



# **Defending the Nation, Growing the Economy**

**A trade union case for creating good industrial jobs  
through increased defence spending**

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# EXECUTIVE SUMMARY

We live in one of the most uncertain periods of geopolitical turmoil since the end of the Second World War. Russia's full-scale invasion of Ukraine in February 2022 and recent Chinese hostility towards Taiwan have been accompanied by a major change in US policy under Donald Trump, which has included a military strike on Venezuela, threats towards the sovereignty of Greenland and air strikes against Iran. A United Nations Commission of Inquiry has spoken of genocide being committed by Israel in Gaza<sup>1</sup>. The UK Prime Minister, Sir Keir Starmer, refused to participate in the initial, offensive strikes against Iran, arguing that the UK does not believe in "regime change from the skies"<sup>2</sup>. However, under earlier pressure from the Trump White House, the UK Government signalled its intention to raise defence spending from 2.4 per cent of GDP in 2024 to 2.6 per cent in 2027, with the ambition of eventually reaching 3.5 per cent of GDP in 2035. The Government has expressed its desire to boost growth and jobs across the UK through this increased spending.

Defence already makes a major contribution to the UK economy, delivering £15bn in gross value added in 2024. More than 180,000 jobs, with salaries 12 per cent higher than the UK average, and more than 8,000 apprenticeships, are supported through the defence sector. Defence creates thousands of high skilled, well paid jobs outside of the South East of England. Additionally, the UK's defence industry, particularly its advanced maritime and aviation sectors, provides export opportunities, such as the £10bn deal for the UK to deliver Type 26 frigates to Norway.

The Strategic Defence Review (SDR), published in June 2025, argued that the threats we face are more serious now than at any time since the end of the Cold War<sup>3</sup>. The SDR moves UK policy to war fighting readiness, and describes a whole of society approach to defence policy. It sets out how defence can become an engine of growth. The Defence Industrial Strategy, published in September 2025, speaks of a fundamental shift in the way the Ministry of Defence drives economic growth<sup>4</sup>. Defence Growth Deals (DGDs) will bring investment to the sub-sector specialisms of many local areas, starting with Plymouth and South Yorkshire, with deals to come in the devolved nations. Those deals will be supported by a new Defence Skills Mission and a new organisation, UK Defence Innovation (UKDI). A Defence Industrial Joint Council will include representation from the GMB, Prospect and Unite unions.

Some significant voices argue that the UK, like Germany, should re-examine its fiscal rules to bring forward defence spending more quickly.

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<sup>1</sup> 'Israel has committed genocide in the Gaza Strip, UN Commission finds', United Nations Press Release, 16 September 2025.

<sup>2</sup> Hansard, 2 March 2026.

<sup>3</sup> 'The Strategic Defence Review 2025 - Making Britain Safer: secure at home, strong abroad', Gov.UK, 2 June 2025.

<sup>4</sup> 'Defence Industrial Strategy 2025: Making Defence an Engine for Growth', Gov.UK, 8 September 2025.

But would we be able to scale up defence spending at pace? That would require ensuring that we have the capacity within industry and the numbers of skilled workers available if we wish to ensure that this money is spent creating jobs in the UK, rather than abroad.

To succeed in creating good industrial jobs through defence spending, this paper argues that industries must be brought together. The Government's Modern Industrial Strategy, published in June 2025, identifies eight priority sectors (the IS-8), one of which is defence<sup>5</sup>. Others, including advanced manufacturing and digital technologies, are closely related to defence. The steel industry clearly interacts with defence, given the use of steel products in defence equipment. The so-called 'everyday economy', previously championed by the Chancellor, Rachel Reeves, includes the non-tradable sectors such as social care, retail, accommodation, education and health services that form the pillar of communities. An industrial strategy of which defence is central, but that incorporates all other IS-8 industries and dovetails with an approach that raises productivity in the everyday economy would, in the words of an expert who gave evidence to this report "combine a top down, sectoral approach with a bottom up, skills based approach".

An industrial strategy in which defence plays a central role brings a number of advantages beyond improving the defence capability of the country. It would be a strategy for the economic development of the whole of the UK, moving away from either a focus on the South East on the one hand, or on the rest of the UK on the other. In short, defence needs both; it needs the major defence companies that have factories across the regions and nations of the UK, such as Rolls Royce and Airbus, both of whom gave evidence to this report, and the scientific and technical start-ups often found in places like Oxford and Cambridge. Additionally, leading companies told this report that the security of long-term funding was, in many ways, as important as the amount of funding itself.

Defence is a priority sector, but it faces similar challenges to many other sectors. These include the need to be at the cutting edge of innovation and to have access to skilled workers. The Government has identified specific projects for its major investments, but it takes people to bring projects to fruition, so there is a case to be made that the current balance between people and projects is wrong.

Good jobs is another part of this equation. One leading economist argues that we have a 'good jobs' problem, as too many low quality, low skilled jobs are created if markets are left to themselves. We must also avoid the trap of replacing people with what another economist calls 'so-so technologies', which may look good, but which are not as productive as people might be if they were trained properly and invested in.

## **RECOMMENDATIONS:**

*The Government should set out a timeline for an increase in defence spending to 3.5 per cent of GDP by 2035, considering all plausible ways of funding this increase, and adjusting its fiscal rules if necessary, to achieve this outcome. This increase should not be achieved by cutting investment in other IS-8 industries.*

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<sup>5</sup> The UK's Modern Industrial Strategy, Gov.UK, June 2025.

*By bringing forward its increase in defence spending to 3.5 per cent of GDP as soon as possible, the Government can give business the confidence it needs to invest in long-term projects.*

*The industrial strategy must dovetail with the steel strategy. The UK steel industry should be represented on the Defence Suppliers Forum and the Ministry of Defence should sign the UK steel charter.*

*The Government should recalibrate its spending plans in order that a larger share of investment goes to ensuring that workers have the skills and capabilities to deliver on its announced projects. A 'people' rather than 'projects' approach to future government investment should be adopted.*

*The Government should establish a body, the Defence Commission, to map out future defence spending in the UK. This should be an advisory non-departmental public body, sponsored by the Ministry of Defence, similar in design to the Low Pay Commission. An independent chair should be joined by industry and union representatives, including from the prime manufacturers of defence equipment, joined by smaller, innovative companies. Experts, including economists, defence experts and spatial planners should be called upon as necessary.*

*The job of the Defence Commission should be to examine defence spending over the next six months, one year, two years, five years and ten years, based on latest information and intelligence.*

*It should ask:*

- What do we need immediately and do we have the capacity to produce this in the UK?*
- What companies and unions are involved and should be involved?*
- What contracts should go out to tender?*
- What contracts are best-filled by SMEs at the local level?*

*Workforce planners seconded to the Defence Commission should be engaged in these discussions, forecasting the skills that we need in the short, medium and longer term to ensure that we can produce as much defence equipment as possible in the UK.*

*Alongside the IS-8, the Government should launch a programme to raise the productivity and job quality of the 'everyday economy'. The Chancellor, Rachel Reeves's own report into the 'everyday economy', produced in 2018 when Reeves was a backbencher, should be used as the Government's starting point.*

*Government investment should be directed towards high skill, high wage work, using its spending power to shape markets.*

*Government subsidies should be directed towards the development of more socially beneficial technologies, rather than those which simply replace people with machines.*

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*HM Treasury should look at the balance of the tax burden placed on businesses employing workers, compared with those associated with introducing technology, especially when so much of that technology is low quality. There should be a tax bias towards employing workers, compared to replacing them with machinery.*

*These reforms should be accompanied by a bold programme of increasing employee skills, so that workers are as productive as they can possibly be.*

# INTRODUCTION AND POLITICAL CONTEXT

We live in one of the most uncertain geopolitical times since the end of the Second World War. The rise of muscular governments in both China and Russia is one reason for this. Whilst not entirely predictable, this was hardly a surprise. Those, such as the American political theorist Francis Fukiyama, who suggested that the West's winning of the Cold War was the 'end of history' and that future problems would be addressed in the context of liberal democracy, were a little premature<sup>6</sup>.

Russia's full-scale invasion of Ukraine in 2022 and concerns about China's intentions towards Taiwan are the most obvious manifestations of fears regarding those two governments. International institutions seem powerless to intervene, as with Israel's actions in Gaza, described by a UN Commission of Inquiry as Israel having committed 'genocide'<sup>7</sup>. Moreover, evidence suggests that much is also happening that is rarely seen. This concerns the so-called 'grey zone', where activities that fall between peace and war, such as cyberattacks and disinformation, take place. Those actions do not represent conventional conflict as such, but they help to achieve the goals of a hostile power.

According to the Royal United Services Institute (RUSI):

*"Much of this activity appears to be directed or enabled by the Kremlin, though typically carried out through proxies and other deniable channels. These operations, subtle and dispersed across multiple domains, are designed to discredit European governments, probe for weaknesses in their defences, drain resources and reduce capacity for coherent, timely response."<sup>8</sup>*

So far, so predictable. More surprising, however, has been the shattering of Western assumptions by the current US President, Donald Trump. The US National Security Strategy, published in November, 2025, spoke of 'civilisational erasure' in Europe, and described 'the growing influence of patriotic European parties' as a cause for 'great optimism'<sup>9</sup>. The US's military strike against Venezuela, its threat to annex Greenland and its air strikes against Iran have raised further questions about the US's commitment to an international rules based order.

