# VFS Supports MOSA

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The Modular Open Systems Approach (MOSA) is a congressionally mandated requirement for all major Department of Defense (DoD) acquisition programs, enshrined in law as part of the National Defense Authorization Act (NDAA) for fiscal year 2017 for new systems, and the 2021 NDAA, even for existing systems "to the extent practicable." VFS is an active supporter of implementing MOSA for vertical flight.

## MOSA Summit

In June, key thought leaders from the Vertical Flight Society once again stepped up to provide the perspectives on MOSA from the leading US military rotorcraft original equipment manufacturers (OEMs) at the annual MOSA Industry and Government Summit & Expo, held outside of Washington, DC, at National Harbor, Maryland.

Moderated by Tom Von Eschenbach, VP of Crewed Aviation Systems at Parry Labs, VFS organized a panel — "Vertical Lift OEM Perspectives on MOSA" — with leading technical experts from Bell, Boeing and Sikorsky. The objective of the session was to provide insights into developing the next generation of rotorcraft, including the progress and challenges in fully implementing the Army's ultimate vision of MOSA for future Army Aviation platforms, as well as upgrades to current helicopters in the Army's Enduring Fleet.

Galen Valentine, an Associate Tech Fellow at Bell, provided perspectives from his comprehensive software engineering and avionics experience. Andrew Augenstein, a Software Engineering Leader at Boeing Vertical Lift, is responsible for all aspects of mission and flight software development. Kirk Avery anchored the panel, providing key insights from his background as a senior fellow at Sikorsky, a Lockheed Martin Company.

This annual panel is a unique opportunity for VFS members to provide candid feedback to the US Army, other DoD agencies and the broader defense community and industrial base. The panel touched on progress and challenges in fully implementing the Army's ultimate vision of MOSA, giving examples of how each company is approaching designing, developing and delivering MOSA solutions. Understanding that both the US government and industry will be co-developing standards, there was some dialogue on how to "measure" MOSA to ensure companies meet contract deliverables and evaluate outcomes. There was also some conversation on how the rotorcraft prime contractors are working with their subcontractors to ensure MOSA compliance and conformance.

Tom Von Eschenbach, Parry Labs

The moderated panel transitioned to lively and candid questions from the audience, which required the panelists to think outside the box but with smiles and laughter. The room was packed shoulder-to-shoulder, and the overall disposition was of optimism and inspiration.

The MOSA Summit is organized by TechConnect, with the Vertical Lift Consortium (VLC) as the largest sponsor. The third annual MOSA Summit will be held again in National Harbor, in August 2025, and VFS plans to continue its successful series of insightful discussions on implementing MOSA on vertical lift platforms. Go to **https://events.techconnect.org/MOSA_2025** to learn more.

## What is MOSA?

VFS has been active over the past several years to support the government and industry in implementing MOSA-conformant systems, including those developed under the DoD Future Vertical Lift (FVL) initiative, such as the Army's Future Long Range Assault Aircraft (FLRAA) — the Bell V-280 Valor tiltrotor (see "FLRAA Soars through Milestone B," pg. 20). The promise of MOSA will not only change how the military implements technology advances on weapon systems — with both modern modular architectures and legacy systems — but also the more difficult part, it will change how both the DoD and industry engage on the business side of how they design, develop, deploy and sustain these systems. The implementation of MOSA across the DoD is driving tangible acquisition reform.

The Army's intent with MOSA is to provide future commanders with faster fielding of innovative, threat-based capabilities — using modular and open hardware and software — with


Galen Valentine, Bell


Andrew Augenstein, Boeing


Kirk Avery, Lockheed Martin

commonality across mission systems where it makes sense. MOSA is expected to reduce the time span for fielding new systems like FLRAA and take out cycle time for future sustainability and improvements by moving away from the "vendor lock" of proprietary, stove-piped systems. Applying MOSA at the enterprise level is the key to creating a more plug-and-play environment for companies to bring their technologies to the Army for competitive incorporation into future platforms, ensuring that they can be affordably sustained and upgraded for decades to come.

In addition, the NATO Next Generation Rotorcraft Capability (NGRC) program (see ● **www.vtol.org/ngrc**) will require MOSA, while modular and open systems approaches are also important for commercial aviation efforts. In other words, just about everyone in the VFS community should get more familiar with MOSA, how to incorporate it into aircraft developments and why.

*To learn more about MOSA and the VFS support, visit* ● ***www.vtol.org/mosa.***