AeroSpace and Defence Industries Association of Europe

Position Paper

COVID-19:
Proposals for EU Relief Measures for Aerospace, Defence and Security Industries

2 May 2020

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Executive Summary

The COVID-19 pandemic represents an unprecedented crisis and has led to a sharp downturn of the world economy. In order to fight the spread of the virus, governments around the globe have put their economies and societies into an artificial coma, from which it will be difficult to awake and recover.

In the past weeks, both the European institutions and Member States have taken important decisions to help industry in Europe to survive this shock. However, the way out of the crisis will be long, and much remains to be done to support the recovery process.

Given the magnitude of the crisis, common European action is more important than ever. What we need is a European Union able to mobilise sufficient resources to support Member States, and able to deploy new and innovative instruments that meet the requirements of this historical challenge. All measures must be coordinated under a **coherent and ambitious European Recovery Plan (ERP).** To make a difference, this recovery plan needs to mobilise big money and focus on things that really matter for Europe's competitiveness in the 21st century.

Aerospace, defence and security should qualify as strategic sectors in this Recovery Plan. Together, they form a truly European high-tech ecosystem that is not only a major contributor to growth and innovation, but also essential for Europe's technological sovereignty and strategic autonomy. This ecosystem should therefore rank high on the priority list of the future ERP.

Priority must be to ensure that aerospace, defence and security companies continue to operate during the height of the crisis and recover rapidly when things begin going back to normal. Support measures under the ERP should therefore have as

Short term objectives: guarantee **business continuity** through protection of staff, transfer of components and subsystems, etc. and **financial stability** with dedicated guarantee schemes and direct state aid in particular for SMEs, continuation of procurement and research programmes, etc.;

Long-term objectives: boost i**nnovation**, strengthen **strategic value chains** and foster **technological sovereignty**. This requires in particular a substantial increase of the MFF budget, major investments in key technology areas, an ambitious and comprehensive industrial policy and careful screening of Foreign Direct Investments.

Since aerospace, defence and security markets are very different in nature, they are also affected differently by COVID-19. The ERP must take these specificities into account. We have identified the following sector-specific measures as particularly important:

Civil aeronautics

- **Financial support to customers** (airlines, other aircraft operators and air navigation service providers) to avoid bankruptcies with knock on effects on the entire civil aviation value chain;
- **Financial support to aeronautical supply chain companies** through a specific equity based European Fund for civil aeronautics;
- Safeguard of **European Financial Instruments** like repayable launch aid Instruments to defend a level playing field vis-à-vis the US and China and preserve European industry's ability to finance new civil aeronautics programmes;
- **A European Aviation and Aeronautics "Marshall Plan"** to support a sustainable aviation roadmap, consisting of three elements:
  - increased public funding of Research & Innovation in Clean Sky and SESAR;
  - a green incentive scheme for airlines and aircraft operators to replace older aircraft (fixed wing and helicopters) with more modern and environmentally friendly aircraft;
  - a European public investment plan for Sustainable Aviation Fuels (SAF);

- **Investment in the European Air Traffic Management system (ATM):** make aid to air navigation service providers subject to continuous investment in technologies and infrastructure (SESAR), provide 100% public funding and implement incentives for SESAR deployment.

Defence

- **Continue PADR and EDIDP and be flexible** in project management (extended timelines, pre-financing and accelerate payments wherever possible);
- **Get the European Defence Fund ready for 2021 with an ambitious budget** at least at the level initially proposed by the European Commission (€13bn);
- **Use EDF strategically** to support key capabilities and reduce technological dependencies;
- **Facilitate uptake of emerging technologies** through synergies with civil research programmes**;**
- **Support strategic defence value chains** with financial and regulatory measures;
- **Facilitate access to finance under the InvestEU programme** through the design of defence-specific financial products.

Security

- **Include a specific security dimension in the European Recovery Plan:** Support public authorities and economic operators during the pandemic against security threats (cyberattacks, disinformation, etc.)**;** use recovery to enhance resilience against natural and man-made disasters;
- **Increase security budgets to address capability gaps that COVID-19 has revealed** (common crisis management system, common equipment pool, unified standards…);
- Systematically include **resilience as a priority** in EU funding programmes;
- Implement the Cyber Strategy with an appropriate funding for the **protection of digital systems**;
- Develop a comprehensive and ambitious **security industrial strategy** that aims at European technological sovereignty in key security areas;
- Invest in **research on low probability – high impact events**;
- Establish a **permanent European Security Board** with experts from security industries and critical infrastructures to advice the European Commission on the entire security cycle (from prevention to containment, response and recovery).

Space

- **Mandate the European Space Agency (ESA) to implement its relief measures also for the EU programmes** that are delegated to ESA (Galileo, Copernicus, EGNOS);
- **Continue ongoing bidding processes for EU flagship programs** (Copernicus, Galileo);
- **Support the Space programme under the next MFF** at least at the level initially proposed by the European Commission (€16bn) to allow for both full deployment, exploitation and evolution of the flagship programmes and launch of the new initiatives Govsatcom and SST;
- Devise, with industry, **a recovery plan that would aim at developing new enabling space-based services** contributing to the general European economic recovery (contribution of space infrastructures to a Digital Europe and to the Green Deal objectives);
- **Support Space R&D and innovation** via *Horizon Europe* with a significant dedicated budget and an efficient implementation mechanism (co-programmed partnership). Focus on Industry competitiveness and non-dependence of Europe, define work programmes on the basis of the Strategic Research and innovation Agenda supported by Industry.

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Introduction

The COVID-19 pandemic represents an unprecedented crisis and has led to a sharp downturn of the world economy. Air traffic was one of the first and hardest hit sectors: Flights have been reduced by more than 90% in Europe and worldwide, airlines grounded (almost) their entire fleets and suffer dramatic losses of revenue, with immediate knock on effects on the entire civil aviation value chain.

It is totally unclear if and when air traffic reaches again pre-COVID-19 levels, and how many airlines will survive this crisis. As a result, the demand for new civil aircraft has slowed down enormously.

