

## Delivering NextGen – A System Engineering Perspective

The next 10 years promise to be a pivotal time in the history of air transportation, as the United States begins a transformation that will change the face of aviation. It is called the Next Generation Air Transportation System – NextGen for short – and it will redefine how the US manages its national airspace system (NAS).

The complexity of the NAS is as impressive as it is difficult to grasp. It is a vast, multi-layered operation to manage air traffic in the US safely and efficiently – a scope that handled 46 million aircraft operations last year alone. However, future demands on the system exceed the projected capability of the NAS and will require highly innovative solutions which will provide increased benefits to the flying public, but will also increase the complexity of the system.

Upgrading a system of systems that manages an operation as intricate and complex as the NAS requires tremendous commitment and perseverance. A series of coordinated upgrades to the current ground infrastructure and aircraft systems will be accomplished by building on key elements of the existing NAS while maintaining the pace and efficiency of operations we have today – a daunting task at best. Its success depends on business acumen, operational and technical expertise, and effective application of tools such as System Engineering. In this webinar, we will discuss how System Engineering is being applied in the transformation of the NAS to NextGen.



**Steve Bradford** is the Chief Scientist for Architecture and NextGen Development in the FAA's Air Traffic Organization NextGen and Operations Planning Service Unit. In this role he has participated in the development of the Joint Planning and Development Office's (JPDO) NextGen Concept, the RTCA NAS Operational Concept and the ICAO ATMCP Global Concept. He is currently working with elements of the FAA and the JPDO to develop midterm plans and five year budget requests to implement NEXTGEN. Previous activities include leading efforts to validate future concepts, developing the FAA's NAS Enterprise Architecture, and leading several co-operative international efforts via action plans with Eurocontrol. Prior to his current position, Mr. Bradford was the Manager of the NAS Concept Development Branch and conducted early analysis of Free Flight Concepts.