

# Bringing NextGen Together - The FAA William J. Hughes Technical Center

## Bringing NextGen Together – The Federal Aviation Administration William J. Hughes Technical Center

The Next Generation Air Transportation System (NextGen) is required to meet the present and future aviation needs of our nation. Robust and dynamic aviation partnerships among government agencies, industry, and academia are a critical component of NextGen. The Federal Aviation Administration has entered many partnerships to deliver NextGen. Among these is an agreement and lease with the South Jersey Economic Development District for 58 acres of FAA property located at the William J. Hughes Technical Center to construct the Next Generation Aviation Research and Technology Park.



The Federal Aviation Administration William J. Hughes Technical Center is home to the nation's leading aviation testing laboratories. The Next Generation Aviation Research and Technology Park is located on the WJHTC Campus.

The technical center's multi-modal complex gives research park tenants access to the nation's leading aviation and air traffic management Federal Laboratory – a unique collection of laboratories situated on a 5,000 acre complex that replicates the National Airspace System – and the FAA's top-caliber technical expertise.

In June 2010, the technical center opened its newest laboratory, the NextGen Integration and Evaluation Capability display area. The NIEC is a research platform where scientists will use simulation to explore, integrate and evaluate NextGen concepts, including area navigation (RNAV), trajectory-based operations, flying unmanned aircraft systems (UAS) in the national airspace system (NAS), and more. The NIEC display area compliments the existing unique facilities and aviation-based equipment at the Technical Center.

The NIEC complex features an air traffic control simulation area, a cockpit simulator, an unmanned aircraft system suite, a simulated tower cab interior and a multi-purpose display area.

The multi-purpose area can be used to show weather and traffic management data, operate as a simulation monitoring station or simulate an airline operations center. Each NIEC component mirrors a key area in the NextGen “gate-to-gate” spectrum.



This is just one example of the type of state-of-the-art technology to which Next Generation ARTP tenants will have access.

The environment at the WJHTC is ideal for collaboration, and the new Next Generation ARTP will enable the FAA to develop NextGen in close cooperation with the aviation community. This unique partnership will help facilitate NextGen development and improve air travel safety and convenience.



# Next Generation ARTP Membership has its Privileges

## Membership has its Privileges: ARTP Membership Creates an Exclusive Environment for Industry, Academia, and Government Collaboration

Membership in the Next Generation Aviation Research and Technology Park is open to all individuals and organizations interested in supporting the advancement of aviation research and technology. This includes, but is not limited to: academia, governmental agencies, industry, airports, commercial airlines and carriers, pilot organizations and all aspects of aviation including associations, businesses and aviation in general.

Members of the ARTP will cooperate in the development of the research park through joint participation in various teams, committees and focus groups including the ARTP Management Advisory Team, Technical Advisory Team, and Steering Committee.

There are many benefits with membership. These include the following:

- Opportunities to conduct funded R&D projects in support of the FAA NexGen Program and other aviation systems end users.
- Participation on the Management Advisory Team, Technical Advisory Team, and other focus groups that will be formed to address new technologies, innovations, incubation activities, and other aviation research and implementation challenges.
- Access to shared equipment and facilities, such as conference and media rooms, classrooms, and research libraries.
- Marketing and business development opportunities through an Outreach Program.
- Opportunity to introduce and provide systems and solutions to other government agencies through the FAA Technology Transfer Program.
- Networking opportunities with other members of the aviation research community.
- Opportunities to assign personnel such as scientists, professors, students in areas to gain advanced experience and exposure to a highly technical and realistic research environment with other aviation organizations and professionals.
- Opportunity to participate in Mentor-Protégé relationships to support the development and growth of small businesses.
- Name recognition in the lobby of the main building, on its web site, and in any public relations activities.
- Inclusion in the research park directory, listing your organization's capabilities and contact information.
- Invitation to all events conducted at the research park such as open house, symposiums, conferences, or other public events.
- Opportunities to participate in product incubation, innovation, and commercialization with other members.
- Participation in conferences, meetings, and seminars with other aviation professionals.
- Access to state programs that offer funds and tax benefits to technology companies in New Jersey including loan guarantees, reimbursement for laboratory fit-up, and reduced employer taxes.



Members of the Next Generation Aviation Research and Technology Park will have opportunities to conduct funded R&D projects supporting the Federal Aviation Administration NextGen Program and other aviation systems end users.

There are several levels of membership that offer different benefits. Membership dues will be assessed annually and will be used to develop, maintain, and operate a professional, state-of-the-art research facility. In addition, membership may be a requirement for some federal and state grants.