The Trump administration's behaviour challenges previous assumptions about the defence and security of Europe, including the UK. Indeed, as Professor Andrew Dorman of Kings College, London, has pointed out, since 1945, British defence policy has been centred on the United States being tied in to Europe via NATO and the Article Five guarantee. Our operationally independent nuclear deterrent, aimed initially at the Soviet Union and now at Russia, and our ability to project a limited military capability across the globe, has been

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<sup>6</sup> 'The End of History and the Last Man', Francis Fukiyama, 1992.

<sup>7</sup> 'Israel has committed genocide in the Gaza Strip, UN Commission finds', United Nations Press Release, 16 September 2025.

<sup>8</sup> 'Maintaining the UK's Intelligence Edge in the Grey Zone', Matt Ince, 11 December 2025, RUSI.

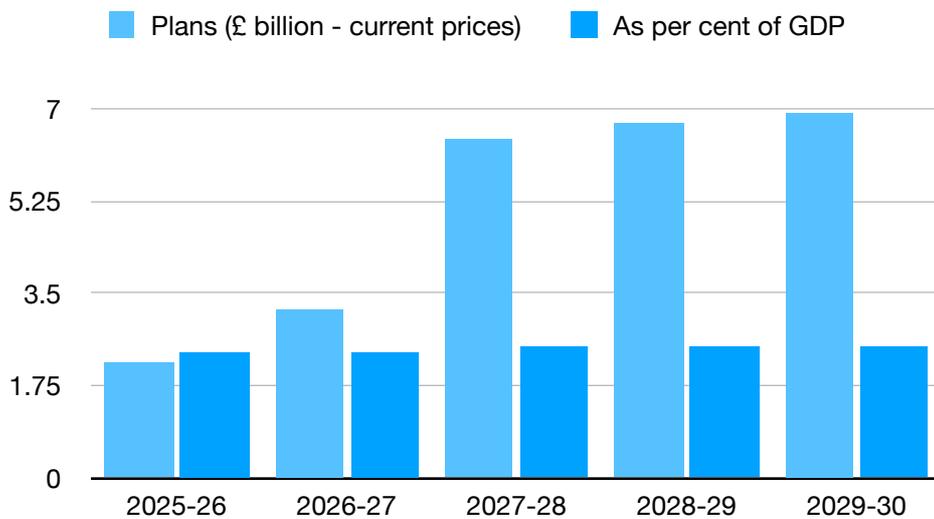
<sup>9</sup> 'National Security Strategy of the United States of America', US Government, November 2025.

underpinned by the special relationship with the United States. Dorman argues that that Special Relationship is, at the very least, open to question and that, with the abandonment of the transatlantic foreign policy consensus, the US can no longer be relied upon<sup>10</sup>.

Whilst avoiding any such undiplomatic language, the UK Prime Minister, Sir Keir Starmer, has committed to increased defence spending.

**Figure One: Government Planned Defence Spending in £ billions, and as a percentage of GDP.**

Source: HM Treasury Calculations and Office for Budget Responsibility, as set out in Spring Statement 2025



The major cash increase planned by the Government takes place between 2026-7 and 2027-8, as can be seen in Figure One. Beyond this, however, the Government has committed, as part of a NATO agreement, to increase spending to 3.5 per cent of GDP by 2035. According to the Office for Budget Responsibility's Economic and Fiscal Outlook, published to coincide with the Spring Statement of 2026, this commitment would represent around £40 billion annually in 2025-26 terms<sup>11</sup>.

This increased spending is being done for clearly identified geopolitical reasons. It does, however also have the potential to make an important, material difference to the economies of communities across the UK that have struggled in recent years. The defence industry was already one of the eight targeted industries identified in the Government's Modern Industrial Strategy, published in June 2025. Seeking to make a virtue out of necessity, the Government has seized upon the potential for economic and industrial growth that increased defence spending provides. Delivering her 2025 Spring Statement to the House of Commons, the Chancellor, Rachel Reeves, told MPs:

<sup>10</sup> 'Trump, NATO, and Britain's Shattered Defence Dream', Professor Andrew Dorman, 1 April 2025, UK in a Changing Europe.

<sup>11</sup> Office for Budget Responsibility, Economic and Fiscal Outlook, March 2026.

*“As defence spending rises, I want the whole country to feel its benefits”.*

A year later, delivering her 2026 Spring Statement, the Chancellor reported progress on this ambition:

*“... in an increasingly dangerous world, I am proud to be the Chancellor that is delivering the biggest uplift in defence spending since the Cold War:*

- With £650 million committed in January to upgrade our Typhoon fighter jets,*
- A new Royal Navy frigate launched from Rosyth last week,*
- And just yesterday, our £1 billion helicopter deal with Leonardo”<sup>12</sup>.*

The Confederation of Shipbuilding and Engineering Unions (CSEU) comprises four unions - Unite, GMB, Prospect and Community - all closely involved in the defence sector, either directly or through products that are vital to a successful defence industry, such as steel. The CSEU welcomes this increase in defence spending and the commitment to turn this into good industrial jobs.

That ambition is not straightforward, however. To succeed, increased defence spending must dovetail with the Government’s wider industrial strategy. Good defence jobs will require a high number of skilled workers. Furthermore, if we are increasing our defence spending rapidly, that raises capacity issues. Should we spend this money on equipment from larger, established defence companies, or invest in smaller, innovation-rich firms? How has the war in Ukraine changed the nature of armed conflict and do previous assumptions about warfare still apply?

This report will grapple with these questions. It will draw on the most recent research, as well as the work of key defence analysts. It will also present new evidence gained from interviews with industrial policy experts, including the former Chief Economist of the Bank of England, Andy Haldane, and the former Business Secretary, Greg Clark, as well as managers and trade union reps at two key UK defence companies, Rolls Royce and Airbus Defence and Space.

The report is split into two broad parts. First, we look at the facts. How important is defence to the UK economy? And what is the Government’s current policy towards the defence sectors, as set out in the Strategic Defence Review and the Defence Industrial Strategy?

Second, we look at how to make industrial policy work, and how to apply that to the defence sector, with the explicit trade union aim of maximising good defence jobs for UK workers.

In between those two parts, we hear from the defence industry on the ground, through the voice of two key companies and their worker representatives.

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<sup>12</sup> Hansard 3 March 2026



**Photo: The Royal Navy Type 45 Destroyer, HMS Defender.**

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# THE IMPORTANCE OF THE DEFENCE INDUSTRY

## THE ECONOMIC CONTRIBUTION OF THE DEFENCE INDUSTRY

The defence sector is complex to define, since many major defence manufacturers span several activities, not all of which are defence-related. Defence does include, however, firms in aerospace, shipbuilding and weapons manufacture, as well as electronics, communications and other, emerging data-driven sectors.

ADS is the trade body representing the defence sector. ADS reports<sup>13</sup> that, in 2024:

- Defence contributed £15bn in gross value added (GVA) to the UK economy. This was an increase of 70 per cent between 2014 and 2024.
- Defence had a turnover of £36.4bn, an increase of 64 per cent over 10 years.
- Defence provided £13.7bn (three-year average) of exports, a rise of 52 per cent over 10 years.
- The defence sector delivered jobs for 181,500 employees, a growth of 30 per cent in the last 10 years.
- There are an estimated 8,100 apprentices in the defence sector.
- With an average salary of £41,800, defence workers enjoy pay that is 12 per cent higher than the UK average.

