

## Written evidence submitted by ADS (PEG0082)

### 1. SUMMARY

1.1 ADS is the trade association for the UK's aerospace, defence, security, and space industries. ADS has more than 1,100 member companies across all four sectors, with over 95% of these companies identified as Small and Medium Size Enterprises (SMEs). The UK is a world leader in the supply of aerospace, defence, security and space products and services. From technology and exports, to apprenticeships and investment, our sectors are vital to the UK's growth – generating £79 billion turnover a year in the UK, including £46 billion in exports, and supporting over one million jobs.

1.2 COVID-19 is a grave challenge for many of our members, particularly in the aerospace sector where companies face immediate threats to their future. ADS is therefore asking Government to implement the following to stimulate and secure long-term and sustainable economic growth.

- Establish a dedicated **long-term supply chain investment fund** to support the ability of the UK's small and medium sized businesses to compete in global markets.
- Boost investment in aerospace innovation to **deliver on the UK's 'jet-zero' ambitions**, by doubling funding for the Aerospace Technology Institute and front-load funding for technology projects.
- **Support UK prosperity by maximising the power of procurement** and providing attractive conditions for investment.
- Provide **targeted resources for strengthened industrial engagement** for the UK's security and resilience sector to unlock its full growth potential.
- Ensure **direct support is provided to protect jobs and retain skills** in sectors where employment is worst hit, and with the flexibility employers need to avoid damaging redundancies.

### 2. What core/guiding principles should the Government adopt/prioritise in its recovery package, and why?

2.1 **The Government should ensure that its recovery package contains targeted support for the industries that have been disproportionately affected by the COVID-19 pandemic.** It should be based on the underlying principle that not all sectors of the economy have been affected in the same way and that some will take much longer to recover than others. Indeed, some are yet to restart at all. It should recognise that some sectors, such as the aerospace, defence, security and space industries, provide highly skilled, high-wage jobs across the regions and nations of the UK which are at risk of being lost in the long-term if decisive and targeted action is not taken.

2.2 One example is the UK's aerospace industry which is currently facing an existential crisis due to the sector's reliance on international aviation. The industry is constituted of aircraft and aircraft component manufacturing as well as maintenance, repair and overhaul services (MRO). Aircraft production rates are driven by demand for passenger travel and revenue from MRO is dependent on planes being flown at scale. While passenger numbers are slowly increasing as the international travel market opens up, they will not reach pre-COVID levels until at least 2023. This translates into demand for new single aisle aircraft returning to previous rates by 2025 at the earliest, and demand for wide body aircraft not recovering until late in the decade.

2.3 Companies across all ADS sectors, including defence, security and space, are only now starting to see a reduction in orders as they complete orders from Q1, or the projects they were involved in responding to the COVID emergency, for instance by manufacturing ventilators, are being wound down. The impacts of COVID-19 meant very few orders were placed in Q2 2020 that would generate work for the next few months and this has created a delay in the drop to demand, meaning that for many companies the crisis is only now beginning to hit.

2.4 Any Government support package must therefore recognise that for some industries, such as aerospace, the recovery will be long, uneven, and slow. These sectors are also strategically important, and crucial to the UK's international competitiveness, net-zero carbon emissions goals and national security. In order to protect jobs, skills and national capability, tailored support is required.

