EQUIP FOR THE
Future

Make no mistake, the effort to catapult air traffic control technology to a revolutionary and vastly more capable level in the United States and Europe is a very, very big deal, not only in terms of scope and cost but also in terms of the consequences of success or failure.

There is a staggering amount of work yet to be done, but in the United States there also has been an impressive amount of work completed, and the rate of implementation is accelerating. Clearly, the pressure is on to make the two systems, NextGen in the United States and Single European Sky ATM Research (SESAR) in Europe, highly harmonized, not perfect clones, but close enough to not get in the way.

A possibly overly simplistic explanation of the difference between the two automatic dependent surveillance-broadcast (ADS-B) modes that are the heart of this advance is this: ADS-B Out is the airplane signaling its global positioning system–derived position for the air traffic service provider to process as if it were advanced radar with fantastic coverage down to the ground; ADS-B In, on the other hand, is data flowing into the airplane from ground facilities and other aircraft.

To my mind, NextGen and SESAR are safety systems, even though their raison d'être is to cope with the crushing growth of operations expected in the next several decades, growth that surely will extend in short order to the increasingly prosperous developing world. But even at the lowest level of implementation — ADS-B Out as radar equivalent — the idea of controllers being able to monitor and accurately sequence precision approaches at remote airports is but one example of the many safety benefits, or advances such as the 4-D Weather Box, real-time weather data flowing into the aircraft in fairly early ADS-B In usage.

Money, however, is and will remain an obstacle. Much of the spending is the government's, and anyone in the United States tracking the ability of the Federal Aviation Administration to get its budget through Congress knows of the multiple built-in barriers in that process.

Users also will have to put up a fair chunk of cash to be part of the system. However, users are reluctant to equip their aircraft with even the well-defined ADS-B Out without proof that they're not just buying a new box lacking a net benefit for them.

Despite the safety arguments for buying into equipage, managers in today's economic climate — and legislators — must ask that question so they can explain why, in tight money times, they decided to spend billions to benefit a bunch of jet-setters.

To that end, the NextGen Advisory Committee, an industry-government group chaired by David Barger, chief executive officer of JetBlue and treasurer of Flight Safety Foundation, has been formed not only to keep development on an agreed path, but also to forge a consensus business case that details why this technology should be embraced.

Several years ago, Southwest Airlines was known to favor low-tech cockpits. Then came a fleetwide equipage with head-up displays, followed several years later by avionics for RNP (required navigation performance) operations. It has been said SWA went the latter route because the carrier believed it could save one minute per flight. This is the sort of vision managers need to develop today to see the payoffs on the other side of the expense.

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