

Overcoming COVID-19: Aerospace & Defense's Road to Recovery





INTRODUCTION

For over a century, the aerospace and defense (A&D) industry has met countless challenges head on and persevered, from the trials of world wars to the pressures of the Space Race. In 2020, we are once again facing an unprecedented challenge to our workforce, shared supply chain, and economic health: the COVID-19 pandemic.

Global air traffic has dramatically decreased as the world fights this deadly virus. Civil aerospace, which accounts for 61% of our industry's revenue, has been particularly hard hit, with over 200,000 jobs at risk. And this impact will likely be felt for years to come. However, our industry is committed to overcoming this newest hurdle and emerging stronger, enabling us to help lead America's recovery.

To better understand the scale and scope of the crisis' impact on our employees and companies, AIA turned to several experts for independent analysis that identifies the myriad ways COVID-19 is undermining the A&D industry. This expert analysis from Avascent, Boston Consulting Group, and McKinsey & Company, combined with extensive input and insight from our members, serves as the foundation of AIA's Roadmap to Recovery, a strategic action plan for how companies and government leaders can work together to help the industry persevere through the crisis and become more resilient on the other end. It will guide our work to protect the health and financial wellness of A&D workers and provide relief for struggling businesses under pressure from this crisis.

COVID-19'S IMPACT ON THE A&D INDUSTRY

In 2019, despite the pre-pandemic aircraft groundings that caused stress across the manufacturing supply chain, the A&D industry saw some of its highest industry employment and sales revenue in the past half century. However, the unprecedented crisis brought by COVID-19 during 2020 continues to have a clear and significant impact on our workforce, industry, country, and global economy.

The civil aviation industry is currently facing one of the most dramatic changes in its century-long history. According to Airlines for America, between February and April of 2020, domestic air travel in the United States slowed to a crawl, with more than a 95% year-over-year decrease in revenue passenger miles at its lowest point in mid-April. The International Air Transport Association (IATA) reports that, largely due to travel restrictions and the decline in passenger travel, 17,000 aircraft have been grounded (more than 60% of the global fleet) as of May 2020. That's compared to 1,500 typically in storage. Globally, IATA expects the immense decline in global passenger mileage due to the pandemic will result in more than \$400 billion in revenue loss for airlines.

Civil aviation manufacturers will be affected in turn, with some estimating that global civil aircraft production will drop by nearly 50% in 2020 (Avascent, July 2020). The impact on the civil aviation workforce is expected to be equally severe without further government assistance, with 220,000 U.S. jobs at risk under current projections (Avascent, July 2020). Though passenger air travel may return to 2019 levels within the next five years, the aviation market may take nearly a decade to recover (Avascent, July 2020).

As end-use civil aviation manufacturers face decreasing passenger demand, the industry's shared supply chain will also see substantial impacts. In addition to a reduction in airframe production and its associated supply-chain components, the significant reduction in passenger travel may result in an excess of aftermarket parts. These factors will pose a serious barrier to the recovery of the industry's supply chain, with the small and medium-size companies – the lifeblood of the industry – at greatest risk.

The impact of the pandemic is extending beyond civil aviation and into the defense realm due to the closely integrated nature of the supply chain that the two sectors share. As a result, the defense industry is unlikely to be spared as suppliers face disruptions in their civil manufacturing consumer base. In addition, the defense sector's unparalleled ability to help safeguard U.S. national security and the technological edge of the U.S. military will likely be challenged by fiscal pressures from reduced tax receipts during the recession, heightened competition among federal priorities, and growing concern about deficit spending.

A healthy and resilient industrial base is a critical element of national and economic security. While we still do not know the full scope of the pandemic's impact, it is clear that further action will be necessary for A&D employees, companies, and the overall industry to weather this storm.



STEPS TOWARDS THE ROAD TO RECOVERY

As the crisis continues, companies and government leaders have taken a variety of actions to minimize the harm of this health crisis. For example, A&D companies are supporting and investing in their employees during this time, including improving benefits for workers and their families. Companies have also invested significant resources in finding new ways to work remotely, while also maximizing the health and safety of work environments by ramping up the frequency of decontamination and sanitization efforts, implementing physical distancing procedures, providing personal protective equipment (PPE), and conducting temperature testing at facilities.