Bain and Company calculate that each £1 billion spent on defence generates £2.2 billion in economic value for the UK and supports 15,000 jobs. Bain's research also shows that the defence sector achieves top-quartile gross value added (GVA) and productivity returns.<sup>14</sup>

Andy Haldane is a former Chief Economist of the Bank of England. Haldane chaired the Industrial Strategy Council from 2018 to 2021. Interviewed for this report, Haldane stressed the regional benefits of defence jobs to the wider economy:

*"...it's in the nature of the defence industry that its activities are not centred on the 'golden triangle' [i.e. London, Oxford and Cambridge]. They are not Southeast centric, they are scattered across the four corners of the UK... So it's spatially spread .... I'm not only very much supportive of a spatially spread industrial strategy, but I think it is an absolutely central feature of our meeting a national growth mission."*

Greg Clark was Business Secretary from 2016-2019 and serves on the current Government's Industrial Strategy Advisory Council. In an interview for this report, Clark, who is now based at the Warwick Innovation District in the West Midlands, emphasised the importance of good jobs in the defence sector:

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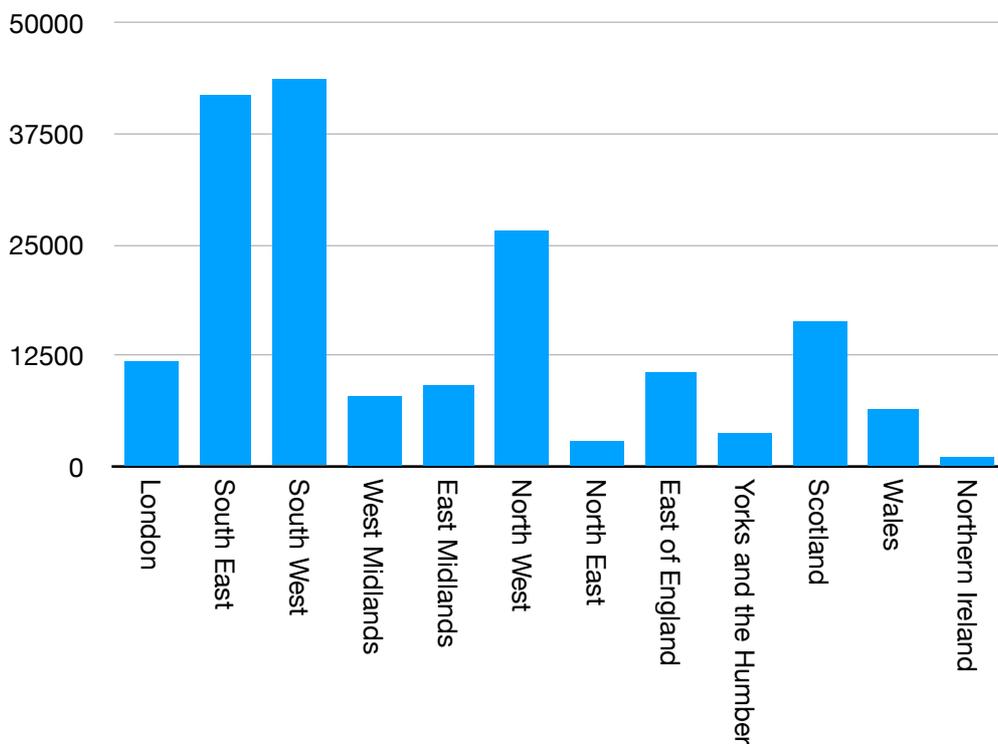
<sup>13</sup> ADS Defence Sector UK Outlook 2024.

<sup>14</sup> 'Unlocking the Full Value of UK Defence Spending', Bain and Company, March 2024, quoted in 'Securonomics: the contribution of a Defence Industrial Strategy', William Freer and Paul Mason, Council on Geostrategy', March 2025.

*"I think defence jobs are important for a number of reasons. They tend to be, if I call them "good jobs"; good jobs in the sense that they are skilled jobs, that pay well ... they are dependable jobs, you can get careers from these jobs, and because it's not going to be erratic, then you could invest in careers, whether it's individuals or whether it's a company, you can really put in the training, so you're creating high-quality jobs, and that is what I think the country needs, and so defence is an excellent source of that."*

The regional nature of defence jobs can be seen in Figure Two.

**Figure Two: Defence jobs across the regions and nations of the UK**



Source: ADS Defence Sector, UK Outlook 2024

Figure Two shows that the South West, home to Rolls Royce, Bristol, who we will meet later in this report, is the largest of the regions and nations in terms of defence employment (43,500 jobs), with significant numbers employed in the North West (26,500 jobs) and Scotland (16,250 jobs), as well as 41,750 jobs in the South East.

## EXPORTS

Exports are important for the UK defence sector. According to 'Securonomics: the contribution of a Defence Industrial Strategy', by William Freer and Paul Mason, the UK is recognised as having one of the most advanced defence sectors, especially in marine and

aviation, as well as an under-appreciated but important role in the export of key components. Allies and partners across the world are seeking to modernise and expand their militaries, but lack of defence expertise and capacity is constraining them from doing so at the pace required. This provides an obvious export opportunity for UK businesses.

A recent example of the UK's export potential was on display at the end of August 2025, with the announcement of a £10 billion deal for the UK to supply Norway with Type 26 frigates. According to the Scotland Office, this deal supports 2,000 jobs at BAE Systems' shipyards in Glasgow and a further 2,000 roles across the UK maritime supply chain until the late 2030s. As we will see below, the Type 26 frigates will be powered by Rolls Royce engines. This agreement is expected to support 103 Scottish businesses, which includes 54 small and medium enterprises<sup>15</sup>.

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<sup>15</sup> 'Major boost for Scottish shipbuilding as Norway selects UK warships', Scotland Office, Gov.UK, 31 August 2025.

## THE CHANGING NATURE OF WARFARE

Technology is changing warfare. New capabilities include First-Person View (FPV) drones, targeted algorithms and hypersonic missiles. Many of these technologies are becoming available after years of investment in research and development. This highlights the need to balance the development of both low-end equipment, such as expendable FPV drones, with more advanced equipment, such as sophisticated long-range radars.

Furthermore, the war in Ukraine demonstrates how wartime conditions catalyse innovation. According to David Hambling, writing in 'New Scientist':

*"As both sides of the ongoing Russia-Ukraine war attempt to claim technological supremacy, drone versus drone combat has become routine. This new kind of warfare is being documented in real time across air, land and sea.*

*Russia's invasion of Ukraine has already been dubbed the "first drone war", with some sources suggesting that small drones are inflicting as much as 80 per cent of the damage to military hardware and personnel. Now, the war has evolved, with machines fighting machines on a daily basis in a way we have never seen before."*

Hambling quotes Samuel Bendett, an analyst for the CNA think tank in Virginia, who likens the development of drones to the rise of aircraft combat during the First World War'.<sup>16</sup>

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<sup>16</sup> 'Drone vs Drone is the New Warfare', David Hambling, New Scientist, Volume 264, Issue 3512, 12 October 2024.

# UK GOVERNMENT DEFENCE POLICY

## THE STRATEGIC DEFENCE REVIEW

The Government published its Strategic Defence Review (SDR) in June 2025. This acknowledged the changing world in which we live: the threats we face are more serious and less predictable than at any time since the end of the Cold War. The SDR was conducted within that context. Five key principles encapsulate the SDR:

- **A move to war fighting readiness**, which requires a more lethal ‘integrated force’ equipped for the future and strengthened homeland defence. This entails:
  - A new hybrid navy, including Dreadnought and SSN-AUKUS submarines, cutting edge warships and support ships, transformed aircraft carriers and new autonomous vessels.
  - An army that is ten times more lethal, made up of an armoured capability, AI, software, long range weapons, and land drone swarms, with an aim to increase full-time troops to at least 76,000 into the next Parliament.
  - A next generation Royal Air Force, including F-35s, upgraded Typhoons, next generation fast jets through the Global Combat Air Programme (GCAP), and autonomous fighters.
  - A sovereign warhead programme with a budget of £15 billion this Parliament, supporting more than 9,000 jobs.
  - Up to £1 billion in new funding for Homeland air and missile defence.
  - A new CyberEM Command, defending Britain from daily attacks in the grey zone.
- **Defence becoming an engine for growth**, driving jobs and prosperity through a new partnership within industry, including radical procurement reforms and backing UK businesses.
  - This includes a £6 billion munitions budget for this Parliament, including £1.5 billion in an ‘always on’ pipeline and at least six new munitions and energetics factories in the UK, creating more than 1,000 jobs.
  - Up to 12 conventionally armed, nuclear powered attack submarines through the AUKUS programme.
  - £400 million to invest in defence innovation in UK-based companies.
  - A new Defence Exports Office, driving exports to our allies and growth at home.
- **‘NATO first’**, which entails leading in NATO with strengthened nuclear, new technology and updated conventional capabilities.
  - This entails the first European hybrid airwings, transforming our aircraft carriers, combining fast jets, long-range weapons and drones.
  - The first European laser directed energy weapon in service, through nearly £1 billion of new funding.
  - Greater European deterrence, with up to 7000 new long-range weapons and supporting 800 jobs in the UK.
- **UK innovation driven by lessons from Ukraine**, which entails harnessing drones, data and digital warfare.
  - This entails doubling investment in automatic systems during this Parliament to boost UK export potential.

- A new digital targeting web in 2027, provided by up to £1 billion for the digital integration of our armed forces.
- A new 'Drone Centre', accelerating the use of autonomous systems across our own forces.
- **A whole of society approach**, which means wider participation in national resilience and the renewal in the UK's contract with those who serve.
  - This includes the upgrading of military accommodation, through a budget of at least £7 billion this Parliament, with more than £1.5 billion of new investment to fix forces' family housing.
  - More opportunities for young people, delivered by a 30 per cent increase in cadets by 2030 and introducing a voluntary 'gap year' scheme.
  - A new UK strategic reserve by 2030 with the Navy taking a leading role in protecting underseas infrastructure.
  - A New Defence Readiness Bill, legislating to improve national preparedness.

