In Times of Change, We Self-Reflect

By Angelo Collins, Executive Director

Just when we thought the COVID-19 pandemic was the once-in-a-century disruption, we find ourselves facing a new wave of challenges in 2025. Funding cuts to nongovernmental organizations (NGOs) and other nonprofits, including reduced grants and contracts, have rippled across the aerospace sector. Ironically, VFS does not receive direct federal grants or contracts, but we were not spared. Federal travel restrictions significantly impacted government attendance at our 81st Annual Forum (see "Forum 81 — Ideas Awaiting Orders," pg. 20), leading to an estimated $200K revenue shortfall.

That loss hurt — not just financially, but emotionally. It meant that some of our most respected members couldn't present their research, receive awards or be recognized for their achievements. In moments like these, we pause. We reflect. We ask, "who are we, and where are we going?"

One of my favorite graphic novels is "Watchmen." Its film adaptation opens with a haunting montage set to Bob Dylan's "The Times They Are A-Changin'." The scene depicts the fading relevance and media attention of the Watchmen, culminating with Night Owl setting up his own camera to document their existence. These days, it sometimes feels like it's VFS behind the camera, trying to keep vertical flight in frame while the world looks elsewhere.

But the world is, undeniably, changing. The draft federal budgets make that clear (see "Washington Report," pg. 6). This includes cuts to the Vertical Lift Research Centers of Excellence (VLRCOEs), to NASA, to Army research and development (R&D), and signals from the Army about reducing the role of crewed attack helicopters. The attention is shifting.

So, as we reflect, here's what we do know about the future of vertical flight.

Subject Matter Expertise Matters More Than Ever

Having competent, knowledgeable rotary-wing subject matter experts (SMEs), is more important than ever. Who they're employed by is a different story. The days of world-class SMEs working as civil servants may be numbered, but, rest assured, the work will always be plentiful for our best and brightest. As such, it is critical that the Society continues to invest in the future vertical flight workforce to ensure we have enough technically sound, experienced rotary-wing experts guiding the future. Redoubling our efforts to support the VLRCOEs; the Vertical Flight Foundation (VFF) scholarships; and our science, technology, engineering and mathematics (STEM) initiatives will help ensure the future workforce is ready for the challenge.

Subsystems Will Drive the Next Generation

Rather than fielding entirely new helicopter platforms, we expect a renewed focus on modernizing existing ones. Most legacy rotorcraft will continue to serve for many decades and even take decades to find their stride. For example, Bell's first helicopter, the Bell 47, first flew in 1945; today, 80 years later, 1,000 aircraft are still registered. At Vertol (later Boeing Philadelphia) in the 1950s, the lead engineers — many born in the 1800s — would be humbled to learn their beloved Chinook could still be flying in the 2100s.

Understanding the potential extended lifespan of rotary-wing aircraft, the most impactful innovations will be fielded that focus on affordability, sustainability, maintainability and safety. Technologies like additive manufacturing, advanced composites, computational fluid dynamics, and artificial intelligence (AI) will play essential roles in driving this evolution.

Acquisition Will Be Reimagined

The US military is shifting from program-centric to capability-driven acquisition. This challenges traditional aircraft development models. There may no longer be a "one platform fits all." Modular, upgradable architectures will take center stage. The Department of Defense's term "colors of money" may also blur: Was this first-person view (FPV) drone funded by a government program or private investment? Either way, the Army is increasingly open to procuring systems developed outside traditional pathways.

VTOL Is Central to Modern Warfare

Vertical takeoff and landing platforms are not optional — they are central to today's battlefield. One-way FPV drones that are used in Ukraine aren't toys. They are the result of decades of rotorcraft research in aerodynamics, control systems and structural design. These technologies are shaping the future of warfare. Beyond drones, utility helicopters will remain a cornerstone of the Army's logistics and mobility strategies. While the role of crewed attack helicopters is evolving, one thing is certain — VTOL attack platforms will be part of the future battlespace.

Many challenges and uncertainties lie ahead, but one thing will remain constant: the Vertical Flight Society. We are not just a platform for members to learn, network and grow, but the bedrock of global vertical flight research and advocacy. Even in uncertain times, VFS remains agile, resilient and ready. As the world changes, we will continue to lead, support and advance the art and science of vertical flight.