### Contact Information:

**Ronald J. Esposito, Executive Director**

**Next Generation Aviation Research and Technology Park**

**(609) 363-ARTP**

**[www.NextGenAviationPark.org](http://www.NextGenAviationPark.org)**

# Right Location, Right Facilities, Right Price - The First Building

The Right Location, the Right Facilities, the Right Price: A Preview of the First Research Building at the Next Generation Aviation Research and Technology Park

- **66,000 GSF of adaptable, state-of-the-art aviation research space in an architecturally impressive, cutting edge, three story building.**
- **Designed by the nationally recognized architectural firm Environetics Design, Inc., specializing in multifunctional research and development facilities. Previous design projects include the University City Science Center, the Penn State Research Park and numerous other corporate and industrial parks.**
- **Located in an environmentally unique, campus-like setting that is convenient, and easily accessible with friendly walking/jogging paths.**
- **Conveniently located on the campus of the Federal Aviation Administration William J. Hughes Technical Center and nearby Atlantic City International Airport.**
- **LEED Silver Certified.**
- **Cost efficient - competitive leasing costs that include all common area facilities.**
- **Amenities include state-of-the-art media room, classrooms and conference centers.**
- **Tenants will have 24/7 access to the building.**
- **State-of-the-art security system.**
- **At full build out, the NextGen ARTP will consist of seven buildings encompassing 400,000 SF of research and development facilities. Buildings will be located in a centralized cluster to allow for collaboration among business, academia and all major research arms of the federal government.**
- **Construction of the first building planned to begin early 2011.**

The Next Generation Aviation Research Park is a unique regional partnership among academia, federal state and local government agencies, as well as private industry, who have joined together to develop a state of the art research facility that will meet current and future demands of the nation's air transportation system.

## Leasing Information:

**Gordon K. Dahl, Executive Director**

**South Jersey Economic Development District**

**(856) 765-9700**

**[www.sjedd.com](http://www.sjedd.com)**



# Next Generation Aviation Research and Technology Park



# Next Generation ARTP Aviation Community

The Next Generation Aviation Research and Technology Park is ideally located near other aviation organizations and businesses including the Federal Aviation Administration William J. Hughes Technical Center, Atlantic City International Airport and the 177th Fighter Wing of the New Jersey Air National Guard.

## **The Federal Aviation Administration William J. Hughes Technical Center**

The FAA William J. Hughes Technical Center (WJHTC) is the world's premier aviation research and development, and test and evaluation facility. The Technical Center serves as the national scientific test base for the FAA. Technical Center programs include research and development, test and evaluation, and verification and validation in air traffic control, communications, navigation, airports, aircraft safety, and security. They also include long-range development of innovative aviation systems and concepts, development of new air traffic control equipment and software, and modification of existing systems and procedures. Through a series of initiatives known collectively as NextGen, the Technical Center is helping to shape the Next Generation Air Transportation System.

The WJHTC has served as the core facility for modernizing the air traffic control system and for advancing programs to enhance aviation safety in all stages of flight since 1958. Along with research and development project work, the center provides 24-hour, daily operational support to the FAA field facilities all over the country.

The WJHTC houses laboratories, test and support facilities, and the Atlantic City International Airport in an area that covers more than 5,000 acres. Some unique WJHTC laboratories include: air traffic control and simulation facilities, a human factors laboratory, a fleet of specially instrumented in-flight testing aircraft, the world's largest full-scale aviation fire test facility, a chemistry laboratory for analyzing the toxicity of materials involved in a fire, radar test laboratories, a structural panel test facility and the National Airport Pavement Test Facility.

The Technical Center also serves as a focal point for Homeland Security activities. It is the home of the Federal Air Marshal Service training program and the Transportation Security Laboratory, which is the test and evaluation site for new, advanced airport security technology. The U.S. Coast Guard Group Air Station Atlantic City, the U.S. Marshal Service and the New Jersey Air National Guard 177th Fighter Wing also base their operations at the Technical Center.

## **The Atlantic City International Airport**

Operated by the South Jersey Transportation Authority, ACY is recognized for having the shortest wait time of all New Jersey airports, as well as a speedier in-and-out time than the Philadelphia International Airport. The airport records a rising number of passengers annually and is capable of handling major carriers and more flight frequencies. It has one of the longest runways in the world and is an alternate landing site for the NASA space shuttle. More importantly, ACY controls its own air space.

THE SJTA continues to make numerous capital improvements to the airport. It has completed a taxiway relocation project, constructed a state-of-the-art baggage screening facility, erected a \$26.3 million, six-story parking garage, and has begun a \$2.5 million terminal renovations project to better serve its passengers.

In an effort to grow, ACY has engaged in a coalition with Atlantic City destination and economic development stakeholders with the goal of attracting carriers and improving connectivity to the national air travel system.



A F-16 Fighting Falcon piloted by the 177th Fighter Wing located at the Atlantic City International Airport in Egg Harbor Township, NJ.