## THE DEFENCE INDUSTRIAL STRATEGY

In September 2025, the UK Government published its Defence Industrial Strategy (DIS). This described the Government's ambition to spend three per cent of GDP on defence in the next Parliament, as economic and fiscal conditions allow, and a commitment to spend five per cent of GDP on national security by 2035<sup>17</sup>. Alongside this investment, the DIS promised reform and "a fundamental shift in how the Ministry of Defence (MOD) maximises its potential to drive economic growth, delivering on the Government's central mission". The DIS continues:

"As one of the eight priority sector plans in the Government's Modern Industrial Strategy, the Defence Industrial Strategy (DIS) will accelerate this reform agenda and ensure that every pound spent on defence both makes our country safer and grows the UK economy."

The DIS argues that the UK must become the best place from which to export, Europe's leading defence exporter, and the most attractive country in the world to grow a defence business. The DIS aims to make the UK a defence industrial leader by 2035 "with a new partnership with industry, workers and our Armed Forces". The UK will export its defence capabilities through a new Office for Defence Exports, to assist UK industry to compete in global markets.

The DIS states that defence supports over 460,000 jobs in the UK, over 24,000 MOD apprentices and £28.8bn spent with UK-based businesses<sup>18</sup>. Nearly 70 per cent of defence jobs are outside the South East (these being jobs directly supported by MOD expenditure). The Defence Nuclear Enterprise along supports a supply chain of over 3,000 businesses based in the UK, generating a current workforce demand of over 48,000, set to grow to around 65,000 by 2030.

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<sup>17</sup> Note that 'national security' is a wider definition than defence; the Government has committed to spend 3.5 per cent of GDP on defence by 2035.

<sup>18</sup> The MOD uses a wider definition of defence employment here than that used by ADS and quoted above.

Given its scale, the defence industry is well positioned to use its buying power to support economic growth, purchasing through co-ordinated procurement.

Building on the successful Plan for Barrow, the DIS launches new regional Defence Growth Deals across the UK. Created in partnership with industry, local government and other regional organisations, these deals will see investment in each area's sub-sector specialisms. The first Defence Growth Deals will be in Plymouth and South Yorkshire, with similar deals to come in each of Scotland, Wales and Northern Ireland, working with the devolved administrations.

The DIS adds:

“Investment that drives economic growth and ensures national security can also contribute to the government's clean energy mission and to Net Zero 2050 through accelerating innovation in dual-use technology.”

The MOD is partnering with industry to create a new defence skills mission - 'Destination Defence'. Defence skills will be boosted across the country to train the welders, coders and engineers of tomorrow, through new regional STEM initiatives, establishing Defence Technical Excellence Colleges, and creating a new strategic relationship with higher education institutions through the Defence Universities Alliance.

According to the DIS, the Government is committed to putting the UK at the cutting edge of defence innovation in NATO. As confirmed in the Spending Review 2025, the MOD's research and development budget will be over £2bn in 2026-7, and will rise each year, this being the baseline for the next 10 years. Through the new UK Defence Innovation (UKDI), the MOD will invest in our most innovative defence companies with a ring-fenced annual UKDI budget of at least £400m. This will increase in the future, with a growing proportion invested in novel technologies such as uncrewed and autonomous systems. From the next financial year, the MOD will spend at least 10 per cent of its equipment procurement budget on novel technologies.

The Government's commitment to our nuclear deterrent is reinforced by a 'triple lock', guaranteeing (i) the building of the four Dreadnought nuclear submarines at Barrow-in-Furness; (ii) that it will maintain the UK's Continuous At-Sea Deterrent (CASD); and (iii) the delivery of all future upgrades to ensure the safety and effectiveness of the deterrent. A £15bn investment in the sovereign warhead programme this Parliament will support over 9,000 jobs.

As noted in the Strategic Defence Review, the Government will also strengthen supply chains, investing £6bn in munitions this Parliament, including £1.5bn in an 'always on' pipeline for munitions, and building at least six new energetics and munitions factories in the UK, generating over 1,000 jobs and boosting export potential.

In order that the DIS is supported by the right institutions, the Government has created the Defence Industrial Joint Council. Chaired by the Secretary of State for Defence, this body includes representatives from the GMB, Prospect and Unite.



**RAF Typhoons in the Middle East, 2024.**

**Photo: Cpl Nathan Edwards / MOD, OGL 3 <<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3>>, via Wikimedia Commons**

## CASE STUDY ONE - ROLLS ROYCE, BRISTOL

Rolls Royce is one of the best-known engineering companies in the world. Beginning life in 1906 as a producer of motor cars - the six cylinder Silver Ghost, described as the 'best car in the world', was developed within a year - Rolls Royce produced its first aircraft engine, the Eagle, in 1914. During the Battle of Britain in 1940, the Rolls Royce Merlin engine powered a host of iconic combat aircraft, including the Supermarine Spitfire, Avro Lancaster and DeHavilland Mosquito. Rolls Royce built its first civil aero engine in 1953 and in 1966, it merged with Bristol Siddeley, increasing its capacity for military aircraft engine manufacturing.

Today, Rolls Royce produces complex power and propulsion solutions for safety critical applications in the air, at sea and on land. Rolls-Royce delivers large engines for civil aircraft, is a market leader in aero engines for military transport and patrol aircraft, and is a provider of integrated solutions for onsite power and propulsion. Rolls Royce operates in 50 countries around the world and employs 24,000 people in the UK. Derby is the home of its UK civil aerospace operations, while its defence business is headquartered in the United States. The centre for combat propulsion, however, is based in Bristol.

Mark Tivey is the Business Development Director for the Future Programmes Team at Rolls Royce, Defence. Describing the factory in Bristol, in an interview for this report, Mark said:

*"2026 represents 120 years since Rolls Royce was incorporated as a company. The factory in Bristol dates from 1909 and was originally an aircraft manufacturer with both airframe and engine divisions. The engine division grew into Bristol Siddeley, which was incorporated into the Rolls-Royce family in 1966, so we are an integral part of the company's long, illustrious and precious history."*

## ROLLS ROYCE, BRISTOL, AND THE LOCAL ECONOMY

As we saw earlier in this report, one of the benefits of the defence sector is that it provides good, well-paid jobs outside of London and the South East. Rolls Royce in Bristol has played this role for decades. Jed Ellis, Defence Convenor, and Steve Jones, Senior Unite rep, both of whom were interviewed for this report, come from three generations of Rolls Royce employees. Jed, who has worked for the company for five years, had a grandfather who worked for Bristol Siddeley, and a father who was employed by Rolls Royce, for 42 years. Steve's great uncle and uncle both worked for the company, as did another relative during the Second World War. Steve himself has worked for Rolls Royce for 43 years.

Inevitably, a company like Rolls Royce is vital to the local economies in which it is based. Mark told us:

*"We've got somewhere in the region of 1,000 apprentices coming through the pipeline nationally, and around 400 since 2020 coming through Bristol. We've got about 1,400 suppliers as Rolls Royce across the UK, more than 500 we access from this site; that's important, because that mix of civil and defence gives us a real benefit,*

*to collaborate with a supportive supply chain ... Around two thirds of all the revenue that the Team Tempest partners receive, goes through to our supply chain."*

Jed made a similar point about Rolls Royce, its workforce and the local community:

*"Sometimes I'll break it down as small as this, the fact that if you look at the Bristol site, and you look at the miles around, every burger van, every little café, every bearings workshop, is all reliant on this place and the [economic value] that we produce..."*

## **INDUSTRIAL RELATIONS AND THE BARGAINING AGENDA**

Both management and trade unions spoke of the constructive nature of industrial relations at Rolls Royce, Bristol. From a Future Programmes perspective, Mark said:

*"Our relations with the trade union on [the Global Combat Air Programme] GCAP are really constructive... We have regular catch-up sessions to understand and exchange messages about where we want to take things, what is important that we see from the programme side, what is important from the trade union side for us to be thinking about... so I would say they are very constructive."*

Mark was clear about the valuable role of the unions in taking the company's message to policymakers:

*"The union have a different but equally valuable route into those areas and a powerful story to tell, and I think when it comes from the union it comes with a different context but it's no less powerful."*

*It's fine me sitting in front of important stakeholders and saying 'This is really important', it's important for the defence of the country, it's important because we need to maintain this capability. It's really helpful when the trade unions come in and reinforce a similar message - with a slightly different context, it's about the protection of jobs, it's the development of those jobs, it's the upskilling of those jobs, it's the advanced, high-tech nature of those jobs..."*

Steve told us:

*"We are just coming to the third year of a three-year pay deal. We've worked hard, because we had those years of high inflation and we worked hard on those deals to recover it, our wage through that period."*

Jed added:

*"We've done quite well, because we've got RPI<sup>19</sup> in the third year. A lot of employers don't want to recognise RPI, because CPI<sup>20</sup> is a lower measurement. But because of*

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<sup>19</sup> Retail Price Index, a measure of inflation that includes housing costs.

<sup>20</sup> The inflation target of the Bank of England.