The government has played a key role in supporting the industry's employees and businesses as well. One critical government action was to increase progress payment rates for defense contracts, which injected much-needed liquidity up and down the shared supply chain to help companies continue to make payroll and complete essential work. Industry has worked with federal agencies (and continues to build on this work) to establish clear, consistent, and flexible contract guidance that reflects the large impact the virus is having on employees, the availability of supplies, and production and transportation delays. In addition, the relief and support measures in the Coronavirus Aid, Relief, and Economic Security (CARES) Act have been, as one AIA member said, "a lifesaver." In fact, one study found that the government Paycheck Protection Program alone has helped protect millions of jobs so far.

However, given the severity of the continued crisis, more needs to be done. Both the A&D industry and U.S. government leaders will need to take additional steps to overcome COVID-19. The following is a summary of recommended solutions that industry and government can take to help lead the country to recovery.



INDUSTRY ACTIONS:

- **Restoring Confidence in Air Travel:** Passengers remain concerned about the risks associated with travel as the virus continues to spread. To help rebuild public confidence in the safety of air travel, the aerospace and defense industry is partnering with allies across the travel ecosystem to highlight the many layers of prevention, protection, and safety built into the travel journey. For example, the industry is supporting the International Air Transport Association, Airports Council International, Airlines for America, and other airline and airport groups in a coordinated effort to implement guidance from the International Civil Aviation Organization (ICAO) on air travel health and safety. Actions include:
 - Aerospace and defense companies encouraging a unified, consistent, and layered approach to air travel safety guidelines and procedures that are based on independent scientific findings.
 - Cabin/interior suppliers, airframe original equipment manufacturers (OEMs), and airport security equipment providers working with airlines and airport communities to implement a comprehensive health-focused strategy that will address risk and risk mitigation and, in turn, help increase customer confidence in air travel, including introducing innovative products where appropriate.
- **Strengthen the Resilience of the Supply Base & Improve Communications:** Businesses strive to adapt to disruptions and constantly changing dynamics while also protecting employees' health and safety and maintaining operations. The COVID-19 pandemic reinforces the need for enhancing this kind of resilience for both individual businesses of all sizes and the entire supply chain. Communication throughout the supply chain can help ensure efficiency and maximize effectiveness. For private-sector leaders, the biggest way to support suppliers is to send demand signals as early as possible that are clear and stable. Clear, reliable information about upcoming demand gives suppliers more transparency and increases their ability to plan. Some options industry will pursue include:
 - Increasing the resilience of the supply base by developing secondary sources, onshoring, and other tactics where appropriate.
 - Increasing visibility about future demand, which could – in extreme circumstances – even prevent suppliers from exiting a program entirely.
 - Companies, regardless of their position in the value chain, improving how they measure and monitor the performance of the shared supply chain. This can be done by improving resiliency through broadly adopting a common set of minimum supplier data requests and controls.
 - Standardizing communication among suppliers and OEMs. OEMs and prime contractors communicate to suppliers in different ways, leading to huge inefficiencies and redundant work for all parties. An industry standard approach would integrate common elements across the industry while still protecting proprietary information. This would also reduce a significant administrative burden on suppliers, allowing them to focus their resources instead on core operations.
 - > Using digital ledger technology (like Blockchain) is one possible way to standardize and streamline these customer/supplier interactions, but other potential solutions exist as well.

- **Flexible Actions to Support Suppliers:** Flexibility is essential during periods of uncertainty and crisis for businesses of all sizes. Some ways private companies can support flexibility in the supply chain include:
 - Offering balance-sheet support. For example, OEMs and prime contractors should avoid delaying payments or pushing back delivery receipts of finished goods. Small businesses and cash-tight suppliers have almost no margin for error, and in many cases, delayed payments could push them to the brink of insolvency.
 - Sharing inventory risk. In critical situations where production capacity is at risk, OEMs and prime contractors could also take ownership of some supplier inventory (e.g., buying finished goods ahead of need or purchasing suppliers' raw materials or other inputs). This should be a tool of last resort and used in highly unique scenarios where security of supply may be at risk.

