



vertiflite Commentary

Wanted: Leadership

By Mike Hirschberg, Executive Director

It's about leadership.

AHS prides itself on a history of leadership for the vertical flight industry. This includes assisting in the formation of the National Rotorcraft Technology Center (NRTC) and the Rotorcraft Industry Technology Agreement (RITA) in 1994, the International Helicopter Safety Team (IHST) in 2006 and the Vertical Lift Consortium (VLC) in 2010. AHS also spearheaded the creation of a Congressional Rotorcraft Caucus, resulting in direction to the U.S. Department of Defense for a Capabilities Based Assessment and a Strategic Plan for Future Vertical Lift in the 2009 National Defense Authorization Act.

In 2002, the Society was instrumental in restoring funding for NASA rotorcraft programs. Subsequently, when the National Full Scale Aerodynamics Complex (NFAC) at NASA Ames was closed in 2003, AHS championed the transfer of the NFAC to the Department of Defense (DoD) and assisted in restoring funding for its operations.

Tremendous successes have been achieved due to active, committed leadership.

In stark contrast in Washington is the political gridlock that mires the U.S. Congress and the White House in a state of inaction. The failure of the less-than-super-committee to reach a comprehensive budget compromise kicks the can on tough decisions. Although the draconian defense cuts that are set to automatically go into effect in fiscal 2013 will almost certainly be lessened by Congress, it is doubtless that significant cuts will be made. This is bad news for a vertical flight industry on

the brink of beginning the development of its next generation of capabilities. What we need is intelligent and dedicated leadership.

In Europe, the sovereign debt crisis threatens the Eurozone, with the possibility of financial crashes causing catastrophic effects that could spread across the globe. Populations are protesting austerity measures being enacted by struggling member countries. European leaders are coming together to determine the fate of European Union – will it push the member countries apart or pull them together?

The European Commission, through the 7th Framework Programme, is funding several bold initiatives to advance the state-of-the-art of rotorcraft, from “Greening Air Transport” and “Increasing Time Efficiency” to “Pioneering the Air Transport of the Future.” Despite the coming austerity, the European Union is showing determined leadership and should continue to fund the Framework Programme and invest in the future.

AHS supports the development of rotorcraft technologies across the globe – our mission is to advance the state-of-the-art of vertical flight worldwide. The decision makers of each government must decide whether their industry wants to be a leader or an also-ran in the lucrative civil and military rotorcraft markets.

One of the few Fiscal Year 2012 budgets that the U.S. Congress had passed at press time (two months after FY12 had begun) was that of NASA. Although the “space agency” was allocated \$17.8 billion – \$648 million less than 2011, the result of Space

Shuttle termination – the Aeronautics Research Mission Directorate was fully funded by Congress, but it has been continually cut over the years to a pale shadow of its former glory. NASA leadership must recognize – as European governments have – the huge societal and economic benefits of a healthy aviation industry with continually advancing capabilities. In the U.S. alone, aerospace (predominantly aviation) accounts for over \$80B in exports. U.S. decision makers must determine whether they are willing to cede leadership in this economic sector.

NASA's rotorcraft funding has hovered around \$28M a year for the past few years. Its Subsonic Rotary Wing (SRW) project is pursuing improvements in performance, efficiency and speed. Credible advances and breakthroughs are being made through the SRW research efforts, including engines and drive trains, active rotors, flight dynamics, materials and structures, and computational methods. But is it enough? Not by a long shot. NASA rotary wing funding is 5% of the Aeronautics budget, which itself is 3% of the agency's top line; this is not sufficient investment in vertical flight research to realize the full potential of rotorcraft.

This summer, AHS worked with the VLC and the CEOs of the major U.S. military rotorcraft manufacturers to sign a letter to the Secretary of Defense, urging the approval of the Future Vertical Lift (FVL) Strategic Plan. This joint effort creates a vision and a way forward for next generation vertical flight aircraft. Now, AHS and VLC are working with the

newly formed Army Aviation Caucus, which, despite the name, includes all military rotorcraft. The leadership shown by Congressmen Mo Brooks (R-AL) and Mark Critz (D-PA) has resulted in more than two dozen members of Congress joining the caucus. We are impressing upon the Caucus the importance of investing in next generation rotorcraft efforts.