*the products we produce and because of the skills involved in our jobs, we are in a good position, we are able to negotiate a higher measure, which means our members in the workforce receive pay rises that are in line with inflation, or a higher measure of inflation. That's been a big win for us."*

## **ROLLS ROYCE, BRISTOL, AND ITS PRODUCTS**

Mark was asked about the products that Rolls Royce support on the Bristol site. He replied:

*"EJ200, which is the engine for the [Eurofighter] Typhoon fighter. A really important product for us, a class leading engine. It is an engine that has one of the best power-to-weight ratios of anything in operation today, a really impressive piece of engineering excellence. We have the Adour engine, which powers the Hawk. We contribute to the TP400-D6, which is the engine that powers the Atlas transport aircraft produced by Airbus. The MT30, our naval engine, which powers the HMS Queen Elizabeth and Prince of Wales aircraft carriers. And we've also been privileged to have been selected on the Type 26 Frigate, which has export customers now in Norway, Australia and Canada. So our facility and our workforce are a key strategic partner for the Government and our Armed Forces."*

Pete Spittle, Strategy Development Executive at Rolls Royce, Bristol, highlighted other potential opportunities for the plant:

*"In the defence world, there are programmes of record, like GCAP, the Global Combat Air Programme, of which we are a key member, developing the power and propulsion system related to that. The opportunities for Rolls Royce are not just about the core of the engine, which we've been very good at, but the energy systems, the storage systems... There are other engine development programmes as well, at a different scale, so if we can begin to get into smaller, lower power engines, there is room for growth in that world."*

These are world-leading products and, in themselves, they help to make Rolls Royce a good place to work, as Jed explained:

*"The products that we produce are very interesting, so our workforce is quite engaged, highly skilled and a lot of the work we undertake, it can be quite enjoyable producing the parts which we do, so, yeah, quite a positive experience really."*

Steve added:

*It's at the forefront of technology, you are defending the nation, what's not to like?*

Mark spoke of the strategic value of the company's products:

*"I would say our capability is unmatched in Europe when viewed across the entirety of our air, sea and land defence portfolio. We are able to develop advanced concepts, to an integrated propulsion system design, and then certification and support of a*

*critical power solution. In combat air, in particular, we compete with similarly capable competitors in the US, so in that sense this isn't just a strategic asset for the UK, this is strategic asset for Europe..."*

## GCAP

The Global Combat Air Programme (GCAP) is a next generation combat aircraft, to be developed by the UK, Japan and Italy, by 2035. According to the Defence Select Committee:

*"Participation in GCAP promises much: national sovereignty in combat air; a boost for the domestic defence industry; closer relationships with important allies; and economic return via export sales."<sup>21</sup>*

As we saw earlier, the Strategic Defence Review commits the UK to the GCAP programme. At its heart is a next-generation crewed combat aircraft, commonly referred to in the UK as 'Tempest', which is the capability that GCAP will deliver.

Rolls Royce argues that, by collaborating with IHI Corporation in Japan and Avio Aero in Italy, the three companies can combine skills, people and technology, innovating together to deliver value for money and the best military capabilities. The UK has over 3,500 people working on Tempest and GCAP, with more than 950 employed at Rolls Royce. According to PwC, Tempest's contribution to GDP is estimated to be £37bn between 2025 and 2070, and 16,000 highly skilled jobs per year will be supported for the next ten years through the Tempest programme.<sup>22</sup>

Whilst welcoming GCAP, the Defence Select Committee noted that it will take up a lot of the defence budget in coming years. To deliver on time and to budget, lessons and mistakes, associated with the development of Eurofighter Typhoon, act as a guide to a more efficient programme of GCAP.

Mark described Rolls Royce's involvement in plans for GCAP from its concept stage:

*"In 2015, when the combat air strategy was first published, we started a conversation with the Government about how you turn that into a reality. That produced the Team Tempest programme in 2018-2019... we worked closely with the Royal Air Force and the Ministry of Defence to identify the technology and team needed for a programme like this and convert the vision into reality.*

*A lot of people make the assumption we're already building the engine, we're not. We're still in that concept phase, evaluating what the requirements of the aircraft will need to be, whilst simultaneously developing the technologies and processes that will support it."*

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<sup>21</sup> 'The Global Combat Air Programme' HC 598, House of Commons Defence Committee, p. 1.

<sup>22</sup> 'Assessment of the Expected Economic Impact of the Future Combat Air System Programme (2025-2070)', October 2024, PwC.

The need to learn lessons from the production of the Typhoon is not lost on Rolls Royce, as Mark explained:

*“We’ve learnt the lessons from Tornado and Typhoon, which is to focus on schedule and agility. To create an aircraft and programme that can rapidly adapt to meet the threat environment that it faced at the time.*

*... How has our approach changed? It is about using technology that enables us to do better things faster and establish a digital twin... that is a game-changing enabler, to communicate faster with our supply chain, to be able to give the operator different options. We're not there yet... but there is a digitally connected cycle where we send instructions rapidly to our supply chain or even in some circumstances the operator at the side of the aircraft who effect a modification in real time. That is how we are trying to assess the value of technology in the R&D space: Does it help the operator? Does it enable affordability? ... Does that technology, does that piece of research and development, add or give us the capability to add to that?”*

From the perspective of the workforce moving forward, GCAP is very important to Rolls Royce, Bristol, as Steve explained:

*“The dynamic is, the factory needs another product, because some of our existing power plants are coming out of service, so we need to replace them. If you think of combat aircraft, there is the fourth-generation aircraft, which is the Tornado, we provided the engine for that, then we did the four-and-a-half generation one, the Typhoon, we provided the engine for that. Then we missed out on the fifth-generation of aircraft, that's the one the country bought from America, with the F-35s, it has a Pratt and Whitney engine in it... but what this Government's spend is leading to now is the sixth-generation fighter, which is the Tempest/GCAP programme, so that is all new – brand-new engine, fully world class, so that's where the government spending is a big investment in the future. It comes into service in the next decade and it will be in service for 40 plus years after that, so it's a really important step for us, getting that funding over the line.”*

## THE CHANGING NATURE OF TECHNOLOGY

As we have seen elsewhere in this report, defence technology is changing fast - in fact, the way that warfare itself is conducted is changing fast - so how does a company like Rolls Royce adapt to that?

Pete told us:

*“We've got to make sure that whatever we are designing right now is an iterative thing, it's not just 'one and done' ... Humanity's ability to identify and find an aircraft signature will keep progressing faster and faster, therefore technologies in the aircraft and in the engine need to constantly evolve as well. We talk about 'spiral development'; we are setting ourselves up so that we're not going to be 'one and done' with an engine, it's going to be done, and [then we will ask] 'What's the next*

*iteration?', and 'Has this module of the engine evolved to address that threat?', and then keep rolling those upgrades out..."*

## HOW CAN DEFENCE SPENDING CREATE GOOD JOBS IN THE UK?

Important though the increased government spending on defence is, Mark Tivey stressed the long-term certainty of finance as the most important thing from the company's perspective:

*"The key thing for affordability is long-term funding, multi-year funding, so that I can make commitments now that will have spend requirements or will incur spend outside of the current fiscal period. If you get into a start-stop, or short-term funding rhythm, that increases time and increases cost, and in a 10-year programme to get an aircraft off the ground, we cannot afford that.*

*Confidence is the most precious currency in these type of programmes. If we can project confidence into the supply chain and our vital SME support then they too will invest in the machines, apprentices and training that we will need to depend on to deliver the programme. I would say both with this Government and the previous Government we have received really solid support."*

Steve Jones from Unite made the same argument:

*"Getting that ... long term funding, to actually get through a full-on development programme, which we really need to get on with, to give the company the confidence to further invest, working with our partners, and that's what's needed, it's just that security of funding."*

Pete added:

*"What we need to do, yes, we need to generate a pipeline of people to come and support us, to work in the factories that we are setting up, but in the here and now, we want to press on and establish those capabilities, establish that infrastructure."*

## SKILLS

As we will discuss later in this report, one concern is that the UK may not have the capacity to meet the increased demand for defence equipment in such a short timeframe, leading to imports from the US - creating jobs there - rather than delivering employment in the UK.

Mark raised the issue of competing for skilled workers:

*"[H]istorically I don't think we as a country have valued engineering highly enough as a career. I think and hope that is beginning to change, but in contrast to some of our partners, and we have a challenge to compete in the same pool, as banking, or HS2, or other capital programmes such as the Astute programme, the AUKUS programme,*

the Dreadnought programme. Within the UK there is a lot of competition for those skills.

*We have been successful, to this point, in part, as Rolls Royce, because we build on [our] legacy ... we are well known as a brand that will push people into interesting places where they can define a career of real substance. The opportunity to get in on the ground floor to design the next generation fighter for the Royal Air Force has a draw. But do we have to compete every day for that? Absolutely. It's a risk, for us, it's something we talk a lot about. Our team is what drives this programme to succeed."*

## ARTIFICIAL INTELLIGENCE

Perhaps inevitably, Rolls Royce wishes to embrace the possibilities of Artificial Intelligence (AI). Pete told us:

*"Corporately, Rolls Royce is developing its own AI tools. The company is investing heavily in AI and working out how we can better use the information that we've got around us, the rich data that we get every day from our engines and our development programmes ... to inform AI to accelerate the design iterations, and the analytics that go along with that. We are probably a bit behind the curve compared to a Tesla or a Google, and people like that, but it is absolutely our ambition to lean into that right now. How we do that within the four walls of a secure environment is more challenging."*

Rolls Royce argues that through an integrated Digital First approach, it can deliver better, smarter, faster, more cost effective and safer programmes such as Tempest and GCAP.

