Looking Back:
A Vertical Retrospective of COVID-19
By Mike Hirschberg, VFS Executive Director

With the dawn of a new decade, we had been taking a look back at how things have changed since the beginning of the 21st Century. This series — like everything else — is being interrupted to give a short history and perspective of the impact of the global pandemic.

The month of March 2020 was one of the most consequential of the past century. Within those 31 days, the novel coronavirus changed from a national epidemic in China to a global pandemic.

Conference and Events Cancelled
As the virus spread to Europe and began to rage in Italy in late February, normal business slowly began coming to a halt. AERO Friedrichshafen, Europe’s largest General Aviation tradeshow and fly-in, was cancelled on March 6, less than a month before it was scheduled to begin.

Many universities, government agencies and companies also began prohibiting international travel and then any air or non-essential travel. Universities and then primary/secondary schools began shutting down in Europe and then North America as the COVID-19 threat approached.

NASA’s Urban Air Mobility (UAM) Working Groups Kickoff Workshop (see “NASA’s National Campaign,” pg. 58) — planned for March 10–12 at College Park, Maryland — was cancelled the day before it was to begin, with many travelers from around the country and around the world already en route. The working group kickoff was later held as a series of virtual events.

The Province of Quebec suspended all large gatherings on March 12, when it still had only a handful of cases. The US and Canada soon closed the border to non-essential travel. President Trump declared COVID-19 to be a national emergency on March 13 and three days later issued guidelines called “15 Days to Slow the Spread” (later extended).

Most conferences and events around the world were soon being cancelled or postponed.

VFS had planned a two-day Workshop on eVTOL Infrastructure for UAM for March 17–18, at Rowan University in Glassboro, New Jersey — near Philadelphia and the US Federal Aviation Administration (FAA) Technical Center in Atlantic City. Rowan notified VFS with less than one week’s notice that the university was closing down. Consequently — with the support of our event sponsors — VFS is holding a series of free webinars in April and May to provide a detailed introduction to the challenges of UAM infrastructure and keep the momentum going. The in-person workshop is tentatively planned for Sept. 1–2 near the FAA Tech Center and will focus on solutions to these challenges. See www.vtol.org/infrastructure.

Forum 76 Rescheduled
In early March, it still looked like the impact of the novel coronavirus would be similar to the 2003 SARS coronavirus or the flu. It was obviously bad in China, but it looked like it had been largely contained. Yes, it had flared up in Italy and a few other nations, but the draconian quarantines, like in China, were expected to prevent further significant spreading.

VFS set up a webpage, www.vtol.org/covid, and provided regular updates, beginning March 4, on the developing situation through its Hover online professional networking community/email platform. Forum 76, planned for May 19–21 in Montreal, Quebec, was then 76 days away and it appeared unlikely to be significantly impacted.

Based on the information at the time and the opinions of experts and health agencies in the US and elsewhere, we advised our members to take precautions to minimize chances of any transmittable disease. Early Hover postings now appear antiquated, including the quote of a Johns Hopkins Hospital statement that, “As of Mar. 7, 2020, the flu is showing much more of an impact on Americans than COVID-19.”

Nonetheless, on March 9, I advised the VFS Executive Committee that we had begun to look at contingency plans in the — what appeared to be — highly unlikely event that we could not hold the Forum as scheduled. After a blur of events that shook the world and the nation, we announced on March 24 that we had successfully been able to reschedule Forum 76.

We found that the Virginia Beach Convention Center had an opening Oct. 6–8 and that the hotels were also available. Through the tireless efforts of our staff and the gracious understanding of partners in Montreal, we were able to get released from our contracts and line up agreements with Virginia Beach within the space of about two weeks. Working with our Forum Committee and the VFS Technical Council leadership, we were also able to replan our technical paper submission plans.

As of this writing, there is still quite a lot of work to do to complete the transition to Virginia Beach, but we are working
diligently to provide the high-quality Forum that our members and attendees expect, with the maximum opportunity for information sharing, education and networking.