This has dramatic consequences for the aeronautics industry, which is one of the European Union's key high-tech sectors. It is important in economic terms, but also in strategic terms, as it is closely linked to the defence, security and space sectors, which are crucial for achieving Europe's technological sovereignty and strategic autonomy.

Civil aeronautics, defence, security and space have multiple strong links and form in many ways a common ecosystem. Many companies of this ecosystem have activities in more than one of these sectors and are part of a complex web of supply chains that spans across all EU Member States and beyond.

Within this ecosystem, civil aeronautics is the economically most important pillar in terms of revenues and employees. It is also particularly hard hit by COVID-19, which has provoked a sudden and totally unexpected collapse of its worldwide customer base. Defence, security and space companies are concerned by supply chain disruptions and infection of critical staff. At the same time, they serve exclusively (defence) or to a considerable degree (security) public customers and have, therefore, not (yet) experienced a comparable market meltdown. However, the risk is real that defence and security will suffer severely from the economic fall-out of the pandemic when public budgets get under heavy pressure. This would be particularly dangerous as there are no indications that the security environment in and around Europe will improve after the COVID-19 crisis.

The links between the four sectors offer both risks and opportunities: given its economic weight, a complete breakdown of civil aeronautics would undermine the basis of the ecosystem as a whole and, thereby, drag down defence, space and security as well. Europe would not only lose one of its few hi-tech sectors where it is a world-leader, it would also affect the industrial basis for its aspired technological sovereignty in key strategic areas.

At the same time, the differences between the sectors of the ecosystem can be turned into an advantage. Defence and security markets are not big enough to compensate for the implosion of the commercial business. However, since they are (mainly) public markets, the EU and its Member States can use their procurement and research budgets to support these two strategic sectors directly. This would also contribute considerably to stabilising the civil aeronautics sector until the global commercial business recovers from this crisis.

Since aerospace, defence and security industries are of strategic importance for Europe, it is an essential interest for the EU and its Member States to ensure their survival. Given the diversity of the ecosystem, specific measures are necessary for each of these sectors. At the same time, these measures should be coordinated and follow a holistic approach to exploit the opportunities that the different market conditions of each sector offer. Coordination between the EU and its Member States is crucial to ensure timely and effective implementation, and to ensure a level playing field within the EU.

Over the last weeks, the European Commission, the European Central Bank and Member States have taken important decisions to protect European citizens and businesses in this unprecedented crisis. However, further action is needed, and time is of essence: Many companies, most notably SMEs, across Europe are struggling for economic survival and may have to close down before the anticipated recovery.

Therefore, it is essential that already agreed measures are implemented as fast as possible and without bureaucratic burden. At the same time, we must start immediately to prepare an ambitious recovery plan for the time after the general shutdown.

In the first part of this paper, we have listed the most urgent immediate needs that are common to all ASD sectors and identified some general elements for a future recovery plan. In the second part, we have done a more detailed analysis of short-term and mid-term needs of each sector. We hope this contribution will be useful for decision-makers in the EU and Member States. ASD stands ready to support the EU institutions in their efforts to find the best way out of the COVID-19 crisis.

A. Priorities of all ASD sectors

1. Short-term priorities

1.1 Business Continuity

Aerospace, security and defence industries develop products and provide services that are used to fulfil the core functions of the state. It is therefore crucial to ensure that their production and maintenance, repair and overhaul (MRO) activities can continue during the COVID-19 crisis. Such continuity is essential to ensure that companies can support public authorities in their fight against the pandemic. It is also important economically, as it mitigates companies' current cash-flow problems.

The main precondition for business continuity is health and **safety of staff**. This necessitates, amongst others, rapid delivery of infection protection material and the use of new tools and processes for secure remote working. To ensure the functioning of cross-border supply chains during the crisis, the European Commission should coordinate measures taken by Member States. It could in particular issue guidance for infection protection protocols for on-site operations applicable throughout the EU to all companies of the same sector (e.g. use of masks, minimum distance between workers, cleaning and disinfection frequencies). The European Agency for Safety and Health at Work could play an important role here.

Equally important for business continuity is the quick **re-establishment of the single market** for cross-border logistics (flight, land transport, shipping and personnel) and delivery flights. Derogations from **travel restrictions for third country citizens** should be granted for customers who need to enter the EU to take delivery of European products and/or get their products maintained.

1.2 Financial support

With severe problems on both supply and demand side, companies face pressing liquidity shortages. Pressure is on the whole supply chain, but urgent support with dedicated guarantee schemes and liquidity is needed in particular for lower-tier companies and SMEs.

Industry therefore appreciates the **Temporary Framework for state aid measures** to support the economy in the current COVID-19 outbreak. We welcome the flexibility that the Framework provides, and the fast clearance of state aid measures since then. At the same time, we believe that the limit of €800 000 for direct grants, tax advantages and advance payments should be increased, and the risk period covered by public export credits extended. Equally important is an effective **coordination of national support at the EU level** to avoid supply chain disruptions and negative effects on competitiveness. Given the gravity of the economic situation, we also appreciate the possibility to extend the Temporary Framework beyond 2020 if needed.

We expect the recovery of the European economy to be arduous and long. This is true in particular for our sectors, which will face even more pressure from heavily subsidised competitors in other parts of the world. We therefore encourage the European Commission to set up as soon as possible a **watchtower** on support measures taken in third countries.

The **European Investment Bank (EIB)** and financial institutions are also crucial to provide liquidity to companies. The **European Central Bank (ECB)** should be as inclusive as possible when devising its eligibility rules for Euro-Commercial Papers issued by non-financial companies. The EIB instruments should be widened to direct equity participation, if relevant, or zero percent loans. It should also fully exploit its existing possibilities to financially support dual-use SMEs and revise its lending policy to allow the support of defence activities.

1.3 Public investment

Both the European Union and Member States are important customers and sponsors of the European aerospace, defence and security industry. As such, they can contribute to mitigating companies' current cash flow problems. Most important is therefore to **maintain already planned and ongoing procurement and research projects** during the COVID-19 crisis. At the same time, management of these projects should take into account the difficulties that companies currently face. This implies flexibility in terms of funding rates, deliverables and timelines, as well as the full use of pre-financing mechanisms, accelerate payments and advanced payments.

