



# THE VIEW FROM WASHINGTON

BY RIC PERI

VICE PRESIDENT OF GOVERNMENT & INDUSTRY AFFAIRS FOR AEA

## What Level of Risk and Originality are Appropriate for NextGen?

**A**s I write this column in mid-October, the AEA just challenged the Federal Aviation Administration regarding its recent policy memo on the certification and installation of automatic dependant surveillance–broadcast systems. Essentially, we wrote to FAA Administrator Randy Babbitt and asked for a decision and direction from him so his employees can move forward with a reasonable plan for cost-effective ADS-B equipage of some 160,000 aircraft during the next 10 years.

Why was it necessary to raise this issue with the Administrator? Because both sides of his organization are right: the air traffic organization, which is promoting early equipage, and the aircraft certification side, which is mandating a high level of certitude.

The FAA is not unique as a government agency, although it does seem to be in transition. However, its operating rule is simple: The penalty for failure exceeds the benefit of success.

New technology is unproven; it is risky. Old technology might perform to a lower level, but it is predictable; it is safe, in a risk aversion sort of way. Basically, this is the reason we have so much frustration introducing new technology, as well as supporting the NextGen office's initiatives: requiring a new and novel technology that requires the assumption of some degree of risk. This is something the government, in

general, and the FAA specifically, simply do not assume much of these days.

In general, I agree with the FAA's approach.

There have been many cases in which FAA employees have been called up before Congress or the courts to defend their decisions. Now, before this is used by a certain labor group that routinely miscategorizes

ly contacting our legislative representatives when we don't like their actions. Or, worse yet, we challenge the actions of an inspector in the courts. ("We" being society rather than one individual or group.)

We have forced the FAA into simply performing its compulsory tasks perfectly with no risk, no originality and no virtuosity. The problem is, you can't win the Gold

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the risks FAA employees have for doing routine things like field approvals, I am not talking about actions outside of their normal government employment — that is, actions FAA policy forbids its employees to perform — but rather, those actions within the normal performance of the FAA employee. Actions to which they are legally protected.

Although the FAA and the Justice Department protects and supports its employees, being called before the U.S. Congress to defend your actions is a daunting task, one which I would not wish upon anyone. Like it or not, this is the world we live in. This is the world we created by second-guessing an inspector's actions and routine-

ly simply performing the compulsories. Small business cannot succeed, entrepreneurs cannot prosper, technology cannot be developed and NextGen cannot become a reality without risk and originality.

In the mid 1990s, I had the privilege of hearing Peter Vidmar speak about what it takes to win the Gold Medal in men's gymnastics. Vidmar won two gold medals and one silver medal in gymnastics during the 1984 Olympic Games and, as the USA men's gymnastics team captain, he led his teammates to America's first-ever team Gold Medal. As Vidmar explained it, in 1984, if you performed all of your compulsories perfectly, the highest score you could

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achieve was a 9.4. It was only through the addition of risk, originality and virtuosity that you would acquire the other six-tenths of a point necessary for the perfect 10.

His talk resonated with me and has stayed with me all these years. Perhaps it was because, at the time, I was working in the government and struggling to introduce new and novel approaches in my workplace and constantly feeling as though I was pushing the weights up hill. Then, I had an epiphany: Originality and risk go hand-in-hand. New and novel ideas almost always have a certain amount of risk. For the management I worked for, the penalty of failure (or the assumption of failure) far exceeded the benefit of most success. Add to this the extremely slow gestation period of most initiatives (I think elephants are quicker), and you have a recipe for stagnation: a safe approach to doing what we do.

The agency promoting “new and novel” in its Flight Plan and its NextGen office also is practicing risk aversion in its aviation safety offices. Essentially, it is struggling to manage dual personalities.

A business always takes risks, and a successful business successfully manages its risks. The agency overseeing our industry is risk averse. These might seem like mutually exclusive philosophies, but they are not.

What is our industry to do? Communicate and listen. Understand the agency’s

position: the penalty for its failure far exceeds its benefit to our success.

Communicate upfront what you are intending, what new technology you will be introducing, what novel applications your equipment will provide, where you see the regulations already covering your application and where you will need more guidance.

Listen to the agency’s response. Remember, they are engineers and, as such, they love to discuss design theory. Don’t be intimidated by a question — that’s their job. They should ask hard questions. If they aren’t, you might want to find someone who does, because you either have done all of your homework and have a perfect paper (not likely) or the engineer assigned to your project doesn’t fully grasp the intended application (much more likely); as such, he likely will get additional input from his co-workers and managers, resulting in delays.

Agency personnel might be passionate about aviation; they might be lifelong aviators. But regardless of cause, as a practice, the FAA is risk averse; therefore, it is up to industry to minimize the risk, or perceived risk, through education, communication and solid engineering.

If this doesn’t work, we need to run the issue up the “chain of command” until we find the manager who, by his or her assignment, is the manager who can assume a cer-

tain amount of risk and insulate employees from the penalty of failure.

In no case should we bring the legislative might of Congress into the discussion. We might not like the agency’s decision, but it is a technical decision — and the agency (like it or not) is the government’s technical experts. When we encourage Congress to second guess the FAA, we are perpetuating its risk aversion position. In essence, we created this monster. Don’t misinterpret my position: There is a place for congressional oversight; it’s just not in technical matters.

In the case of the ADS-B policy memo, we have two separate offices trying to fulfill their compulsory assignments, only to be compromising the success of both. As a result, we needed to have the Administrator weigh in and determine what level of risk and originality was appropriate in its effort to meet the goals of NextGen and to relieve the certification participants from the risk aversion of system design and certification.

While our success might rely on how well we manage risk, originality and virtuosity, our federal partner is risk averse. It is up to us to recognize this limitation and learn how to successfully manage it. □

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*Editor’s Note: The FAA policy memo and the AEA’s letter to the Administrator can be found at [www.aea.net/governmentaffairs](http://www.aea.net/governmentaffairs).*