Yet there has been much discussion about digital technologies such as AI and their effects on the world of work, from a human resources perspective. How is the union at Rolls Royce, Bristol, handling this?

Jed told us:

*"We've got a Disruption Management System (DMS) agreement which has put a limit on how the company can use AI... As technology develops, more and more systems are being introduced into manufacturing, which consists of downtime recording, meaning effectively that if you're a manager, you can see the number of hours that that machine has been productive or utilised. So we've got agreement stating, for example, that this cannot be used in a disciplinary or investigation hearing. We've got things like that. We are currently in the process of reaching a technology agreement but that's not finalised yet."*

Asked whether AI is something that scares him or excites him, Jed said:

*Both, for me, because I think there are some places where it can be used to a good effect. If our jobs involve conducting some sort of dangerous task, and if a drone can*

*do that now, some sort of inspection, and one of our members is upskilled by being able to use the drone, control the drone, then that's a good thing.*

*But there is also a worrying side, because we've got a vast membership. Some of our members have apprenticeships, and [Higher National Certificates] HNCs, things like that, but we also represent stores people, logistics people, and I'm slightly more worried around maybe those kinds of jobs than for someone who may be involved in building a Typhoon engine. I don't think AI is going to be able to do that in our lifetime quite so much."*

## CASE STUDY TWO - AIRBUS DEFENCE AND SPACE

Airbus is one of the most important manufacturing companies in the UK. With more than 25 sites across the UK, Airbus is split into three divisions: Defence and Space; Commercial; and Helicopters.

The economic impact of Airbus in the UK is impressive. According to Oxford Economics, Airbus contributed £7bn to UK GDP in 2022, an increase from £5.6bn in 2020. Every £1 in gross value added directly generated by Airbus supported a further £3.50 contribution elsewhere in the UK economy. One in every 420 UK jobs, and £1 in every £500 collected by HMRC, was attributable to Airbus UK in 2022.

Airbus supported 79,000 jobs in the UK in that year - 11,500 through direct employment and the remainder in the supply chain. Of those supply chain jobs, 29,000 were in Small and Medium Sized Enterprises. Eleven per cent of Airbus employees were early career personnel. These could be broken down into 695 apprentices, 276 graduates and 197 students.

Airbus spent £277m (five per cent of its revenue) on UK research and development in 2022. Nineteen per cent of its procurement spend took place in the 10 per cent of local authorities with the lowest business survival rates.<sup>23</sup>

Airbus's four key Defence and Space sites in the UK are based in Stevenage, Guildford, Portsmouth and Newport. Airbus Defence and Space also has a small site in Newcastle and a presence at RAF Brize Norton.

### AIRBUS STEVENAGE

Hawker Siddeley Dynamics, which preceded Airbus Defence and Space at its current location, opened in the new town of Stevenage in 1952, manufacturing propellers. It then went on to make parts for the Comet jetliner. In the words of Keith Ellis, the Head of Site at Stevenage, the factory has, "a strong manufacturing heritage that we are very proud of".

Products built at Airbus Stevenage today include OneSat and Eurostar Neo. OneSat is a geostationary satellite, orbiting at 36,000km above the Earth. It can cover the entire globe with just three satellites and can be fully reconfigured in orbit, allowing it to meet evolving mission scenarios. Eurostar Neo is a high-performance communications satellite which also operates in geostationary orbit. Just three Eurostar Neos can provide global connectivity for high-speed internet and advanced mobile communications.

Other notable products developed by Airbus include the JUICE (JUperiter ICy moons Explorer) spacecraft, for the European Space Agency, bringing together 80 partners from 23 countries. After reaching its destination in 2031, JUICE will spend four years studying Jupiter and its icy moons. The mission will focus on three of Jupiter's Galilean moons: Europa, Ganymede and Callisto, which are covered by icy crusts.

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<sup>23</sup> <https://www.airbus.com/en/newsroom/stories/2023-09-airbus-gives-a-boost-to-uk-economy>

## WHAT IS THE LINK BETWEEN DEFENCE AND SPACE?

When we think of defence equipment, we think of tanks, warships and so on. But the importance of space must be considered. Nigel Chandler is Head of Business Development at Airbus Defence and Space. Before joining the company, Nigel was a Royal Navy Officer, commanding a warship, which allowed him to see the use of space technology in the field. In an interview for this report, Nigel said:

*"[Airbus is] acutely aware just how important space is to all parts of defence... if you look at the core fighting domains of maritime, land and air, and you think about their reliability on space in this contested, more uncertain world... The Royal Navy is the biggest user of military space, when you aggregate its need to communicate beyond line of sight; its ability to know what's going on around it, a lot of that comes from space. It needs to know where it is on the earth and a lot of that information comes from space. Defence is utterly dependent on space... the UK is very fortunate to have this capability as a sovereign asset."*

## WHAT ARE AIRBUS DEFENCE AND SPACE'S PARTICULAR STRENGTHS?

Military Satellite Communications, otherwise known as MILSATCOM, refers to specialized and secure satellite systems that are used by the armed forces for long-distance secure communication across land, sea, and air. It has been made clear to Airbus Defence and Space that the defence space architecture needs to evolve to meet modern defence challenges. Airbus's vision is to use multiple orbits, in order to maximise the security of communications during defence operations.

Nigel explained that Airbus vision to this report:

*"If we start with where our core is, we call it our Future Space Vision. In MILSATCOM terms, at the moment we have large satellites in the geostationary orbit, the ones we have been building for the last 40-50 years... But there are various orbits; you've got the geostationary orbit, that's the one that is above the Equator effectively; increasingly you will hear [about developments] like the Starlink and Elon Musk, Amazon is coming along. There is the Oneweb constellation, which is something we are very closely involved with. There is the European ambition with IRIS2 and other national ambitions as well."*

*"There are also other orbits; you've got [Medium Earth Orbits] MEO and you've also got Polar type orbits... Part of our MILSATCOM vision is to enable and work to deliver a multi orbit [communication system] ... [We have the opportunity] to say 'How can we harness those other orbits to provide more resilience for the end user, so the person at sea, the person in the air and the person on land are not necessarily just pointing at one satellite, if they can't get through to that they can go to another and go to another. That's our strength, we've got 50 years of experience in this, and we've been putting a huge amount of intellectual effort, engineering effort and we've got some"*

*bench testing, including harnessing applied artificial intelligence for some of the sorting of which is the best path to go on etc.”*

## INDUSTRIAL RELATIONS

Mark Peters is the Senior Unite Rep at Airbus Defence and Space. Mark speaks of the excitement of the space industry, but how are industrial relations at the company?

Mark said:

*“Industrial relations are pretty good. There is always room for improvement, but you can sort out most issues through constructive dialogue”.*

Mark added:

*“We nearly had a situation last year when we were on the brink of industrial action; however, we managed to avoid that through constructive dialogue and intensive negotiations with our Unite Full Time officials, we got the company to move on certain challenges. That’s the first time we’ve been there for a long time.... At the end of the day, we are all in this together. Without a company, we wouldn't have trade union members. The reality is there are going to be times when you disagree, and potentially fall out, but this is actually a mechanism for sorting out disagreements and we find it quite beneficial. We are professional enough on both sides, that once you leave the room, you’ve left that in the room. It's not a personal thing, it's not antagonistic, but you can have the open, robust and adult constructive dialogue and that is something we have concentrated on in my tenure...”*

Nigel agreed that communication between management and workforce was constructive. He also spoke of a certain team spirit:

*“I think generally we’ve got a very good and open relationship. We can talk about things... My reference is the Royal Navy, where you go to sea in a ship with 200 people and you're all in this together. I think there's an element of that as well in the space industry. We need to make it succeed.”*

## EXPORTS

We have seen elsewhere in this report the importance to the defence sector of exports. Nigel certainly saw this as an opportunity for Airbus Defence and Space:

*“There are £10 billion worth of defence exports that could be realised and that's the potential... we've got nations from Japan, Romania, Saudi Arabia, Norway, Canada, all of which see us having, as a nation, this space knowledge, this space advantage. It's perishable - there are lots of people coming up, but we are still maintaining that, from the skills and the talent of the people we have... if we can realise the ambition and use*

those exports to drive the demand signal, then that gives us greater surety to be able to invest in all the things we've talked about - the skills, the infrastructure and the R&D.

