

The Teaching Airport

The United States of America is home to over 19,000 civil-use airports. Interestingly, despite the fact that many of the country's existing airports are more than 50 years old, and others nearly as old as civil aviation itself, only recently have there been any sources of formal education and training for those who manage airports.

In most cases airport managers and their staff are trained while on the job, or via workshops provided by member-supported industry organisations. In far fewer cases airport managers are formally educated at accredited institutions of higher education, primarily through classroom instruction.

In addition the policies and technologies that are implemented at airports are typically developed outside the airport environment, either corporate labs or in government offices. Historically, there has been no formal co-ordination between airports and training and develop-

ment centers to ensure that the educational and technological needs of airports have been met. Embry-Riddle Aeronautical University and Daytona Beach International airport are developing an advanced center for air transportation operations, learning, technology, and policy development. Dr. Rosemarie Reynolds and Dr. Seth Young outline the aims and benefits of this unique program.

To address this crucial issue, The Teaching Airport®, an exciting program partnering Embry-Riddle Aeronautical University (ERAU) and Daytona Beach International airport (DBIA) has been developed. The program has been designed to create education and research programs for university, community

college, and K-12 curricula, primarily by partnering the intellectual resources at ERAU with the operational and administrative facilities at DBIA. In so doing it will focus on high technology sciences, engineering, aeronautical and aerospace applications, internship and career building programs.

Formally established in May 2003 when ERAU and DBIA signed a memoran-



Image credit: ERAU

dum of understanding, today this initiative is supported by both the University and the County of Volusia, who owns and operates DBIA. The program is also supported by the US Departments of Transportation and Homeland Security, State of Florida Departments of Transportation and Law Enforcement, the City of Daytona Beach, private industry, and professional organizations.

The program began on a shoestring budget totaling some \$25,000. This was mainly in the form of in-kind contributions from academic and administrative units within ERAU, as well as within DBIA. With this budget a number of initial projects were launched. They included a Weather and Flight Tracking Information Kiosk at the airport, a coordinated undergraduate internship program, and a Teaching Airport program administrative structure.

Based on the initial success of the program, ERAU allocated a base budget of \$75,000 for fiscal year 2004-5. DBIA plans to support the program with additional in-kind contributions. Further additions to the budget have come from revenue generating projects, supported primarily by the private sector.

The Vision

The vision is that the Teaching Airport will benefit government agencies, industry and professional organisations. Regarding the educational component, an integrated curriculum involving both traditional classroom work and on-site field work at DBIA supports learning in many facets of airport operations and transportation systems management. These include: airport safety, capacity, efficiency, security and engineering; environmental impact mitigation; airport finance and revenue generation; airport marketing and air service development; and intermodal transportation development.

Government agencies, such as FAA and the Transportation Security Administration, face the huge tasks of creating regulatory and advisory policies in a world of continual political, economic, and operational upheaval. These agencies will benefit greatly from being able to evaluate policies in a real-world environment, and with independent academic oversight to help them achieve best practice.

Private sector firms too, will benefit from an on-site field location where they can test and evaluate products. In a similar way to the teaching hospital that evaluates latest medical technologies, the Teaching Airport is designed to assist in the maturation of technologies to the general benefit of the air transportation industry.

Professional organizations such as the American Association of Airport Executives, Airports Council International, and the Airport Consultants Council may use the Teaching Airport to evaluate policy and technological developments that support their respective missions and to enhance professional development opportunities by providing integrated classroom and on-site educational programs.

The favourable mix of high activity levels, good facilities, availability of land, and the potential for great economic growth make DBIA an ideal location for this venture. It is a fully-certified commercial service airport, serving nearly one million passengers annually, and providing access to the National Airspace System for the East Central Florida Region, and it is served by five major and regional air carriers.

ERAU, which is based on the DBIA site, is widely recognised as a world leader in aviation and aerospace education and research. Its flight training operations comprise nearly one-third of DBIA's annual operating activity.

Current Status

ERAU is developing teaching programs by enhancing current course curricula, as well as implementing internship and research programs.

High-technology research attracts the main focus of attention, with discussions already developing in areas such as nano-technology and biometrics. Multinational companies are spearheading efforts to bring advanced research opportunities to Volusia County.

The Teaching Airport is run by a member of the ERAU College of Business faculty in the position of program director (Dr. Seth Young currently holds this position), and is supported by a small staff of technicians and student workers. DBIA is represented by an airport liaison to the program. Currently an advisory board of industry leaders is being formed to oversee the Teaching Airport program.

The Future


The Teaching Airport is a component of a larger development program. Shortly after the Teaching Airport partnership was formed, ERAU set out a strategic goal to develop a 140+ acre campus-style technology research park adjacent to both the university's Daytona Beach academic campus and DBIA. The Teaching Airport is considered a vital component in order to attract high-tech industries to the park. The program allows a unique opportunity to set up a research center that can take advantage of both the intellectual capabilities of ERAU, as well as the field research opportunities provided by the airport.

The location of this high-tech park will provide benefits to industry, as well as the university and the community in general, through the creation of a museum, cultural center and conference center. It is expected that the park will also spur economic development and activity.

Targets

While no formal forecasts have been made, initial estimates suggest that the Teaching Airport will directly contribute to the hiring of between five and 10 academic professionals and staff over the next five years, and employ dozens of students part-time.

Indirectly, as an attractor for the ERAU High-Tech Research Park, the Teaching Airport hopes to contribute to the increase of over 100 jobs in the region over the next several years.

It is expected that the Teaching Airport will generate approximately \$75,000 in annual gross revenues. The High-Tech Research Park, over its lifetime, is hoped to generate millions of dollars for the region. 

The following steps have been taken to bring the Teaching Airport project to fruition:

- ▶ Written MoU between ERAU and DBIA to co-sponsor the program.
- ▶ Teaching Airport advisory board established, comprising local and regional members of ERAU's boards of visitors and trustees, municipal leaders, and aviation professionals.
- ▶ Formal internship program, where students from ERAU will enroll in a rotational internship program of study, with specific curricular activities and goals, at DBIA, for ERAU academic credit.
- ▶ Program of field visits to DBIA as part of course curricula in ERAU's Colleges of Aviation, Business, Engineering, and Sciences.
- ▶ Program of research, in coordination with Lockheed Martin Business Systems, Inc., to test and evaluate biometric technologies for use in airport security enhancement.

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