

The Brattle Group

Five Non-Technological Problems That Have To Be Solved Before NextGen Can Be Successfully Implemented

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First a word of thanks...



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Five Crucial Problems

The Overuse Problem

The General Aviation Problem

The Equipage Problem

The Cost Reduction Problem

The Management Problem

The Overuse Problem

One need not and should not size the system to accommodate every conceivable demand that any potential user faced with any possible price (including a zero price) might impose upon the system

Rather, we should aim to accommodate current and projected future demands by users willing to pay the full costs they impose upon the system

Currently, users of ATC services pay indirectly for the services they use, and in amounts that may bear little relationship to the costs they impose on the system

Roots of the Overuse Problem

Long-run demand/cost relationships

- ◆ Both the demand for transportation services and the cost of providing them tend to grow faster than the economy as a whole
- ◆ Hence...
 - Building our way out of the problem may not be possible over the long term
 - Demand management may become a reality we have to learn to live with
- ◆ We may be there now for urban highways, and soon for airport capacity
- ◆ Will we get there for ATM services?
 - Depends on whether ATM service provision winds up being infrastructure and labor cost constrained, or whether technological advances permit continuous cost reductions

Roots of the Overuse Problem (continued)

Mis-pricing of ATM services

- ◆ The system is currently supported by a set of excise taxes
- ◆ For the most part these taxes are not paid directly by users of the system (i.e., airlines), but rather by others (i.e., passengers and shippers)
- ◆ Amounts paid bear little relationship to costs imposed
- ◆ The result:
 - Aircraft that are too small, and
 - Flights that are too many
 - At times of the day that are too crowded
- ◆ We should size the system to accommodate an economically efficient level of usage, but we don't know what that level is
- ◆ We need to consider cost-based user fees

The General Aviation Problem

Numerous studies show that the costs general aviation users impose on the system exceed what they pay

Disagreements over cost causation and user fees have paralyzed past efforts at financing and governance reform

Reform efforts are unlikely to succeed unless general aviation is brought into the system in a fair and sensible way

We need to move toward horizontal equity – aircraft that use the system in the same way and impose the same costs receive the same service and pay the same fees

The Equipage Problem

Many NextGen Technologies will start to deliver benefits ONLY when the requisite equipment has been installed BOTH on the ground AND in a sufficient number of aircraft using the system

- ◆ Ground installation will be publicly funded
- ◆ On-board installation will be funded by aircraft owners (who are currently somewhat “resource constrained”)
- ◆ Neither party wants to invest first, and have to wait for the other to invest before realizing benefits
- ◆ Neither party wants to invest and then have the other fail to invest

How do you create the right set of incentives for moving the process forward?

The Equipage Problem (continued)

Past history fosters a “don’t get fooled again” attitude

Stretching of the deadline for on-board equipage lowers costs to aircraft owners, but lowers also the return on investment and increases the likelihood that technologies will become obsolete before full implementation

Creative solutions needed:

- ◆ Preferential treatment
- ◆ Financial incentives
- ◆ Competitive incentives
- ◆ Achieving critical mass on a regional basis

The Cost Reduction Problem

Many of the projected benefits of NextGen consist of savings in ATO operating costs (either in total, or on a per unit basis)

Those benefits will materialize ONLY if costs are really taken out of the system

Taking costs out of the system will require reductions in head count and/or the closure of facilities

Past efforts to achieve cost reductions have often failed

Future savings may remain elusive as long as Congress continues to regard and treat the ATO as a jobs creation program



The Management Problem

The Seder question:

“Why is this night different from all other nights?”

The NextGen Question:

“Why is NextGen different from all other ATM modernization programs?”

Past modernization efforts have come in late and over budget, and have under-delivered on promised benefits?

Why will NextGen be different?

The Management Problem (continued)

What does ATO need to pull this off?

- ◆ Empowered leadership
- ◆ Mission clarity
- ◆ Customer Involvement
- ◆ Predictable funding to permit and support multi-year planning and procurement
- ◆ Ability to attract, hire and retain staff with the requisite skills to manage a complex technology development program
- ◆ Insulation from congressional micromanagement

Finding all of this within the current financing and governance system may be difficult, although ATO has made great strides

Conclusion - Prospects for Success

ATO is clearly aware of these problems, and is working hard to address them

More progress has been made than I would have thought possible a few years ago

While I still tend to believe that full NextGen success will require some degree of finance and governance reform, I am eager to be proven wrong