*"That's where we need that clear commitment [from the Government]. We have got a really strong relationship across government and the importance of exports is fully realised... we welcome everything's been said and we await with a huge amount of interest the final commitment."*

## SKILLS

Needless to say, a company building products as specialised as those developed at Airbus Defence and Space must have a highly skilled workforce. Nigel told us:

*"I think there is a positive story developing [at Airbus] around skills and this idea that we're not just targeting people coming out of school, but we're going into schools locally and it's exactly the same in Portsmouth ... We're making sure that we have a very healthy [science, technology, engineering and mathematics] STEM population. We can actually see in the schools that we're targeting, [increases in] people taking STEM subjects at GCSE and A-level ... and hopefully that will start to feed through."*

Mark made the case for a balance of graduate entrants and craft apprenticeships:

*"There is a need for craft apprenticeships in the manufacturing areas. We have an ageing workforce. The thing is to transfer those skills; we have skills which are very very unique. You can't get them out there, so we need to grow our own. We will be taking on far more craft apprentices, who can then work their way through the system. We have had quite a lot of graduates, quite a lot of technical apprentices, but this is one area that has now been identified as critical."*

*In the last recession, the first thing that went was the training of apprentices, and we ended up with a skills shortage in the UK. Defence and Space has recognised that this is a growth opportunity. The number of candidates who apply for apprenticeships at ADS is massive; [the union] would like to have as many as possible; because people love and are inspired by space. The innovation - we've been to most of the different planets or moons, landed spacecraft on comets, it's a fantastic industry."*

*When you win a contract, we sometimes have to develop technology that's isn't yet invented... Can it even be done? This is why you need people who want to be in this industry; it's academia, the science, innovation, blue skies thinking, which includes some very, very, very clever people, with the ability to design cutting edge space products for our commercial, Earth Observation and MilSatCom product lines. This needs to be balanced with [craft workers because] you've then got to manufacture these spacecraft products and structures, test them to the customers' exacting requirements, specification and quality standards. If you launch something and it doesn't work, you can't just go out there and fix it, it has to be right. This is why we need a very highly versatile skilled and dedicated workforce across all disciplines, as space is a high risk and expensive business, especially if you get it wrong."*

*I believe we have to have far more apprentices than we have at present, but we can pick from the best of the people who apply, and when we partner with others in our supply chain, we [encourage them to] look at these people as well."*

In other words, the apprentices that Airbus doesn't take on directly can be redirected towards its supply chain. Nigel said:

*"We are effectively running a clearing system. I've seen something similar in government policy now, but we'll make it happen for space and we'll make it happen this year, because we really want to see ourselves as the national space champion."*

Other developments within the company, such as expanding to other orbits, will require the evolution of skills. Nigel also spoke of artificial intelligence skills:

*"Using more of artificial intelligence to harness - it's bringing those skills into the business ... to make sure that we are continuing to feed the business with our people that have these skills, at the same time re-skilling those that are in the business of the core task. Bringing in automation, so we can start to be more repeatable, especially on the smaller satellites. We've gone, as a business, quite a long way to doing that, but how do we expand those capabilities so that we can scale up? One of the things about these large constellations is, you don't just buy one or two satellites anymore, you're talking about launching 30 at a time, so we need to be able to produce at scale, at mass... [To do that, we need] something established, with an established workforce, with the skills and the foresight to start saying, 'How could we do that?'"*

## **THE RELATIONSHIP BETWEEN PRIME MANUFACTURERS AND SMALL AND MEDIUM SIZED ENTERPRISES**

As will be set out elsewhere in this report, there is some argument about whether government investment should go to large, established companies such as Rolls Royce or Airbus, or whether it should go to SMEs which, as we will see, can be more innovative? Nigel Chandler said this discussion should not be seen as an either/or:

*"There's a responsibility that comes with being a prime. This is where we have this thing called the Community for Space Prosperity. We've harnessed a lot of activity that was going on. It's growing the ecosystem. We've got a supply chain of circa 2,000 UK companies, of which 1,000 are SMEs... we can't do everything ourselves. We need a very healthy supply base and a national supply base... to feed that growth.*

*"There is a responsibility to support that growth, there is also responsibility to bring new innovation through. [We have a] launchpad where we're working with SME's, early start SMEs, at that initial startup phase, just going through the valley of death, they want to go to the next stage. We're bringing them into the business, we're providing them a space, labs, an opportunity to engage with the skills and to learn from the proximity to the prime, and also to provide those critical introductions, and of course*

*if they fit with what we want to do for future, then that's good, but equally they can go off into the ecosystem and the economy.*

*“So, with all of those we are certainly very much focused on ensuring we drive a healthy supply chain. However, I don't think this can be an either/or argument, because if you try to bypass the primes to go to the supply base and the SMEs, you could leave something behind, and I think this is where the dialogue - a much more collaborative dialogue with the Government - is beginning to help. It is very positive at the moment, some of the conversations we're having with various government departments.”*

## **INCREASING DEFENCE SPENDING AT PACE**

As we will see later in this report, the challenge of increasing defence spending is amplified by the pace at which this must happen. Moving to a higher defence spend over 10-15 years would be one thing, but the UK Government has to do this much more quickly. Nigel agreed that, in his words,

*“We have to be really mindful to ensure that the skills are in place, the capacity is in place, and then there is the investment decision ...*

*I think the question is probably about pace and scaling, and that comes from clear government signals and commitments. The signals, I think, are there and we are really anticipating and hoping that the Defence Investment Plan delivers against where a lot of our conversations have been in the run-up to [Strategic Defence Review] SDR and through it.”*

## **DEFENCE - A POLICY FOR THE WHOLE OF THE UK**

We saw earlier in this report how Andy Haldane has argued that one value of the defence sector is that it provides opportunities for the whole of the UK. There is some criticism that UK growth policy is too focused on the so-called 'golden triangle' of London, Oxford and Cambridge but, with its good industrial jobs in places such as Rolls Royce in Bristol and BAE Systems in Brough, defence bucks that trend.

Airbus Defence and Space, as we have already seen, has sites in Stevenage, Guildford, Portsmouth and Newport. Its Stevenage site is part of the OxCam growth corridor. It also works with key suppliers in the Oxford-Cambridge-London region, using its experience and expertise to help the company to grow and develop.

To give one example, in February 2025 the Ministry of Defence announced that the Oberon earth observation synthetic aperture radar (SAR) satellite mission had been awarded to Airbus Defence and Space, with Oxford Space Systems, a venture capital-backed, growth stage company founded in 2013, as a key supplier.

Nigel told this report:

*“Oxford Space Systems in Harwell - part of our critical supply chain for some of the new innovative satellites that we’re working to deliver for the Ministry of Defence - they are an SME, going into that medium territory, they have got some really innovative designs for an antenna. It’s a fabricated design that they knit on their knitting machine, very very clever technology, it gives a capability advantage. We’ve been working with them to show them how to quality assure, how to sort out their manufacturing processes and working very much in partnership with our supplier, to help them be able to be a reliable supplier to us. It’s that kind of partnership that, if they wanted to go to the next stage in, the question was, how do we scale up, we could say, we will either help you by doing some stuff in house to show you how to do it, or we will work with you to look at expansion.”*

## THE ROLE - AND LIMITS - OF ARTIFICIAL INTELLIGENCE

A big question when considering the future of the defence sector, as when discussing all future employment, is the role and limits of AI.

While believing that it should be used with caution, Mark recognised its potential:

*“[AI] is technology that we need to utilise and enhance. Space is a very, very niche market, but you need to develop innovative solutions, and AI is a tool that can be used, providing people know how to use it [responsibly]. In space it can be utilised to solve a lot of problems, a lot of complex mathematical problems, but it has to be used and harnessed in the correct way.”*

Nigel also recognised the opportunities, alongside the need for a human to be the ultimate decision-maker:

*“MILSATCOM, I talked about the multi orbit approach, so [hypothetically] at the moment you are pointing at Skynet and you are taking your critical information from Skynet and, for whatever reason you may need to come off Skynet, or there is some active attack on that satellite at the time, you need an alternative path. We’ve got a Software-Defined Base Band [SBBB], which basically sits underneath the ground segment, but then will automatically select another satellite, another path, it will go to something like One Web or Star Link or something in the medium earth orbit, or another geostationary [satellite of] one of our allies.*

*Where artificial intelligence comes in is it learns over all the ships, over all the land headquarters, the aircraft that are experiencing this kind of situation. It learns and it starts to anticipate ... [You can say] ‘I’m going to this situation in that part of the world, I expect the enemy to be working like this’, and artificial intelligence will say ‘Yes I’ve learnt from that in the past, this is how I anticipate [what will happen] and this will be the best way [to deal with that situation], and it starts to be more anticipatory.*

*What you’ve got to do is make sure you harness that by putting - and this is where I think we’re all struggling a little bit to work out how that works - putting the human in*

*the loop, so the real decisions are still there. 'This is what I want to get through. This is the information I need to exchange at all costs, and ideally I'd like it to go a route where I know that no one's going to be able to intercept it or play with it anymore', and the AI can help you with that. Or you can just say 'Over to you and you just make sure that I can communicate in all circumstances'. That's where we are, and ... [w]e demonstrated [SBB] last year at global MILSATCOM, it's a part of our connected intelligence business, it works on that end-to-end piece with our space business, we sit side-by-side in Defence and Space, and it got a huge amount of interest."*

## A NEW EUROPEAN SPACE COMPANY?

In October 2025, a Memorandum of Understanding was published to create a new European space company, combining the satellite and space systems manufacturing and space services of Airbus, Leonardo and Thales. Airbus said that, by joining forces, the three companies aim to strengthen Europe's strategic autonomy in space.