1.4 Foreign Direct Investment

With stock market values low, and cash-flow problems ahead, European companies may become easy targets for undesirable takeovers by third-country investors who pursue a strategic agenda. This is particularly important in strategic sectors like aerospace, defence and security. ASD therefore fully supports the recent Guidance concerning enhanced scrutiny and vigilance toward foreign takeovers. We urge the Commission to accelerate the launch of the Cooperation Mechanism under the FDI Regulation and to rapidly engage with Member States on further EU measures for the protection of strategic European assets.

1.5 REACH

ASD remains committed to the intent and relevant provisions of the REACH legislation. However, in light of the crisis and its impact on industry resources, there is a need to slow down the update of its Candidate List, the update of its Annex XIV, or the preparation of proposals for new substance restrictions. Separately from REACH, it would be beneficial for industry to have a deferral of the date for inputting data in the European Chemicals Agency Substances of Concern in articles as such or in complex Products (SCIP) database, due on 5th January 2021 under the EU Waste Framework Directive (WFD). This database will require heavy data gathering and processing, costly IT infrastructures adaptation and dedicated human resources for it, which at the moment the industry cannot afford.

2. Mid- to long-term priorities

2.1 A European Recovery Plan

At the time of writing, all efforts are focused on fighting the spread of the virus, reducing the number of fatalities, helping companies to survive the general shutdown and preparing a roadmap for lifting restrictions. The way back to normality will be long, and it will take a lot of time and efforts for the economy to awake from its current coma. This will be the case also for the aerospace, defence and security

sector. It is therefore essential to start immediately to develop a coherent and ambitious recovery plan for the years to come.

2.2 A European Union that delivers

The European Union will play an essential role for the recovery of Europe's economy. What we need now is a Union that is able to mobilise sufficient resources to support Member States, and to deploy new and innovative instruments that meet the requirements of this unprecedented crisis.

The success of the recovery plan will depend on how much money is spent and under which conditions, but also on what. Here, it will be crucial to focus investment on key technologies and strategic areas that can strengthen Europe's long-term competitiveness. Moreover, these investments must be accompanied with the appropriate legislative and regulatory measures to support trade, growth and employment.

2.3 An ambitious Multi-Annual Financial Framework

The next Multiannual Financial Framework (MFF) must be a centrepiece of the European recovery plan and needs to be agreed as soon as possible. In order to cope with the economic and financial fallout of the COVID-19 crisis, the budget of the MFF must be much higher than Member States indicated before this pandemic. Moreover, it should focus investments on high-technology sectors, as they have the biggest added-value and multiplier effects. Those EU programmes that foster innovation and technological sovereignty are therefore key drivers for the recovery of Europe's economy and must be funded at least at the level initially proposed by the Commission.

2.4 Review EU policies and programmes

The EU budget must be adapted to the needs of the (post-)COVID-19 area, and so must be the policies the MFF supports and the programmes it funds. Lessons must be learned from the pandemic and Europe's difficulties to cope with it. This does not necessarily mean to change completely previously defined priorities and instruments, but concepts and objectives, such as Strategic Value Chains and Technological Sovereignty, should be reviewed in the light of the crisis.

For example, the COVID-19 crisis has further demonstrated the importance of digital technologies for industry and society. Digital transformation must therefore remain a top priority for the Union, and the fast and ambitious implementation of the EU Digital- and Data Strategy is more important than ever. This is true also for ASD sectors: Many technologies that are core to digitalisation (e.g. Cloud, High Performance Computing, Big Data, 5G, Artificial Intelligence) are by nature cross-sectorial and dual-use. Aerospace, security and defence industries can and will play a significant role for the development of these technologies with common research and deployment, but also by contributing to the security and continuity that these technologies must embed.

Investments in digital development and transformation must be adequate, coherent and appropriately apportioned across all sectors. Ongoing and future EU programmes such as Digital European Sky, the European Defence Fund, the Integrated Border Management Fund, Factories of the Future or Digital Europe, play a crucial role here. They must avoid unnecessary duplication, foster technological sovereignty in key areas, and ensure that security and continuity are embedded in new digital endeavours. Security and continuity must be an integral feature of industrial digitalisation, as both are required to foster competitiveness, contribute to a level playing field (by protecting against unfair or malicious intrusions and actions) and strengthen resilience, which has been under severe pressure during the COVID-19 emergency.

The increased importance of resilience, security and continuity for digitalisation is just one example of a possible adjustment of priorities. The same exercise should be run for all policies and programmes, in close consultation with all relevant stakeholders. ASD stands ready to support this endeavour with industrial know-how and expertise.

B. Sector specific priorities

1. Civil Aeronautics

Civil aviation is a global sector. The fact that the COVID-19 crisis became a pandemic has therefore major impacts on the sector: Worldwide, airlines have grounded (almost) their entire fleets, requested to postpone deliveries of new aircraft to manage their cash situations, with some of them contemplating cancellations. Commercial aircraft manufacturers did not receive any new orders in February.

All this creates financial stress and massive implications for aircraft production rates which will be cut increasingly rapidly as a result through 2020 and 2021. Airbus already announced a 30% cut in its production rate of its A320 single aisle product and bigger cuts at its long/medium haul products (A350, A330). Other manufacturers are expected to announce similar cuts.

The pressure on airlines is also having a knock-on effect on the revenue of Air Navigation Service Providers (ANSPs) and airports. As such, it also puts investments in Air Traffic Management (ATM) and airport technology at risk with a possible negative impact on those ASD industries involved in these businesses. A key threat to the aeronautics business is that down payments (pre delivery payments) fail to arrive and deliveries can no longer take place, with corresponding impact on the cash situation.

When it comes to helicopters, the enormous previous market crisis already led to a 40% drop of worldwide helicopter sales/deliveries since 2014. In this extremely challenging market environment, COVID-19 will drastically reinforce this downward trend. In particular, the dramatic drop in oil prices risks to create a negative impact on the demand for helicopters for the offshore sector.