PROPOSED GOVERNMENT ACTIONS:

- **Targeted and Temporary Payroll Assistance from Government:** Protecting jobs and keeping employees on payroll is a shared priority for American businesses and policymakers. There are several policy proposals that focus exclusively on helping companies continue to pay employee wages, salaries, and benefits, including:
 - Enact transparent payroll cost share program to keep employees on payroll and save thousands of jobs through legislation, such as:
 - > Senators Moran and Warner's bill: The Private-Public Partnership to Preserve Jobs in the Aviation Manufacturing Industry Act of 2020; or
 - > Representatives Larson and Estes' bill: The Aviation Manufacturing Jobs Protection Act of 2020.
 - Extend CARES Act programs (including payroll support, payroll tax deferrals, employee retention credits, small business Paycheck Protection Program, etc.) and allow small businesses that have already received one PPP loan/grant to apply for another.
 - Continue supplemental funding to cover payroll expenses for maintaining workforce unable to work because of COVID-19 closures.
- **Broader Financial Relief for Civil Aerospace:** Both promoting supply chain stability and protecting critical suppliers, jobs, and skill sets are essential. Measures to send government-backed capital to suppliers in need would provide welcome relief. Potential approaches include:
 - Developing a derivative of the Small Business Administration (SBA) Small Business Investment Company (SBIC) Program, where independent fund managers direct private funds and government-guaranteed debt commitments into a portfolio of critical businesses.
 - Establishing an equity and/or debt investment fund, capitalized jointly by large U.S. suppliers, the U.S. government, and private investors.
- **R&D and STEM Education Government Stimulus:** Investment in cutting-edge technologies can help protect jobs and critical skills now, while also paying economic dividends in the future. Government support for critical aviation R&D and STEM education initiatives will be crucial to meeting long-term economic goals, keeping critical workforces engaged, and mitigating skills atrophy. Some potential approaches include:
 - R&D project identification, design, and funding distribution managed by one or more USG entities (e.g., NASA, FAA, DOE), but supported by consensus group of industry leaders.
 - Creating a tax credit program for relevant R&D and STEM initiatives.
 - Establishing an FAA-directed improvement fund similar to the current FAA Airport Improvement Program (AIP) for terminal redesigns and technology adoption that promotes safe passenger experiences (e.g., TSA checkpoint overhauls, new scanning systems, etc.).

- Maintenance Repair Overhaul (MRO) Stimulus:** With aircraft parked or stored due to travel restrictions and public concern about the risks of COVID-19 being spread through air travel, maintenance, repair, and overhaul (MRO) providers, which repair, service, and inspect aircraft, are also acutely suffering the effects of the massive decline in air travel. Like so many other critical elements of the interconnected ecosystem that keep the aviation system safe and moving, their skills and services will be crucial to the aviation and economic recovery.
 - To help minimize MRO service disruptions, government could create funding opportunities for viable U.S. airlines' major upcoming/scheduled MRO shop visits. An example might include establishing a loan program with appropriate terms that incentivize airline use of MRO services.
- Accelerating Defense Procurement:** Notable progress has been made in improving military readiness, defense modernization, and strengthening the supply chain over the last several years. Beginning in 2017, Congress increased investment in the defense budget, while DOD made structural changes to bolster innovation and sustain the industrial base. These gains are now threatened because of the pandemic's impact on the shared supply chain and pressure on the federal budget from crisis-related spending. The DOD can help relieve some of the stress on the industrial base by accelerating defense system and service procurements, with a focus on initiatives that involve suppliers with notable commercial aerospace exposure. Examples of action include:
 - Accelerating or creating demand for programs – that enhance security through DOD missions – with prime contractors and/or subcontractors with commercial aerospace market exposure.
 - Continuing to authorize increased payments against ongoing contracts as they reach development and production milestones. This has been one of the government's most successful responses to COVID-19-related cashflow challenges in the industry, injecting nearly \$4 billion into all levels of the A&D supply chain.
- Continued and Sustained Government Aerospace and Defense Funding:** The progress made when it comes to readiness and modernization must be maintained. Sustained and stable federal investment in aerospace and defense will help ensure America's national security and technological edge and preserve the health of the defense industrial base. Some experts argue that threats to our security are multiplying, as adversaries take advantage of the crisis. Sustained government investment in aerospace and defense provides a multitude of dividends for the country: it supports our national security; preserves the extensive cadre of highly skilled and highly capable American defense workers; fosters a healthy joint industrial base; improves competitiveness of U.S. high-tech businesses; and ensures the modernization and readiness our troops need to meet new threats.



CONCLUSION

In the coming years, the COVID-19 crisis will create unprecedented challenges for our industry and country. But just as we have done throughout our history, we can overcome this crisis through the ingenuity, determination, and private-public partnerships that have helped defend this nation for decades and empowered humans to not only reach the skies, but surpass them.