The Annual Forum plays an important role for the community and in support of advancing vertical flight. We greatly appreciate the outpouring of support and understanding from our members and partners as we work to support you during this difficult time. As the coronavirus threat progresses, we will continue to make decisions and provide updates based on the available information.

Impacts on the Vertical Flight Industry
When the first major outbreak of COVID-19 outside of China occurred in northern Italy, Leonardo’s Milan-based facilities were immediately affected. Leonardo shut down on March 16 for “extraordinary cleaning and sanitation.” It reopened a few days later, balancing safety with producing helicopters for the military and public safety sectors. Social and workplace distancing, as well as teleworking, were implemented. Airbus similarly suspended production in France and Spain on March 17 for several days “to implement stringent health and safety conditions.”

The week of March 16 in the US also saw cities and states begin issuing stay-at-home orders. Initial hotspots were near San Francisco and Seattle, but soon the greater New York City area was engulfed in COVID-19, and then Philadelphia and other major cities. Despite these US federal, state and municipal directions to stay home, the Pentagon declared on March 20 that the US defense industrial base was a “critical infrastructure sector” and was expected to continue to meet their national security commitments. As a result, most helicopter production in the US continued, though Boeing closed its Philadelphia plant for two weeks in early April for “deep cleaning activities” and to set up safety protocols. Across the industry, of course, engineers have been working from home to the maximum extent possible.

Helicopter operations have been impacted much more negatively, with discretionary flying curtailed in most areas. The US Army suspended helicopter flight training at Fort Rucker and warships with infected crew have returned to port. London Heliport has temporarily closed and Helijet paused its scheduled helicopter service in British Columbia. The collapse of world tourism has halted most helicopter sightseeing operations. Even corporate helicopter demand has been reduced as part of a dramatic drop in executive travel and shelter-at-home requirements.

Air ambulance operators are being dispatched to very few motor vehicle accidents and hospitals are restricting or redirecting incoming patient flights. New protocols have been introduced to screen passengers. Personal protective equipment for the crew, as well as development of contamination containment from patients who could possibly be infected, is used for essential missions. Special ventilators have also been developed for patients needing helicopter transportation.

Civil helicopter demand is tied to many sectors that have been negatively impacted by the economic slowdown and social distancing, including tourism, natural resources development, utilities and even flight training.

From a long-term perspective, the civil helicopter industry may go through a major downturn worse than 2008 and the 2014 collapse of oil prices. The current dramatic drop in oil prices will almost certainly prolong hardships in the offshore helicopter industry and further reduce demand for new helicopters and pilots.

A reduction in global flight hours will impact supporting maintenance, repair and operations (MRO) and training industries, weaken demand for new aircraft and negatively impact residual values and selling prices of inactive aircraft.

Of course, the impact will not be nearly as bad as the impact to the global commercial airline industry, because there are a lot of missions that only helicopters can do. But the aerospace supply chain that supports the helicopter industry is badly exposed if they are also part of the supply chain supporting commercial or business aviation.

Although unmanned aircraft systems (UAS) are now getting more use and attention, the pandemic also has the potential to significantly threaten eVTOL aircraft developments. VFS is tracking more than 270 eVTOL concepts and some 200 companies and innovators on our website.

Support for Today and Tomorrow
COVID-19 has deeply affected everyone and their view of the world in the future. VFS is doing everything we can to support our members and the Vertical Flight community during this time of crisis.

VFS has the world’s most extensive vertical flight resources online to serve our members and other vertical flight researchers and innovators. For those members now conducting more online research, our expanded-access options are more cost-effective for those who are paying for frequent downloads. Members can upgrade to the Regular Plus* membership category with full access to the Vertical Flight Library. Go to our membership page at www.vtol.org/membership to learn more about all of our online resources.

We are in unprecedented times, but together, we will continue to work towards a bright future of vertical flight.

What do you think? Let me know at director@vtol.org.