Additionally, suppliers might be financially distressed in countries where there is not enough government support. Some ASD members already secured credit facilities to help the supply chain with liquidity, but more support will be needed to support fragile suppliers, especially SMEs, along the way. Without proper government funding support, there is also a risk that industry, in order to save available cash, will be forced to slow down important R&T and digitalisation projects.

Generally speaking, the aeronautics industry is more vulnerable to staff shortages than the automotive industry (mass production) due to lower automation and higher complexity in manufacturing, hence members are re-enforcing business continuity as much as they can to avoid any shortage. Health and safety of employees is the number one priority in this respect.

Beyond general support measures for all sectors, a dedicated EU civil aviation relief programme is needed to ensure the survival of the entire civil aviation sector (industry, airlines/aircraft operators (including business-jet operators and civil rotorcraft operators), MRO providers, ANSPs and airports). There is in particular a need to provide support to the entire civil aviation value chain to avoid devastating economic knock-on effects due to widespread bankruptcies along different actors in the civil aviation value chain.

On 27th March 2020, the US President signed the Coronavirus Aid, Relief, and Economic Security Act (CARES Act). This bill provides 2.2 US$ trillion in economic stimulus to the US economy including 61 US$ billion in grants and loans for the US aviation industry (airlines, MROs, manufacturing industry and other suppliers). In the meantime, the US has imposed 15% import tariffs on the European aviation industry. In addition, China and others are providing significant support to their industry.

A common European response coordinated at international levels is essential to ensure a level playing field for EU industry and to avoid distortions of competition.

1.1 Immediate and short-term (2020)

Financial support to customers, manufacturers and suppliers:

The best way to protect aircraft manufacturers is to support their customers (airlines and others) with cash. It is absolutely crucial that customers carry on accepting deliveries on time. In addition, aeronautical supply chain companies should receive financial support so that they can guarantee continued supply. To protect jobs, it is paramount to continue producing and delivering aircraft.

The European Commission is encouraged to implement the following support measures:

- Support the aeronautical supply chain with immediate funding needs. A potential solution could be to **create an equity-based European Fund for civil aeronautics** managed by the European Commission.
- With a view to the public support that the US civil aeronautics sector could receive, it is particularly important for European industry to safeguard **European Financial Instruments** like repayable launch aid Instruments. The civil aeronautics industry needs to preserve its ability to finance new programmes in the future and receive the same level of support and funding as its main competitors in the US or in China.
- Allow **R&T projects** to continue through an **increased public funding share** for projects both at EU as well as national levels while respecting WTO rules. In addition, a solution which would further reduce the pressure on industry cash levels could be to **pre-finance the (reduced) industry's funding share** of R&T projects with zero interest loans to be repaid at a later stage when the industry has stabilised (2-3 years). This solution could in particular apply to SMEs but should not be limited to them.
- **Support ASD members' customers with near term access to public and private funds**. Air connectivity will be essential for the global economy to recover, but airlines and other aircraft operators, as well as ANSP, need short term assistance amid the worsening outlook for aviation.
  - ASD welcomes the European Commission's planned 'aviation emergency bill', which will relieve pressure on our customers' cash situation by dealing with deferrals of payments (e.g. emissions trading scheme, postponement of air navigation & airport fees)
  - Ensure regional air connectivity: air transportation – especially regional aviation – also play a key role in fostering connectivity and economic development in the most isolated territories. In these difficult times, it is, therefore, important to support regional/domestic companies and to protect public service operations routes.
  - Support civil rotorcraft operators: beyond financial support, regulatory and safety issues specific to rotorcraft operations during the COVID-19 crisis will also need to be addressed.
  - Any other stimulus package with eligibility for airlines/aircraft operators and ANSPs to get direct support from EU funds is encouraged. Measures to stimulate the recovery of air transport should be addressed.

Ensure continued flight operations during the crisis

- Ensure essential air cargo services and ferry flights keep operating.

Temporary relief from EASA regulatory deadlines and fees

- Introduce some flexibility for EASA certificate and approval holders, which have a regulatory deadline which cannot be met due to the COVID-19 crisis hindering close interactions between industry, civil aviation authorities and EASA. In this context, we identified the following regulations/requirements:

- Extension of the applicability date of the new Part 21 (Regulation 2019/897) Regulation (EU) 748/2012;
- Extension of the applicability date of the new Part 26 Implementing Regulation amending Regulation (EU) No 748/2012, No 1321/2014 and No 2015/640 as regards the introduction of new additional airworthiness requirements (ageing aircraft, reduction of runway excursion and conversion of class D compartments);
- Part 66 licence validity for licensed engineers;
- Airworthiness Certificates validity;
- Certification of the conversion of passenger cabins to carry cargo;
- Regulation (EU) 2015/2338 for Cockpit Voice Recorders (CVR) to record the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual Certificate of Airworthiness on or after 1 January 2021;
- Commission Implementing Regulation (EU) 2019/1387 of 1 August 2019 amending Regulation (EU) No 965/2012 as regards requirements for aeroplane landing performance calculations. Operators will have to use OEM data for this assessment. The COVID-19 crisis is delaying the availability of such data.

- ASD would like to ensure that lead times for (major) change approvals/Supplemental Type Certificates (STCs) do not suffer (in as far as possible) from less efficient processes at EASA now that most of their key specialists and project certification managers (PCMs) are working from home. Project delays due to delayed approvals would add further pressure to the already critical business conditions that most aerospace companies have to deal with now.
- ASD supports in principle the proposal outlined in CM-21.A-B-001 Issue 1 on Use of Remote Technologies for the real-time witnessing of inspections and tests.
- Design and manufacturing organisations have suffered a drastic reduction in income, making cash management a critical issue, and often requiring use of cash reserves. To help address this, ASD proposes that EASA and industry should enter into discussions on the temporary deferment of payments for annual organisational approval fees.
- Given the cash issues, and recognising that many organisations are reducing their workforces and/or moving people to critical jobs due to the COVID-19 crisis, it is proposed that EASA should consider an extension to the current 30 day payment terms for all fees and charges invoices.

