UNMANNED AIRCRAFT SYSTEMS

Unmanned Aircraft Systems (UAS) continue to be the most dynamic growth sector within the aviation industry. Once enabled, commercial UAS will have the potential to be a significant component of the national airspace system.

Integration of Civil UAS in the National Airspace System-Roadmap

Unlike the manned aircraft industry, the UAS community does not have a set of standardized design specifications for basic UAS design that ensures safe and reliable operation in typical civilian service applications. Ultimately, the pace of integration will be determined by the ability of industry, the user community, and the FAA to overcome technical, regulatory, and operational challenges.

The purpose of the Integration of Civil Unmanned Aircraft Systems in the National Airspace System Roadmap is to outline, within a broad timeline, the tasks and considerations needed to enable UAS integration into the NAS for the planning purposes of the broader UAS community. The Roadmap also aligns proposed Agency actions with the Congressional mandate in the 2012 FAA Reauthorization.

The five-year Roadmap will be updated annually and is intended to guide aviation stakeholders in understanding operational goals and aviation safety and air traffic challenges when considering future investments.

Unmanned Aircraft Systems Comprehensive Plan

The UAS Comprehensive Plan details work that has been accomplished, along with future efforts needed to achieve safe integration of UAS into the National Airspace System (NAS). The perspectives and information available from these individual activities create a framework and reveal an evolving capability for the integration of UAS into the NAS.

The UAS Comprehensive Plan sets the overarching, interagency goals, objectives, and approach to integrating UAS into the NAS. Each partner agency will work to achieve these national goals and may develop agency-specific plans that are aligned to the national goals and objectives.

Unmanned Aircraft System Test Site Program

On February 14, 2012, Congress mandated the FAA to develop a test site program. These test sites will enable the development of a body of data and operational experiences to safely operate and integrate these aircraft into the NAS.

The overall purpose of this test site program is to develop a body of data along with operational expertise to enable the safe operation of these aircraft in the NAS. FAA received 25 applications from 24 states. The following map summarizes the locations of the six test
sites that were awarded on December 30, 2013. The first test site should be operational by July 2014 and the test sites will continue to operate until at least February 2017.

UAS Spending Forecast

Teal Group's 2013 World Unmanned Aerial Vehicle Systems annual sector study forecasts U.S. and international Unmanned Aircraft markets. Teal Group creates a market profile along with a forecast for military and civil markets for both the U.S. and outside the U.S. As summarized in the chart below, Teal Group forecasts significant spending growth. Total procurement and R&D is expected to increase from $5.2 billion to $11.6 billion annually over the next decade. Teal Group’s ten year forecast estimates total UAS spending worldwide at $89.5 Billion.
Once the regulatory structure, operation requirements, and industry standards have been established, the commercial UAS markets will develop. Relatively inexpensive UAS systems under 55 pounds are economically viable for a commercial standpoint, and we expect that market demand for UAS will occur within the constraints of the regulatory and airspace requirements.

Once able to legally operate, the FAA estimates roughly 7,500 commercial small UAS will be operating at the end of five years. This forecast is highly uncertain and is dependent on the regulatory structure finally adopted, and the technology and the cost structure of the industry as it evolves. The safe and efficient integration of UAS into the airspace has the potential for broad benefits for virtually all Americans.