### 3. How can the Government borrow and/or invest to help the UK deliver on these principles?

- 3.1 Government support has so far helped to secure some companies in the short term. However, the current support available to business is based on a system of loans. For some companies their financial position makes them unfavourable to lend to and for others debt financing is unsustainable in the long-term. Unaffordable loans weigh heavily on future company behaviour, and companies are forced to focus on paying down the debt rather than on growth. For some, they are simply inaccessible.
- 3.2 What is needed is a long-term investment fund. **A Government-backed long-term supply chain investment fund would provide companies with the confidence to invest in long-term capability in the UK.** This would constitute a single fund, with companies applying for investment in return for equity in their business. Investment would be tailored to the specific needs of the firm. It could provide support for running costs or upgrading facilities to improve competitiveness. Government would essentially be helping to bolster companies that in usual times would be highly competitive through real investment.
- 3.3 An equity investment fund would be transformational for UK industry. Government-backed investment would help protect the UK's valuable supply chains in return for trusted capital that simultaneously secures crucial national capabilities. An investment fund will help the high-value manufacturing sector overcome the challenges it faces due to long investment cycles that can often be deemed unattractive for typical lenders. Significant disparities in equity capital availability exist across the regions and nations of the UK, but this type of investment would help bridge that gap and help secure the long-term competitiveness of UK manufacturing, which is currently at risk.
- 3.4 From a defence industry perspective, in recent years the UK has identified several national strategic priorities across the science and technology, innovation, national industrial base and future capability domains. National shipbuilding, future combat air, complex weapons, defence space, autonomy and artificial intelligence technologies and high-value design and manufacture have all received funding and attention in recent years. These are areas where the UK has already demonstrated a willingness and commitment to become world leaders and where investment should be prioritised in the coming months and years.
- 3.5 In the short-term technology demonstrator programmes (TDPs) and capability demonstrator programmes (CDPs) can catalyse SME and non-traditional supplier engagement with defence capability challenges. Working in collaboration with the Frontline Commands and Defence Science & Technology (DST) these can address capability gaps and encourage industrial activity.
- 3.6 Working in partnership, Government and industry have the opportunity to create a suite of national strategic priorities that delivery on near-term and long-term capability priorities, cross-cutting technology priorities, and deliver economic and social value across the UK. By building on these areas of national strategic importance the industrial base is given a clear direction as to where to invest capital in the long term, whilst also receiving more assurances as to the future of defence programmes. In addition, these areas all have high potential of technology spill-over to adjacent areas of the economy.

#### **4. What measures and support will businesses need to rebuild consumer confidence and stimulate growth that is sustainable, both economically and environmentally?**

- 4.1 **Restarting international aviation safely is fundamental to the long-term recovery of our sectors.** The announcement of travel corridors between the UK and countries with low cases of COVID-19 is a helpful first step to resuming flying at scale. However, the Government should enact further measures to ensure passengers can fly in a safe and comfortable way, and also perceive it to be so.
- 4.2 Clear guidance and advice, coordinated across Government, must be underpinned by international collaboration given the global nature of the aviation and aerospace industries. Working closely with the US Federal Aviation Administration and the European Aviation Safety Agency must be a priority given their influence across the globe. Working through IATA will be critical in developing a global set of standards at airports and in aircraft to ensure the health and safety of passengers. While the UK works with international partners to reopen routes and determine internationally consistent regulations, domestic flights can be used as a means of trialling new ways of working and building consumer confidence.

- 4.3 Once international aviation resumes at scale, the aerospace industry can begin to restart. Only then will airlines and lessors start ordering aircraft again, which will begin to stimulate activity throughout the supply chain.
- 4.4 In terms of long-term recovery measures, the aforementioned supply chain investment fund (3.2) will be essential to stimulating sustainable economic development as it will help ensure companies' long-term competitiveness and growth.
- 4.5 Similarly, **Government investment in research and development (R&D) will be crucial to ensuring that long-term economic growth is environmentally sustainable too.** Due to the huge drop in revenues, R&D budgets are under immense pressure and difficult decisions are already being made. A high-profile example of companies reprioritising their investment is the E-Fan X project, led by Airbus and Rolls-Royce. The two companies were developing a regional jet into a hybrid-electric flying demonstrator. This was viewed as a significant project by Government and industry. Although significant lessons were learnt from this programme, in April the project was ended before the aircraft was able to fly due to the crisis.
- 4.6 When international aviation resumes, airlines and lessors will want greener aircraft to purchase to meet environmental obligations and passenger demand. However, this will be hampered if R&D spend has suffered in the interim. Therefore, to deliver on the goal of achieving net-zero carbon emissions by 2050, and indeed the Government's ambition to deliver 'jet-zero' – a zero-emissions, long-haul aircraft in the same time frame – proactive intervention is needed now.
- 4.7 **Government should increase funding to the Aerospace Technology Institute (ATI).** The industry has a strong record of delivery and the ATI is a successful model which stimulates aerospace investment. Every £1 of Government investment in aerospace research and technology leverages £12 in private R&D spend. The ATI's current £150m per year budget requires an annual uplift of £30m to £180m per year in order to sustain core technologies. Alongside an uplift, accelerating progress towards net-zero requires an additional ATI budget allocation of £150m per year to deliver next-generation technologies through a UK aerospace electrification research programme. This would enable market pull measures to drive uptake of new technology and, in the long-term, industry would also provide significant investment.
- 4.8 Accelerating the uptake of sustainable aviation fuels, such as cooking oil and biomass, can provide a nearer-term solution to reducing emissions. **The industry has identified that a Government-industry co-investment of £100m per year is needed from 2020 to 2025 to fund a sustainable aviation fuel UK infrastructure pilot.** This will help ensure the UK meets its net-zero target even faster.
- 4.9 **Front-loading funding for technology projects will also help SMEs and large businesses.** Currently Government provides a percentage of funds every year to R&D projects. This should be replaced by increased Government funding for a specific length of time at the start of projects. This would provide an important demand signal, helping companies with cashflow challenges and allowing them to continue vital work on R&D as they recover from the COVID-19 crisis. Measures underpinning industrial investment across our sectors should also be sustained to ensure the UK keeps pace with the changing nature of R&D and international competition. This includes **maintaining the Annual Investment Allowance and increasing capital allowances and R&D tax credits.** These complementary measures will support investment and drive uptake of new technology.