Continue investing in a more performant European ATM

- Ensure that financial support to ANSPs is linked to the need to maintain CAPEX investments into future technology and infrastructure. This is essential for ensuring that enough ATM capacity will be available when the civil aviation sector recovers. In this context, it is also important to stay focused on total ATM performance (cost, capacity, flight efficiency and safety). It is essential not to make the same mistakes as those made during previous crisis situations where investment was stopped due to a narrow short-term focus on ATM charges reductions.
- Funding rate should be increased from 70% to 100% for aviation stakeholders in the ongoing ATM research partnership, to enable continuity for remaining projects. ATM requires synchronised development across the whole ecosystem and the distress of many stakeholders prevents remaining projects from being actualised. Aviation partners need more flexibility in these difficult times and access to more SESAR 2020 funding, to engage in next calls, will be important to protect the execution of the partnership as planned. UTM research and development as well as testing should be accelerated considering the growing relevance of unmanned systems.

Ensure global coordination

- The International Civil Aviation Organization (ICAO) should organise a ministry-level meeting to ensure the coordination of state aid to airlines and the manufacturing industry, exchange on ideas and practices, and harmonise and avoid future trade conflicts. ASD is committed to work through the International Coordinating Council of Aerospace Industries Associations and bilaterally with the Aerospace Industries Association in the US and others in this context.
- ICAO should take the lead in setting sanitary standards for civil aviation in order to allow an ordinarily return of international air traffic and to restore passenger confidence. The aerospace industry is well positioned to propose technical solutions.

1.2 Mid- to long-term (2021+)

Marshall Plan for aviation and aeronautics

- ASD calls for the launch of a **European 'Marshall Plan' for aviation and aeronautics to trigger innovation towards sustainable aviation**. Ambitious EU investments will not only foster research, growth and employment, but also leverage industry's global leadership and enable the Green Deal for sustainable aviation to become reality. The EU should establish a strategic partnership with large aeronautic companies for a big structuring programme that could make the difference. In turn, these companies would ensure that SMEs across Europe benefit and contribute to the success of the endeavour. A European Marshall Plan can build on existing initiatives, such as the Clean Sky Joint Undertaking and the Single European Sky R&D Programme (SESAR), revitalising them through new financial support and firm political commitment. In this context, the EU funding rate for R&T projects should be increased since some companies will not be able to co-finance. This is the only way to preserve competitiveness and maintain Europe' leadership in sustainable aeronautics. Immediate action should be taken in the consultation for the Strategic Research and Innovation Agenda, to make deep decarbonisation of civil aviation a reality soon.
- **EU Member States should also be encouraged to adopt specific state aid schemes for aeronautics innovation.** This is the best way to ensure more investment in R&T which as such will help both economic recovery and the energy transition.
- **Adopt Green incentive for airlines/aircraft operators** to retire older, less environmental-friendly aircraft (both fixed wing aircraft and helicopters) and replace them by modern, ecologically and economically efficient ones (similar to the German *'Abwrackprämie'* for cars in 2008/09).
- **Adopt incentive scheme to accelerate the deployment of SESAR technologies** both in the air and on the ground (in line with the recommendations from the EU Wise Persons Group on ATM).
- **Launch an EU investment plan to steer the availability of sustainable alternative fuels** (SAF) for aviation in Europe. In this context, the possibility should be explored to use a specific Project of Common European Interest (IPCEI) for the development of SAF.

Enhance resilience

- Efforts should also be launched to make the civil aviation sector more resilient for a future (health) crisis. This should include a better European aviation crisis management system as well as research activities on measures to protect aircraft and passengers from health risks (i.e. health detection systems in aircraft cabins and improved air treatment systems). R&D is needed also on technical solutions for long range (fixed wing) and short range / urban (rotary wing) emergency biocontainment transportation.

2. Defence

Serving exclusively public customers and operating with long programme cycles, the defence sector has not (yet) faced the same market meltdown as civil aviation. The short-term challenge for companies is, therefore, mainly to protect the continuity of ongoing projects against supply chain disruptions and infections of critical staff. Avoiding (or at least limiting) the slowdown of these projects is important for both sustaining the international competitiveness of industry and backing up Member States' defence capabilities.

Maintaining operations is critical also for the continuous supply and support of equipment and services that armed forces currently use to assist public authorities in their fight against the pandemic (e.g. helicopters, aircraft and unmanned systems, secure communications, medical personnel transportation). To achieve this, the entire supply chain must be protected. Financial support is needed in particular for lower-tier companies and SMEs. Since most of them have also civil activities and suffer from the shutdown of commercial customers, they currently represent the weakest link in defence supply chains.

In the mid- and long-term, COVID-19 may well impact heavily defence markets: mitigating the economic and social consequences of the pandemic will put public budgets under extreme pressure. In such circumstances, the traditional reflex of most (European) governments is to cut defence budgets and shift resources to other priorities. After the financial crisis 2008, for example, defence budget cuts have led to an estimated loss of 25% of Europe's military capabilities. It is crucial to avoid that this happens again.

We see at least three reasons why the EU and its Member States should act differently this time:

1. There are no indications that the security environment in and around Europe will improve after the COVID-19 crisis, on the contrary. At the same time, European Member States' armed forces face severe and urgent capability gaps that will not go away with the COVID-19 crisis. Hence, it would be strategically and politically unwise to reduce the already limited defence spending in Europe again. This is true for Member States, but also for the European Union. The proposed European Defence Fund (EDF) is a crucial catalyst for defence cooperation, which will become even more important in a post-corona financial environment.

2. The COVID-19 pandemic has shown the vulnerability of global supply chains and the risks from over-reliance on third-country suppliers in times of crisis. In strategic sectors like defence, the political lesson from COVID-19 must, therefore, be to reduce Europe's dependency on non-European sources at least for the most critical systems, products and technologies. Investing in the development of much needed defence capabilities would not only help Europe to protect its interest, it would also increase technological sovereignty and strategic autonomy.

3. The EU and its Member States have already announced their intention to invest massively to help the economy recover from the COVID-19 shock. Investments in the development and procurement of modern defence capabilities would sustain industrial activities in hi-tech sectors and, thereby, contribute boosting the economy in general. Stable defence revenues would also help the aerospace industry to better cope with the dramatic turbulences of its commercial business.

