  - Strong industry presence
  - Request to government more industry presence (summits)
  - Have a database of members and capabilities
  - Develop local clusters

http://eal.asu.edu/aerospace/Results/
Workshop - ... Results

- **Consortium creation current status**
  - Founding member includes OEM’s and tier 1 suppliers (Hamilton Sundstran, Honeywell, Bombardier)
  - A permanent council will be designated
  - The first draft of the statutes is under revision

- **Creation of a NADCAP site in Monterrey**
  - ITESM and Hamilton Sundstrand established a NSDCAP office in Monterrey
Strengthening TIES: Expanding the Impacts, Queretaro, Mexico, June 13-15, 2007

Additional Information

- Visit the web site of the program at:
  - www.eas.asu.edu/ie/ieaero
  - www.asu.edu/USAID-Consortium
  - eal.asu.edu/logistika
- Or send us an e-mail to:
  - rene.villalobos@asu.edu
  - Jorge.Limon@itesm.mx
- Or call me at:
  - 480-965-0437
Part II:

Please describe for participants in your session the contributions of your partnership to the conference objectives. Specifically:

How has your partnership identified new opportunities for sustainable collaborations*?
- Working with industry and the governments of the states we identified as a long term/sustainable objective the development of aerospace industry suppliers

How has your partnership expanded networks related to trade and business development?
- Industry workshop
- Creation of industry led consortium

*Examples: for example, by bringing together stakeholders in Natural Resource Management and Public Health; Business and Environment; Public Po
How has your partnership identified resources for sustainability and/or gained access to new, potential resources in the private and public sectors?

- State and Federal government

What potential does your partnership offer for replication in the region (North America; Central America; the Caribbean), beyond the borders of the U.S. and Mexico?

- Logistics is a bottleneck for the development of most Latin-American countries