## 5. Should the Government give a higher priority to environmental goals in future support?

- 5.1 ADS recognises that the global climate change challenge demands decisive action from Government and industry. Our members are committed to achieving net-zero carbon emissions in UK aviation by 2050. To that end, significant progress has been made. Passenger growth has been already decoupled from emissions growth, in that despite the huge increase in passenger numbers and fleet size, emissions have not grown at the same rate. This is a result of industry-driven innovation and operational improvements. Indeed, just before the COVID-19 crisis hit, a coalition of UK airlines, airports and aerospace manufacturers committed to delivering a decarbonisation roadmap<sup>1</sup> that sets out how the UK aviation and

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<sup>1</sup> <https://www.sustainableaviation.co.uk/>

aerospace sectors could achieve net-zero carbon emissions by 2050. The roadmap outlines the suite of measures required for UK aviation to achieve this target, while also allowing for a projected 70% growth in passengers (pre-COVID).

5.2 However, COVID-19 has put this trajectory under considerable strain. As outlined above, the immediate and sustained drop in demand in aerospace has meant that R&D budgets are under significant pressure. The risk is that the UK is left behind as a home for the development of the next generation of sustainable aerospace technology. Our competitors are acting swiftly to invest in this disruptive industrial capacity. **Government intervention is therefore crucial and will determine whether we are able to meet our environmental goals, and specifically net-zero aviation.** To meet its environmental goals, the Government should commit to:

- Providing an uplift of £30m to the current budget for the ATI to deliver core technologies and an additional £150m per year out to 2036 to accelerate progress in 'third generation' technologies, including electric and hybrid flight.
- Front loading funding for technology projects to stimulate R&D investment through increased Government funding for a specific length of time at the start of projects.
- Committing to a government-industry co-investment of £100m per year from 2020 to 2025 to fund a sustainable aviation fuel UK infrastructure pilot.
- Maintaining Annual Investment Allowances and ensure R&D tax credits keep pace with the changing nature of R&D and international competition.

## **6. Should the Government prioritise certain sectors within its recovery package, and if so, what criteria should it use when making such decisions? What conditions, if any, should it attach to future support?**

6.1 The Government should prioritise sectors which will take longer to recover from the pandemic, such as the aerospace industry. This is due to the unique demand conditions that it faces, with businesses reliant on international aviation resuming at scale. Without the targeted support that we have outlined, this nationally strategic sector is at risk of significant decline.

6.2 The relative strength of the UK Defence industry at this difficult time for the UK also presents an opportunity for the MOD to increase its traditional procurement pace and become a leader for public sector investment and industrial support.