Any post-crisis recovery plan should, therefore, not come at the expense of the defence sector. On the contrary, European governments should increase the investment part of their defence budgets to strengthen the European defence industrial base. This would stabilise the hi-tech ecosystem of which defence industries are an integral part and reduce Europe's strategic dependence in future crises.

Although decisions on defence capabilities and budget are in the sole responsibility of Member States, the European Union can make an important contribution to supporting the European defence industry. We, therefore, call upon the European Commission to take the following measures:

2.1 Immediate and short-term (2020)

- **Prioritise defence as a strategic sector** for immediate support measures. The most pressing requirement is to protect occupational health and business continuity in order to minimise lockdown effects. To ensure the functioning of cross-border supply chains during the crisis, the European Commission should coordinate measures taken by Member States. At the same time, the EIB should give priority to strategically important companies. It should fully exploit its already existing possibilities to financially support dual-use SMEs and rapidly revise its lending policy to allow the financing of defence technologies.
- **Ensure implementation of the Preparatory Action on Defence Research (PADR) and European Defence Industrial Development Programme (EDIDP)**. It is crucial for industry that all ongoing EU funding programmes continue during this crisis. At the same time, implementation of these programmes should be adapted to current realities. The COVID-19 crisis creates enormous difficulties when trying to establish consortia and cooperate on projects across borders. The European Commission should take this into account and handle projects with the appropriate flexibility. This includes possible extensions of timelines, but also pre- financing and accelerate payments wherever possible to relieve companies of financial pressure.
- **Get the EDF ready for 2021 and maintain the budget** at the level initially proposed by the European Commission (€13bn). Under the next MFF, the EDF will be the centrepiece of the European Union's support for Europe's defence industrial base. It should, therefore, be considered as a cornerstone of the envisaged EU recovery plan and receive the appropriate priority in terms of timing and budget. This is crucial also to indirectly stabilise defence investment budgets of Member States and to ensure European industry's competitiveness vis-à-vis US defence companies, who will benefit from the recently announced envelope of 17 US$ billion for 'US businesses critical to maintaining national security'. Timing is of essence because during the next ten years a multitude of new technologies will be introduced into defence systems; not preparing for this now would most likely mean for European defence capabilities and industry to fall definitely out of the technology loop.

2.2 Mid- to long-term (2021+)

- **Use the EDF strategically:** given the foreseeable pressure on public finances, it is particularly important that the EDF concentrates on technologies and capabilities that really matter for armed forces. From an industry perspective, one key priority should be to support capability-driven flagship programmes that foster cross-border supply chains across the European Union. In the light of the current experiences, special focus should be put on reducing Europe's current dependence on critical technologies, systems, products, components and materials.
- **Facilitate uptake of emerging technologies in defence:** the EDF will be the only EU instrument fully dedicated to defence R&D, but other, primarily civil EU funding programmes, support technologies that can also have huge potential benefits for defence. This is the case, for example, of the European Processor initiative or the European Cloud initiative. Such initiatives should take into account defence requirements from the outset to ensure that their results will be useable also for the next generation of European defence capabilities. Such a defence dimension would

give additional weight to EU Initiatives in areas like artificial intelligence or high-performance computing (HPC) that are key for Europe's technological sovereignty.

- **Support strategic defence value chains:** to achieve an appropriate level of strategic autonomy, Europe must enhance its sovereignty in both conventional and disruptive defence technologies. This requires strong support for critical supply chains all along the industrial and product-lifecycle, i.e. beyond the R&T and capability development phases and including long-term production and maintenance. The EU should mobilise all its financial and legal tools to support the sustainability and the integrity of the defence industrial supply chain, including SMEs. This comprises also measures to ensure sourcing of critical raw materials for strategic sectors during crisis (regional or worldwide). At the same time, a robust EU-wide security of supply system should be restored to ensure also deliveries between Member States in times of crisis.
- **Facilitate access to finance:** under the InvestEU programme, defence will become an eligible area for financing and investment operations. The design of defence-specific financial products (both equity and debt) would help to turn that option into a reality. Such products could make a useful contribution to improving the financial situation of the entire defence industry supply chain.

3. Security

Like many manufacturing industries, the security industry suffers from, *inter alia*, supply chain disruptions, restrictions of the general lockdown and infections of staff. Due to production and delivery difficulties, on the one hand, and the collapse in demand on the commercial security market on the other, many companies face severe cash flow problems. All efforts are focused on preserving production, which comes often (and probably increasingly) at the expense of research activities. Priority is given to projects which are critical for customers.

It is impossible today to forecast the final economic consequences of the COVID-19 crisis for the security industry. However, the protection of the European security industrial and technological base should be a top political priority. The security industry is of strategic importance for Europe, as it develops and produces the systems that are needed to protect our societies, companies, institutions and citizens against a broad variety of security threats, including man-made and natural disasters. It is, therefore, of vital interest for the EU and its Member States to ensure that this industry can continue to produce everything that is needed during the current crisis, and that it can rapidly recover afterwards.

We therefore call upon the European Commission to take the following measures:

3.1 Immediate and short-term (2020)

- In the current crisis, the primary tasks are to guarantee supply for the population with goods, food and public services, stabilise public health systems and ensure the core functions of the state, including security. Public authorities must ensure that companies that contribute to these tasks can maintain production of goods and provision of services. Security should therefore be considered a **strategic sector** and prioritised for support measures aimed at ensuring continuity

of operations. To ensure the functioning of cross-border supply chains, the European Commission should coordinate measures taken by Member States.

