

# The Impact of COVID-19 on the Aerospace & Defense Sector and the Road Ahead



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The COVID-19 pandemic is still continuing, and it has already inflicted heavy damage on the global economy. Virtually all sectors have suffered serious damage because of the direct and indirect effects of the pandemic, aerospace and defense being no exception. Global manufacturing networks and supply chains have been disrupted, budgets have shrunk, and programs have been delayed, the aerospace and defense sector has entered a period of uncertainty and faces multiple threats. It can be said that it will take significant time for the sector to recover to pre-pandemic levels globally.

The impact of COVID-19 on the aerospace and defense industry can be assessed under three main topics: Human resources, manufacturing and supply networks, and programs and budgets.

## Human Resources

First and foremost, the main threat of COVID-19

is the threat to human life. The novel coronavirus is extremely contagious, and it quickly spread throughout the globe from China in late 2019. Millions of people have been hospitalized and many cities were locked down, bringing all social and commercial life to a halt for several months.

For the sector, one direct result is the loss in workforce, due to deaths or incapacitation resulting from the effects of the virus on the infected individual. This effect has especially been significant on small to medium sized enterprises which usually have a small number of employees.

Another impact stems from lockdowns, quarantine, and furloughs. Companies have not been able to continue normal operations due to necessary measures to protect employees and the working environment. This has especially affected companies that have manufacturing operations. In some cases, manufacturing plants and serial production lines came to complete stop.

Another critical issue has been related to information security. The aerospace and defence industry deals with extremely sensitive information regarding

national security and advanced technology. Data and information about these projects must be stored and processed in a controlled, classified environment. While it has been possible for some sectors to shift employees to home-office conditions, it has not been possible for all aerospace and defense companies to make the same changes.

## Manufacturing and Supply Networks

Many aerospace and defense projects involve global supply chains where contractors procure countless sub systems, components and parts from suppliers all over the world. This has been the standard mode of operation especially for the aerospace and defense sector in Western countries. The impact of COVID-19 on defense supply chains has been noteworthy. Especially many multinational development projects and production activities have been either slowed down or have come to a complete halt due to delays caused by supply chain, logistics and related disruptions.

There is also another important issue, which is that of companies not being able to meet their contractual obligations as a result of COVID-19. This

includes clients being able to vary, suspend or even terminate these contracts under either certain clauses (e.g. force majeure or frustration) or statutory protections, depending on the governing law (for more on the implications of COVID-19 on commercial contracts, see our briefing). This issue has been especially critical for countries running long term projects involving technology transfers and / or support of services, such as maintenance.

Another important issue is related to the epicentre of the pandemic, China itself. For many products, China is directly or indirectly at the heart of global supply chains. While this is not always the case for the defense sector, due to information security concerns, Chinese subsystems and parts are found in many aerospace products and programs. China also produces many intermediate inputs and is responsible for processing and assembly operations. The disruption of supply chains coming out of China is a major risk factor for global manufacturing networks. Furthermore, it is expected that US - Chinese relations will be further strained in the post COVID-19 era, multiplying the risk factor for programs and products that involve Chinese suppliers.

## Programs and Budgets

One immediate and direct impact of the pandemic has been on defence budgets worldwide. The COVID-19 pandemic has forced governments to focus their spending on healthcare and safeguarding the economy, which could possibly result in shifting priorities away from defense. Some Asian countries have already announced cuts to their defense budget for 2020.

Global defense spending exceeded \$1.9 trillion in 2019 marking the highest since 1988, according to research conducted by the Stockholm International Peace Research Institute (SIPRI). India and Thailand are some of the first countries to have announced a reduction in defense expenditures amid the COVID-19 crisis.

The pandemic and its aftermath will pose a significant challenge to NATO. Even if NATO members continue to aim for the 2% of GDP target for defense spending, holding present budget lines will be difficult as projected national GDP growth is affected by the economic impact of the pandemic. This could even result in more NATO states reaching the 2% target while actually spending less in real terms on defense if overall GDP falls. In the near term, acquisition programs face being disrupted by enforced change within

defense industries, which have their own pandemic challenges. Underlining this risk, NATO Secretary General Jens Stoltenberg has recently highlighted the need to keep up defense expenditure despite the uncertain economic conditions.

Development programs, procurement budgets and military roles will probably be re-defined. The role of armed forces and their ability to respond to humanitarian crises as well as disasters will move to the forefront. Consequently, development and procurement programs under health, humanitarian support, logistics topics will likely have higher priorities. Another aspect of this shift in priorities could be adverse public opinion to high profile, high cost projects, especially in European countries where public oversight and control on defense spending is extremely strict. Government and armed forces performance during the early stages of the pandemic, especially in European countries, will likely shape defense spending and thus the structure and focus of the sector in the coming years.

## The Future: Post-Pandemic

In the longer term, companies will likely face cash-flow shortages and production challenges throughout the supply chain that may weaken

the industrial base that supports complex manufacturing. Defense contractors will likely experience slowing demand due to shrinking budgets and procurement priorities and a flattening of the growth curve over the long term as national governments seek to reduce deficits and control expenses. It can be assessed that:

Companies may lose market share if they fail to deliver or if they are unable to invest in new products during the downturn.

The risk of critical program failure, significant delays in delivery times and project cancellations is likely to rise.

Key suppliers and specialized providers may become financially stressed and require government incentives and support.

One major question for defense companies will be the safety of employees and conducting a safe mode of work while preserving continuous operations in a secure, classified information environment. As such, maintaining and supporting critical workforce, especially highly skilled and experienced managers, team leaders and executives will be a top priority, which will require extra financial resources.

Sustaining production in a constrained environment involving social distancing

will require additional, unforeseen investment in terms of physical and IT infrastructure. This requirement will put an extra burden on already stressed budgets and will also require a transformation period. Those companies that demonstrate the ability to adopt this "new normal" will have more of an advantage in the post-pandemic market environment.

Design and development procedures will need to be re-defined, which means full endorsement of advanced information and communication technology protocols, infrastructure, and capabilities. A new mode of global supply and a manufacturing network will be defined but this will only be possible through close coordination between governments and the sector.

Procedures and criteria for selecting sub-contractors and suppliers will likely be changed. Large companies will be forced to consider creating alternative supply chains and will develop new manufacturing strategies.

Capability to develop and manufacture dual-use technology and products will be a critical advantage for companies to sustain cash flow. Companies that are specialized in a limited number of fields applicable only to military solutions will face higher financial risks in the post COVID-19 era ■