6.3 The Dunne Review of 2018 and subsequent MOD work on the Prosperity Agenda has championed UK Defence highlighted what a collaborative and communicative UK Industry-Government relationship can accomplish. The work undertaken by Government to begin to quantify prosperity and understand Defence's positive impact on regional and national economies is work that ADS members are proud to support. The recommendations made within the Review provide a blueprint for securing economic growth; from including prosperity criteria in competitive procurements to creating an R&D pipeline that encourages inward investment and skills growth.

6.4 **ADS urges Government to view economic recovery through the lens of prosperity and seize the opportunity to fully embed prosperity into the MOD's procurement processes.** In 2018 the UK defence sector turned over £24.4bn and wages were 20% higher than the UK average. Industry believes the MOD should increase the value placed upon UK content and UK-based industrial activity, including jobs and skills and intellectual property generation, as core factors in future defence procurement.

6.5 Capitalising on these factors and investing in the UK Defence supply chain will have spill-over benefits to a number of sectors including civil aerospace and wider commercial manufacturing.

## **7. How can the Government best retain key skills and reskill and upskill the UK workforce to support the recovery and sustainable growth?**

7.1 Our industries share a significant pool of high value design, engineering and manufacturing talent. If the COVID-19 crisis structurally damages this skills base, through job losses and an inability to recruit the talent of the future, it will present very real threats to the UK. The ability of our armed forces to exercise freedom of action using our own advanced technologies will be curbed and we will also be left with a

smaller pool of talent through which to develop the sustainable technologies of the future. Without this advanced skills base, which has taken many years to cultivate and build, we will fall behind those of our strategic competitors which have recognised this threat and responded accordingly. The UK will also no longer be an attractive supplier of high value exports.

7.2 Despite the welcome support in place to protect jobs in the short term, the reality is there have already been and will continue to be thousands of redundancies. For many companies in our sectors, particularly those further down the supply chain, the drop in demand is only now starting to hit with new work drying up. This means that they missed the cut off date for the Job Retention Scheme as they worked to fulfil existing orders, but with future orders drying up they will now have a growing need to furlough employees. **The Government should therefore consider what support can be made available to sectors such as ours who, due to unique market conditions, require extra support to prevent mass redundancies.**

7.3 New measures recently announced by the Chancellor to help businesses bring furloughed employees back to work and to recruit the next generation of talented young people are welcome steps. We hope to see current apprenticeships also receive support, making sure those already being trained can complete their courses and keep their career ambitions on track. In some cases, even if apprentices can complete the year, there may not be an opportunity to join the workforce as demand will remain weak. This is essentially a loss of investment from the employer's point of view and an issue for some training providers who will not be able to access levy funds as a result of incomplete apprenticeships.

7.4 Despite recent Government announcements for funding to businesses that offer new apprenticeships as well as the new Kickstart Scheme, there is widespread uncertainty and recruitment freezes across the sector. This means companies are unlikely to take on apprentices in the same volume as usual. This will exacerbate the skills gap in years to come, harming UK competitiveness and leaving a significant number of school leavers with reduced prospects.

7.5 **The Government should provide support to businesses to ensure companies can induct a full cohort of new apprentices in September. Government should also provide financial support for training providers and businesses that are able to offer training and upskill the workforce in new technologies and areas that support the jet-zero and Green Recovery agenda.**

**8. Is the Industrial Strategy still a relevant and appropriate vehicle through which to deliver post pandemic growth?**

8.1 The Industrial Strategy established and enhanced Government engagement with several industry-Government partnerships and co-resourced initiatives, such as the Aerospace Sector Deal, Aerospace Growth Partnership, Defence Growth Partnership, Security and Resilience Growth Partnership and the National Space Programme. It is important that the Government retains focus on a long-term ambitious industrial strategy as it boosts competitiveness at a time when UK companies need it the most.