- With severe problems on both supply and demand side, **cash flow generation** is the top priority of companies during this crisis. As an important customer and sponsor, the EU can contribute to mitigating these cash flow problems. It should, through its funding programmes, unleash the full potential of pre-financing mechanisms, accelerate payments and anticipate financing wherever possible. At the same time, the EIB should give priority to strategically important companies and fully exploit its possibilities to financially support SMEs with dual-use or security-related activities.
- To stabilise business, it is of utmost important for industry that all **ongoing EU funding programmes continue** during the crisis. At the same time, implementation of these programmes should be adapted to current realities. The COVID-19 crisis creates enormous difficulties to establish consortia and cooperate on projects across borders. The European Commission and executive agencies should take this into account and **handle programmes with the appropriate flexibility**. Administrative burdens should be reduced to a strict minimum, deadlines for submission of proposals or tenders extended, and timelines for deliverables reviewed.
- The general lockdown has led to an enormous surge of the use of networks and digital tools. This has also increased dramatically the danger of cyber threats and the number of cyberattacks, putting resilience of authorities, critical infrastructures and companies under severe stress. The Commission should therefore support urgently all measures aimed at enhancing **cybersecurity**, in particular for critical companies and their sub-suppliers. It should also accelerate and increase the coordination of the activities of national **Computer Security Incident Response Teams.**

3.2 Mid- to long-term (2021+)

- The way out of the current crisis cannot lead back to the status quo ante. Measures to relaunch industrial activities should converge into a **recovery plan that takes into account the lessons learnt from the current crisis**.
- The **security sector must be a top priority** of the recovery plan: first, to support public authorities and economic operators during the recovery phase and second to help prepare the EU against possible future disasters. Both objectives should become priorities for investments under the next MFF. The new Security Union Strategy announced for Q2 2020 should already draw first consequences from the pandemic. In this context, we call on the European Commission to engage, as soon as possible, in a dialogue with security industry on how investments under the recovery plan can contribute to make Europe's economy and society more resilient to future crises.
- For the security sector itself, the concepts of **technological sovereignty and strategic value chains** should be operationalized quickly and serve as guiding principles of the recovery plan. Outsourcing of manufacturing to third countries or relying on these for key components means supply chains can quickly break down with global events. Therefore, control of supply or production is required in key areas and high-end manufacturing (independent from third countries) needs to be able to be quickly and flexibly scaled up. In the aftermath of the crisis, stocks should not be run down (as for instance after the SARS crisis) as it would again leave society exposed in case of another pandemic.
- Priorities of EU security policies and funding programmes must be reviewed in the light of the COVID-19 crisis. The establishment of a **common EU Awareness System and a common EU Crisis Management System** should become a top priority. As a start, pilot projects existing under EDIDP

and H2020 should be quickly operationalised and further developed as IPCEIs or via the Digital Europe Programme.

- The massive recourse to digital tools and the disruptions caused by the pandemic have widened the surface and diversified the opportunities for cyber-attacks from both non-state and state actors. **Enhancement of cybersecurity and cyber resilience** not only in operators of essential services, but in all digital-based processes of companies and institutions should, therefore, be a key lesson to be learned from the current crisis. To achieve this, the implementation of the EU Cyber Strategy should start rapidly, with a strong role for the security industry. As part of the implementation, the European Commission should initiate the development of common platforms to manage cyber awareness and cyber response. It should also agree with Member States on a mix of regulatory and economic measures to strengthen cybersecurity of companies, particularly SMEs, which constitute the most vulnerable link in the European Intellectual Property Right (IPR) and production system. The concept of cybersecurity as a Strategic Value Chain should also be implemented rapidly to foster both the development of cyber capabilities within the security industry and the adoption of cyber measures throughout the economy and society.
- Since the start of the pandemic, multiple multi-faceted **disinformation campaigns** have been driven via traditional and social media, often sponsored by foreign governments. Given the potentially devastating effects on the management of a crisis, but also on the stability of our institutions, the EU should rapidly strengthen its capabilities to counter such campaigns. The sole cooperation with and encouragement of social media platforms and other actors to take down illegal content is not sufficient. The security industry stands ready to support the Commission with its expertise and technologies to develop a more systematic and effective approach.
- COVID-19 is a classic chemical, biological, radiological and nuclear (CBRN) '**low probability - high impact'** event, an area that has been neglected over the last years in terms of research and development. Therefore, the European Union needs to not only step up R&D investments, but also to ensure the flexibility of R&D programmes to be able to rapidly response to new threats.
- Furthermore, the European Union needs to establish a genuine support mechanism for 'low probability - high impact' events where market forces will not ensure sufficient capability in times of severe crises. Part of this could be a **European equipment pool** that can be called on to support such events. For that purpose, Member states need a more strategic capability planning process that covers policy, equipment and training. Furthermore, innovative procurement mechanisms are required during crisis events.
- In order to set up a genuine European response capability, the EU needs **unified standards and improved interoperability** to ensure that compatible equipment is developed. 27 different interface standards or human machine interfaces are counterproductive as it will be necessary to move equipment around quickly and the end-users need to master them without additional training. For pandemics like COVID-19, human factors are critical for the design of new equipment. Responders need to be able to pick up new equipment which they may have not used for months and years and be able to use them within 15 minutes.
- Enhancing security and resilience is an ongoing process, and in case of emergency, rapid (re)action is required. To draw on industrial and technological expertise for both situations, we recommend that the European Commission establishes a **permanent European Security Board** that brings together experts of security industry and critical infrastructures. The Board's mission should be twofold: in normal times, it should assist the European Commission in risk assessment and provide advice on measures to prevent crisis; whereas, in crisis situations, it should provide advice on fast and effective reaction and help implementing the necessary measures.

4. Space

The space industry is at the higher end of an important value-added stream of commercial and public/strategic services. Space value-added services and their ground segment users (e.g. Copernicus, Galileo, Broadcast and broadband services, geo-information...) generate relevant socio-economic benefits[1] and support the development of Europe in a number of policy fields (transport, environment, security, defence, agriculture…). At the same time, European launchers enable an independent access to space to allow all these services to be implemented.

Furthermore, space data and services are also contributing to crisis management. For example, Copernicus, the European operational Earth observation programme, is enabling our environmental and economic situation to be monitored in real time while planning for the future reboot of our economy. On the other hand, Galileo, the global satellite navigation system, is useful to map contagion areas, manage the flux of people to shops in quarantined areas, alert authorities in case of major gatherings and reduce response times for emergency services.

The European space industry is structurally exposed to permanent competitiveness threats, and in particular due to the absence of a level playing field with global main competitors, the over-exposure to commercial and export markets, and dependence situations associated to low security of supply.

