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Emergency Management and Business Continuity Within Commercial Aviation

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Many people think of emergency management and business continuity as two independent endeavors, with emergency management in the public sector and business continuity in the private sector. Yet the two endeavors converge and are key to the security of both. Both are essential in responding to and recovering from an emergency incident, because these incidents can compromise the infrastructure and the capability of business and other organizations to provide services.

In aviation, the convergence of emergency management and business continuity can affect airlines, airports, air traffic control, and all associated transportation modes. Any comprehensive emergency management or emergency operations plan should

PHOTO: PAUL SABLEMAN

A 2011 tornado in St. Louis, Missouri, damaged the main terminal of the Lambert–St. Louis International Airport. The airport reopened less than 24 hours later.

Operational and Business Continuity Planning for Prolonged Airport Disruptions

To help U.S. airports prepare for potential disruptions to operations, the Airport Cooperative Research Program (ACRP) launched a project to explore the practical capacity needed for operational resilience and to provide airports with a tool for developing a plan.[1] Risk Solutions International (RSI), a consulting firm that specializes in business continuity planning, was selected to manage the project, and the findings are expected for release later this year as ACRP Report 93.

RSI reviewed the limited public literature about business continuity planning in the airport sector. The firm interviewed representatives of 40 U.S. airports to assess business continuity practices and found that few had embraced an effective level of operational resilience planning.

RSI conducted business impact assessments at several airports, to identify and document how essential business and operational functions work normally, how their loss would affect the airport's mission, and how the functions would be recovered and restored when the material disruptions had ended. RSI interviewed representatives of organizations that have operational responsibility at airports or that represent key airport constituencies, such as federal agencies, aviation associations, industry organizations, and airlines.

RSI used the data to design and develop a software tool for airport business continuity. The self-contained, intelligent survey application administers a series of up to 2,000 questions about the human resources, the technologies, the plant and equipment, and the processes that comprise every airport operating and business function. The questions are conditional, so that the path each airport takes through the survey reflects the airport's unique operating circumstances. The tool builds a business continuity plan "on the fly" in HTML, which the airport can view in progress; the airport then can generate custom plans in a PDF format that draw on all the data input from the survey questions.

A business continuity plan developed with the tool can range from 500 pages for large, complex airports, to much smaller plans for airports or fixed-base operators—that is, aircraft service centers—that have a narrower scope and operational complexity. The tool is the first software of its kind written for a unique sector of critical national infrastructure and is designed to be effective for a variety of facilities.

[1] ACRP Project 3-18, Operational and Business Continuity Planning for Prolonged Airport Disruptions. http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=2799.

describe a step-by-step procedure for response and recovery and should include appendices with checklists to ensure that important issues are addressed in a crisis. This clear-cut, practical approach will be of greatest value to the end user.

A major challenge is to integrate the National Incident Management System (NIMS) and the Incident Command System (ICS) into aviation emergency management and business continuity. A presidential directive for homeland security, Management of Domestic Incidents, establishes NIMS and ICS as the standards for federal response to nationally significant incidents. Aircraft rescue and firefighting at airports, however, have focused on the command and control of a contained scene, and the procedures do not readily carry over into incident management for airport operations. This leads to interoperability problems, especially with outside agencies.

Systematic observation suggests that more personnel in airport management and in communications and maintenance should complete the ICS online training courses. Without this critical training within the aviation industry, the interface with outside groups for public mutual aid response may break down in critical areas such as operations, communication, logistical support, and continuity and recovery planning.

U.S. aviation is a major strategic concern for homeland security, encompassing approximately 450 commercial airports and 19,000 additional airports, heliports, and landing strips including civil and joint-use military facilities. All of these are vulnerable to harm and destruction by intention or by natural occurrence. Aviation facilities have proved instrumental in evacuations, patient movement, and search-and-rescue efforts and can serve as cache locations for intermodal logistics. Aviation long has been a choice target for terrorists, and aircraft and airport terminals can serve as a prime facilitator for the spread of disease.

Two pathways are vital. One incorporates NIMS training and interfaces with comprehensive business continuity planning. The other makes NIMS and ICS a standard part of commercial aviation's comprehensive emergency management and emergency operations planning. The goals are increased interoperability among organizations involved in public mutual aid and a much more efficient, timely, and cost-effective resolution of emergencies.

Collaborative Contingency Planning for Airports

Improving Passenger Service for Airline Travelers in Emergencies

Anyone traveling by plane recently is likely to have experienced a delay at a terminal or on an aircraft or to have been rerouted midflight to a different airport. These inconveniences, caused mainly by bad weather and airplane mechanical issues, have prompted government regulations to improve customer service for airline passengers. The rules mandate that airlines and airports create and coordinate contingency plans to improve the response to what are termed "irregular operations."

With the sponsorship of the Federal Aviation Administration, the Transportation Research Board funded and managed an Airport Cooperative Research Program (ACRP) project to provide guidance on the collaborative development of contingency plans. The project produced ACRP Report 65, *Guidebook for Airport Irregular Operations (IROPS) Contingency Planning*, which gives the aviation industry direction for working together to create contingency plans.[1]

The guidebook includes collaborative approaches to several situations that most affect passengers, as identified in preliminary research. One suggestion is to create protocols for managing flights rerouted to airports that were not expecting the arrivals. The airports need contingency procedures for dealing with the surge of passengers in terminals and in security areas, as well as with the increased numbers of aircraft that may exceed the gate capacity to deplane travelers. Another suggestion is to create off-hour staffing plans for Transportation Security Administration and Customs and Border Protection personnel, as well as for concessions representatives, to accommodate passengers after normal airport hours.

The guidebook also suggests improvements in passenger conditions during extended stays in terminals—for example, to provide cots and blankets or hotel lodging for overnight stays. Planning for passengers with special needs—especially for those who need medicine, language assistance, or supplies such as diapers—is another topic covered.

The guidebook—supplemented with three online interactive resources, including topics, tools, and a model plan—can assist the aviation industry in developing collaborative contingency plans that close current gaps in customer service during irregular operations, potentially improving the passenger experience. Fort Wayne International Airport and Buffalo Niagara International Airport were among the first to develop and implement irregular operations plans applying the guidelines in ACRP Report 65.[2] According to terminal services supervisor Daniel Rak, Fort Wayne International Airport's stakeholder units documented individual plans and then developed a comprehensive, coordinated plan for the airport to respond quickly in an event.

[1]www.trb.org/Publications/Blurbs/166569.aspx.
[2]ACRP Impacts on Practice, April 2013.