**9. How should regional and local government in England, (including the role of powerhouses, LEPs and growth hubs, mayoralities, and councils) be reformed and better equipped to deliver growth locally?**

9.1 NA

**10. What opportunities does this provide to reset the economy to drive forward progress on broader Government priorities, including (but not limited to) Net Zero, the UK outside of the EU and the 'levelling up' agenda? What should the Government do to ensure that delivering on these priorities does not exacerbate the vulnerability of businesses, consumers and communities/workers that have been impacted by COVID-19?**

10.1 It is becoming clear that many parts of the economy are changing rapidly as a result of the COVID-19 crisis. However, this moment of change provides an opportunity for the Government to deliver on its priorities, and our sectors are key enablers to achieve them.

- 10.2 In terms of achieving net-zero emissions by 2050, our members are pioneers in sustainable technology. Through intensive technological development cultivated over many decades, UK aerospace emissions are declining despite a continuous trend of passenger growth (pre-COVID). Indeed, demand for flights in the UK has increased by 28% since 2005, yet emissions have fallen by 3.5%. The space sector also has a vital role to play in tackling climate change, with space technology at the forefront of informing global responses to the challenge posed to the environment.
- 10.3 However, the COVID-19 crisis is affecting this trajectory. Without Government support, the goal of reaching net-zero emissions by 2050 could be under threat. Other major economies such as France have instituted measures to support the transformation of industry, so the UK risks falling behind. **The measures outlined above, including on sustainable aerospace technology by increasing the funding for the Aerospace Technology Institute, sustainable aviation fuels and front-loading technology projects, will help ensure the UK's net-zero target is reached.**
- 10.4 R&D investment is crucial if the UK is to reach its net-zero goal. In 2019 the UK aerospace sector spent £1.7bn on R&D, and the ATI – which delivers co-investment from Government and industry in aerospace R&D – estimates that over a 10-year period, £1 spent on R&D generates on average 70p of GVA as a result of spillovers<sup>2</sup>. Over 250 companies across the UK have benefited from over £2.5bn in R&D investment through the ATI and over 50% of the ATI Programme investment is directly concerned with improving environmental performance of aerospace technologies. A clear commitment from Government to sustainable aerospace technology will be transformational in decarbonising aviation and enabling industry to continue this vital work.
- 10.5 The Government also has an opportunity to use the contribution of our industries to 'level-up'. Our sectors have a proven track record of investing in local economies across every region of the UK. On average 20% of employment in each sector is concentrated in the North and Midlands. Aerospace average earnings are 45% higher and defence average earnings are 18% higher than the UK average. With the right interventions and changes in approach, Government can use the strengths of our sectors to 'level-up' our economy.
- 10.6 **One means through which to achieve this is through a focus on prosperity in Government procurement.** As the single customer in the UK defence market and a key customer in the security and space markets, Government can use its procurement power to maximise prosperity.
- 10.7 Increasing Government investment in defence, and making those important connections to adjacent sectors, will encourage businesses with historically low levels of defence industrial activity to consider the defence sector for expansion. Northern Ireland (N.I.) is a particularly strong example; currently, 0.57% of the UK defence budget is spent in N.I., supporting 600 jobs. In comparison, the civil aerospace sector accounts for roughly 20% of the N.I. economy. Investment in defence routed towards N.I. could help address the economic challenge that N.I. will experience with a decline in civil aerospace business and increase defence work in an important part of the UK.
- 10.8 In the more immediate term, the MoD can play a significant role in supporting the wider economy through its huge procurement power. ADS encourages the Government to take a more flexible approach to major capital investment projects and defence programmes to, where appropriate, bring them forward and stimulate activity throughout the defence and adjacent sectors. These should be considered in parallel with the continued delivery and administration of existing contracts. ADS has shared a list of potential activities with the Government that may present ideal opportunities for an acceleration in timescales to stimulate activity within the supply chain.
- 11. What lessons should the Government learn from the pandemic about actions required to improve the UK's resilience to future external shocks (including – but not limited to – health, financial, domestic and global supply chains and climate crises?)**
- 11.1 **Greater engagement with the UK's security and resilience sector will be key.** The sector provides advanced capabilities that will support the UK's safe return to work and contribute to the national economic recovery. Key areas of opportunity include biosecurity, viral protection, diagnostics and cyber-security. However, in order to fully unlock the contribution of this fast-growing sector (£14.5bn turnover in

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<sup>2</sup> ATI analysis of R&D spillovers

2019 and 67% growth in turnover since 2014), there are a number of policy issues from procurement reform to the coordination of shared innovation activities that must be addressed in partnership with industry. Targeted resources are required to enhance the Home Office's capacity for strategic industrial engagement, to be addressed through the appointment of a new Director of Prosperity and the renewal of funding at a minimum for the Home Office's Joint Security and Resilience Centre (which is due to expire at the end of this year).