In 2010, Army-led Joint Heavy Lift (JHL) studies were folded into the Air Force-led Joint Future Theater Lift (JFTL) Technology Studies. In November, however, the Air Force abandoned funding JFTL development for the foreseeable future. This is short-sighted, because enabling mounted vertical maneuver is supposed to be an Air Force core competency. While that Service prioritizes funding next generation replacements for the B-2 bomber and the F-22 fighter, analyses by the Army, Navy and Marine Corps have repeatedly shown that the ability to put forces and supplies where they are needed is how to win conflicts. Vertical lift capability is a key enabler, as has been shown countless times during the past decade. For the types of conflicts that we can realistically foresee, the ability to conduct ground operations with mounted forces in access-challenged environments should have far greater strategic effect than attempts at "shock and awe." Where is the leadership to develop the capabilities needed to operate as a truly

joint force?

Meanwhile, four industry teams are conducting configuration trades and analysis studies for the Joint Multi-Role (JMR) rotorcraft. In order for this program to be successful, the Services will have to show strong leadership in the face of severe budget pressures. The Office of the Secretary of Defense (OSD) will have to forcibly defend JMR from the budget hawks. While the Army-led JMR Technology Demonstration program is a major step in the right direction, the Army must maintain full funding for this effort and the Navy must become a full partner if it hopes to obtain next generation shipboard-compatible aircraft. A naval investment in a third JMR Technology Demonstrator would enable three candidate technologies to be flight tested – an advanced compound helicopter, an advanced tiltrotor and an advanced conventional helicopter.

Numerous flying demonstrators in the 1960s and early 1970s advanced the state-of-the-art such that new generation aircraft could be fielded at the end of the Vietnam War. Unbelievably, however, the last all-new technology demonstrator funded by the U.S. military was the XV-15, which first flew in 1977. Funding the JMR demonstration now and programming the development program will at best result in a next generation rotorcraft being fielded in 2030 – 55 years after the first flights of the UH-60 Black Hawk

and AH-64 Apache. Phase out of the existing aircraft may take another 5-10 years.

We can't afford to delay. Operational analyses show the dramatic need for new vertical flight systems across the DoD. History shows that the collaborative investment in rotorcraft systems between the DoD and NASA pays off in improved capability and economic impact. It takes a relatively small investment in science and technology today to provide huge security and economic dividends.

AHS is committed to its leadership role. We will continue to work actively and cooperatively with our industry, academic and government leaders.

The Europeans are showing leadership in their pursuit of next generation rotorcraft technologies. If America is to remain competitive, it must do the same. DoD and its Services must make the right decisions for the future soldiers, sailors, marines and airmen. NASA must grow its investment in aeronautics, and in particular rotorcraft. The industrial base must develop cost-effective advanced capability aircraft more rapidly and efficiently. And the U.S. Congress must support all of the above and fund rotorcraft technology and development if it wants America to maintain its military and economic strength and standing in the world.

What we need now is leadership.



AHS International Needs Your Awards Nominations

It's time for your nominations for the AHS International Awards Program!

The AHS International Awards Program has been in existence since 1943 (Igor I. Sikorsky and Colonel H. Franklin Gregory were the first recipients of the AHS Honorary Fellow Award). AHS awards provide important recognition to those who advance the interests of vertical flight. Both individually and collectively, you are the cutting edge of technology advances in the vertical flight community, so you are among the best qualified judges of those accomplishments that deserve international recognition.

Please go to our website at www.vtol.org/awards for information on nominating a colleague for one of our awards. You can also view the descriptions of the awards and our previously honored winners.

Whether it be for a single outstanding contribution or achievement, a major technical innovation, an act of courage or heroism, or long and valued service that has pushed the frontiers of vertical flight technology and its applications, we want your nomination!

The deadline for receipt of award nominations is **January 31, 2012.**