This unbalanced situation is expected to worsen further as some countries such as the USA are taking unprecedented economic measures to ensure the continued availability of critical aerospace infrastructure, capability, personnel, and mission readiness to maintain assured access to space for national security, civil, and commercial space missions.

The COVID-19 crisis, leading to a sharp economic slowdown and the dramatic reduction of international trade will have a heavy toll on the European space sector[2], and may lead to rapid capability and capacity loss that will take years to rebuild if they are not promptly mitigated.

4.1 Immediate and short-term (2020)

- **Ensure continuity of business** by preserving ongoing bidding processes for EU Flagship Programmes (Copernicus, Galileo) and avoid activity shortage within the industry's supply chain:
  - While the commercial and export market, on which the European space manufacturing industry is highly reliant, will most likely suffer from the crisis, the **importance of the institutional programmes** is key to compensate the adverse effect on businesses.
  - There is a need for short-term measures regarding production, because such measures have a direct positive impact on the supply chain, and in particular mid-caps and SMEs, which may be the most fragilized part of the industry. That is why, whatever can be done to **accelerate phases C/D contracts** is the most beneficial short-term measure which can be implemented to have the best post-crisis exit.
  - Several companies involved in space activities are embedded in large aerospace and defence conglomerates where space business represents a very small fraction of the total, it is thus a sector at risk, that may not benefit from priority support measures internally. This is the

[1] *It is today estimated that 10% of the EU's GDP "depends" on the use of space services (Socio economic impacts from space activities in the EU in 2015 and beyond, PWC report, 2016)*

[2] *This effect will accumulate, at corporate levels, with the heavy impact the COVID-19 crisis has on air traffic, and the global aerospace supply chain.*

reason why the **EU Flagship Programmes and new procurements should target the initial agreed schedule** and not be delayed.

- **Ensure the continuity of critical infrastructures and activities**, for instance at the Guyana Space Centre, in order to reinforce Europe's resilience and autonomy and mitigate crisis impact on launch campaigns.
- **Mandate the European Space Agency (ESA) to implement its mitigations measures to the EU Flagship Programmes delegated to ESA**:
  - At the very beginning of the crisis, the European space manufacturing space industry has been able to count on the support of the ESA to implement mitigations measures (i.e. related to procurement approval process, tendering process, time-to-contract, time-to-payment, contract execution) to ensure a continuous support to industry during the COVID-19 crisis. Those measures should also be applicable to the EU Programmes that are delegated to ESA (i.e. Galileo, Copernicus, EGNOS).
- **The GSA should immediately implement an electronic tendering system.**
- Confirm the European Union's level of ambition in space by **safeguarding an ambitious MFF**:
  - In an increasingly uncertain geopolitical environment; investing in space, and securing independent access to space, must remain one of the major institutional priorities to preserve Europe's leadership, competitiveness, sustainability and autonomy; in particular knowing that the European workforce in space is not only limited in size (approximately 45,000 persons) but also highly specialised and, therefore, easily destroyed and very hard to rebuild[3].
  - The need to ensure the sustainability and evolution of current EU Flagship Programmes EGNOS, Galileo and Copernicus, while at the same time support the implementation of new operational programmes such as GOVSATCOM for secured communications or "Space Surveillance and Tracking (SST)" is key for the European space manufacturing industry to sustain a minimal level of activity it will lack on the commercial and export market.
  - A significant budget for space research and innovation via Horizon Europe, and an efficient implementation focused in priority on the support to competitiveness and on the improvement of the level of non-dependence of Europe for critical services and technologies, will support the sustainability of an efficient technology base for European space systems as well the necessary technological leadership to be able to compete on open markets.
  - The autonomous access to space relies on the aggregation of European institutional launch services, the support to European launch-related infrastructure and facilities and the use of launchers developed in Europe. These policies are the backbone of a forward-looking EU space policy and should be further enhanced and also accompanied by similar commitments at Member State level.
- **Allow for market uptake and possible access to additional sources of financing**
  - While nearly 50% of the world population is currently enjoined to stay in quarantine during the COVID-19 crisis, European infrastructures for telecommunication (including space ones) are heavily solicited to sustain economic but also social activities in Europe. A solid, non-discriminating access to a broadband communication infrastructure emerges every day more as a strategic need for European populations, institutions and economies.

[3] *The Russian industry, which took two decades to recover after it had lost a generation when the Soviet Union collapsed, is a good example of the possible consequences that the European industry might face in the future.*

- Besides, Europe can legitimately strive to be the leading global actor for the development and use of space applications and services, notably through both its world-class public and private space operational infrastructures (Galileo, Copernicus, the meteorological satellites and the telecommunication satellites owned and operated by the European operators). A pragmatic and ambitious roadmap (to be elaborated between industrial and institutional stakeholders) is now urgently needed to boost the development of space applications and services at the service of public policies, citizens' well-being and economic growth. Objectives: aggregation of demand of space services and applications at EU, national and regional level (to implement the objectives of the digital transformation and the Green deal); identification of regulatory and technological barriers, identification of possible regulatory levers; awareness raising about the possibilities given by space technologies.
- On its side, the EU could rapidly start to increase the recourse to space-based applications by playing a role as early adopter and anchor customer of innovative solutions.

4.2 Mid- to long-term (2021+)

- Implement, at the level of the EU and Member States, a **new ambitious "joint" space industrial policy** based on:
  - A tailor-made procurement policy:
    - It is of prime necessity that the EU Space Programme is being used to implement a European public space procurement policy that takes into account the space strategies of our direct competitors, the capability and technology gap between Europe and its direct competitors on the commercial and export market, and the guarantee of continuity and quality of the services.
  - The systematic integration of a section – and a budget – dedicated to space in upcoming programmes supporting the EU's rising capability needs in security and defence.
  - A consistent support European Industry in accessing export markets:
    - The European satellite industry is overall well performing and is a net positive contributor to the EU global trade surplus, with European satellites contributing to an estimated 500M$/year to the EU's trade balance for goods in the past decade (i.e. 2% of 2018 EU's net trade surplus).
    - Facilitate access to new markets by the active promotion of European capabilities through a strong European economic diplomacy.

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Signed by Jan Pie, ASD Secretary General, on 2 May 2020