**11.2 Formalised mechanisms to draw upon industry support to respond to future national challenges should be developed.** In this, the UK should study how countries such as Singapore and Switzerland draw upon reservists from industry to support the delivery of public services across defence, security, and justice in times of national crisis. For example, to meet the national demand for PPE, the Government had to widely redeploy civil servants to support the procurement of PPE at speed, but this has incurred opportunity costs that could have been avoided if industry personnel had been positioned to be drafted in support.

11.3 Lessons have also been learnt about supply chain vulnerability. With supply chain companies in our sectors struggling, there is the potential for acquisitions from foreign companies. The vast majority of foreign investment is welcome and indeed encouraged by Government and UK businesses. However, there are sometimes understandable concerns about the consequences for national security and sovereign capability. To help offset this, **ADS would welcome Government measures to incentivise and promote equity investment into UK SMEs**, rather than one-time Government-backed repayable loans. Treating the UK supply chain and SME ecosystem as primary investment opportunities will provide greater long-term market stability and resilience in the UK.

## **12. What opportunities exist for the UK economy post-Brexit and the pandemic for export growth?**

12.1 The aviation and aerospace industry is vital to global and UK growth. In 2019, it produced £31.8bn worth of exports. Restoring global growth will bring many opportunities, enabling the UK to build, design and innovate in more sustainable ways to significantly cut emissions.

12.2 Due to the number of components involved in manufacturing an aircraft, aerospace supply chains are long and complex. They are also international, with parts being manufactured and assembled in different parts of Europe. Post-Brexit, the new UK Global Tariff will be helpful in making sure the UK is competitive in international markets and can remain a core part of global aerospace supply chains.

12.3 The UK defence industry also provides significant opportunities for economic growth. Indeed in 2018, UK defence exports were worth £10.9bn. However, the strengths of the sector can only be leveraged through the full implementation of the Prosperity Agenda and an effective industrial strategy. ADS believes that the recommendations made in our policy paper on the Defence & Security Industrial Strategy are more important to implement than ever before.

**12.4 An effective and enduring national economic recovery will be built on a competitive export strategy in which the UK uses all levers of state and industry to win.** Many potential customers are becoming more inward-looking or cutting budgets. Comparator nations who may compete with the UK for future export orders have begun to react to this change by re-evaluating legacy capabilities and looking to invest in their national supplier bases through increased work, leaving the UK at a disadvantage.

12.5 Yet, **the export agenda can only deliver growth and high-value work if export campaigns receive deep and wide Government support.** ADS welcomes the steps that have already been taken by the Department for International Trade Defence & Security Organisation (DIT DSO) and the MOD Exports Team to expand their teams and work in collaboration with industry. It is with this proactive attitude that the Government should look to engage internationally and take an ambitious approach to defence exporting. This cross-Government working is vital to creating a unified approach to export campaigns that Ministers and military leaders engage with.

12.6 There are also significant opportunities for export growth for the UK's security and resilience sector, as countries across the globe seek a sustainable and safe economic recovery from the virus. As noted in 11.1, key areas of opportunity include biosecurity, viral protection, diagnostics, and cyber-security, where the global demand for these capabilities has significantly grown. However, to unlock these opportunities, **the UK needs to adopt a step-change in the level of Government-to-Government engagement in**

**support of UK industry**, in the face of fierce global competition. If the UK is not well prepared, it will miss a window of opportunity as peer countries seek to strengthen their footprint in key markets.

**13. What role might Government play as a shareholder or investor in businesses post-pandemic and how should this be governed, actioned and held to account?**

13.1 The long-term supply chain investment fund outlined above would enable the Government to play a significant and transformational role in the economic recovery. It would help companies remain competitive and provide long-term security for critical supply chain companies.

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