If it goes ahead, the new company will pool, build and develop a comprehensive portfolio of complementary technologies and end-to-end solutions, from space infrastructure to services (excluding space launchers). The new company could be operational in 2027, subject to all regulatory approvals and satisfaction of other closing conditions.

According to IndustriALL Europe, which brings together industrial trade unions at the European level, the new company is expected to employ 25,000 people across Europe. IndustriALL Europe representatives have emphasized that this project signals Europe's choice for cooperation over internal competition. They argued, however, that expected synergies must not come at the expense of workers' security. With the space economy booming, this initiative should be a driver of growth and development—for both the industry and its workforce<sup>24</sup>.

Speaking to this report, Mark Peters and Steve Evans, Unite reps at Airbus Defence and Space, Stevenage, said that they would be meeting with the ECADS (European Committee Airbus Defence and Space), as the UK delegates to this body, to find out more about the project. Mark said:

*"The formal European Social Process has commenced in each of the three companies involved. However, this is currently subject to confidentiality in all three companies, as such, with respect are being treated as separate formal consultations. It is also subject to all regulatory approvals being met, of course.*

*We are coordinating under the official umbrella of IndustriALL Europe with our fellow trade union colleagues at Thales and Leonardo in all countries. I am sure we all have very, very similar issues as well of how this proposed [joint venture] JV project between the three companies will work and any proposed impact to our respective members and employees, for example; with regards to jobs, sites and terms and*

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<sup>24</sup> European Trade Unions Unite on Airbus-Leonardo-Thales Joint Venture', IndustriALL Europe, 3 December 2025.

*conditions, in the future. However, this could be seen as an ideal opportunity for the European Space Industry especially in the current geopolitical climate and context.*

*That's one of the beauties of being part of the trade union, is that we can fully utilise our contacts in all types of t[rade] u[nion] organisations and forums globally. We still see ourselves as European, even though Brexit has happened, the UK Government has a crucial part and role to play in all of this, especially on National Security and Sovereign Capability in the MILSATCOM domain.*

As is usual with change, there is a nervousness among the workers, as Steve told us:

*"It's all linked to how we work with the government. I see it personally as an opportunity. I've always felt that since we joined a big Airbus we were diluted; in the past when we were dedicated for space, it was a better environment all around, people understood the complexities of space. I'm all for trying to harmonise things... but it's that short term, if we don't win the UK work then they start to look at harmonisation around products and things, what does that mean for us? So, I'm positive, but there's a nervousness behind it."*



**Earth observation satellite manufacture at Airbus, Stevenage.  
Copyright: Airbus**

# CAN HIGHER DEFENCE SPENDING CREATE MORE JOBS?

The impact of higher defence spending, and specifically whether it will create many good, high skill jobs, has been the subject of much discussion.

The traditional Keynesian viewpoint suggests that military spending stimulates demand and in turn increases employment as large numbers of workers are hired by defence-related sectors. Some empirical studies give support to the thesis. By contrast, some economists argue that military spending 'crowds out' private investment, making it wasteful and inefficient, hence leading to a decrease in employment. We will return to the idea of 'crowding in' and 'crowding out' below<sup>25</sup>.

Others explore the employment effects of military spending versus alternative domestic spending and find that military spending compared to alternative spending (e.g. health care and education) is a poor source of job creation.

Khem Rogaly of Common Wealth, for example, argues that the connection between military spending and job creation has weakened over time. Despite falling as a share of GDP, Britain's military budget has grown in real terms since the early 1980s, yet more than half of jobs in the military industry have been lost. This, he argues, is because defence is increasingly hi-tech and relies less on manufacturing and more on IT and engineering jobs in the South of England<sup>26</sup>.

Rogaly has called for a redirection of productive capacity from the military industrial base towards addressing the climate crisis and deepening economic resilience. This alternative would repurpose parts of the UK's military industry. Citing labour history, Rogaly says that such a move would build on a tradition most famously developed by shop stewards at Lucas Aerospace in the 1970s — to convert military production towards civilian sectors, in this case green manufacturing<sup>27</sup>.

Yet whether military spending leads to as many good jobs as the same money would produce elsewhere misses the point: the West faces a military threat now. This can be seen in the way that countries on the east of Europe - that is to say, closer to Russia - are particularly aware of the threat and have consequently raised their own levels of military spending. The Government is, at the same time, seeking to make a virtue out of necessity by creating good jobs from the increased military funding that it is required to provide.

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<sup>25</sup> Lee, C. T. (2021). Military Spending and Employment. *Defence and Peace Economics*, 33(4), 501–510. <https://doi.org/10.1080/10242694.2021.1873660>

<sup>26</sup> 'Military spending is touted as a remedy for Britain's ailing economy. Here's why it won't work', Khem Rogaly, *The Guardian*, 7 March 2025.

<sup>27</sup> A Lucas Plan for the Twenty First Century From Asset Manager Arsenal to Green Industrial Strategy, Khem Rogaly, *Common Wealth*, October 2024.

A more relevant question is: how can this money be deployed in order to create good jobs in the UK? Writing in the Sunday Times, Mehreen Khan argues that the UK relies on overseas suppliers for about 50 per cent of its defence equipment, meaning that in the short term, increased spending could provide a boon for US rather than British defence workers<sup>28</sup>. Quoted in the Financial Times, Paul Dales, Chief UK Economist at Capita, says the UK would “probably receive a smaller boost than countries such as Germany, given a lack of spare capacity in the economy<sup>29</sup>. So the question is: how can the UK defence sector receive a larger share of this pie?

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<sup>28</sup> ‘Can the Economy Get more Bang from Higher Defence Spending’, Mehreen Khan, Sunday Times, 1 June 2025.

<sup>29</sup> ‘How Big is the Economic Dividend from Extra Defence Spending?’, Delphine Strauss, Financial Times, 4 June 2025.

# IS THE GOVERNMENT'S DEFENCE COMMITMENT BOLD ENOUGH?

The Government has been forthright in its commitment to greater defence spending, and its belief that this will create good jobs across the nations and the regions of the UK. But is it bold enough?

Andy Haldane argued that, given that the Government wishes to increase defence spending to above three per cent of GDP in the long term anyway, a concrete announcement to this effect should have been made earlier:

*"... what was announced in the Spending Review and the lead up to it was a useful augmentation, but not a game changing augmentation, of the overall financing envelope for defence. Everyone thinks that that will need to be big figure three (i.e. three per cent of GDP) rather than big figure two. The Government itself has said that that is its aspiration for the next Parliament. I think... having a timeline for that movement to big figure three, and indeed knowing whether it is three or 3.5 [per cent of GDP], as [NATO Secretary General Mark] Rutte has asked for, would have been even more helpful - one, in providing what I think will be a significant further uplift in that quantum of spend, and two, in providing a clearer long-run runway, behind which private capital could then be crowded-in."*

At a time of economic constraints, asking for a bolder offer than that already committed by the Government is difficult, but Olivia O'Sullivan, Director of the UK in the World Programme at Chatham House, the international think tank, has written:

*"Existing spending goals may also be overtaken by events: NATO is already signalling a desire for higher spending targets from member states more quickly – especially as Russia is determined to reconstitute its own forces at a rapid pace. That will increase pressure on the government to allocate more money in this Parliament."<sup>30</sup>*

Meanwhile, Tan Dhesi, Chair of the House of Commons Defence Select Committee, told the House of Commons on 3 November:

*"Given the multitude of security threats that we face, especially in the grey zone of cyber-attacks, it is abundantly clear that we need to accelerate investment in defence, but the Government are just not able to move fast enough. Our German friends, renowned for their fiscal prudence, have relaxed their fiscal rules just for their Defence Department. In the run-up to the Budget, what discussions has ... the Defence Secretary*

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<sup>30</sup> The UK Strategic Defence Review draws the right lessons from Ukraine – but still relies on continued US commitment', Olivia O'Sullivan, Director, UK in the World Programme, Chatham House.

<https://www.chathamhouse.org/2025/06/uk-strategic-defence-review-draws-right-lessons-ukraine-still-relies-continued-us>

*had with the Chancellor on relaxing fiscal rules for the Ministry of Defence in order to meet the moment?”<sup>31</sup>*

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<sup>31</sup> Hansard, 3 November 2025.

# HOW DOES DEFENCE RELATE TO THE GOVERNMENT'S WIDER INDUSTRIAL STRATEGY?

We noted above that defence is one of eight sectors (the IS-8) targeted by the Government as part of its industrial strategy. But should the government go further? Andy Haldane told us that defence should be the central pillar of the industrial strategy:

*"...I think defence ...probably should have been the absolute pillar of our growth and industrial strategy... I think at the level of politics, you could get a national level consensus about this being the right thing to do [and] of the eight sectors highlighted in the Industrial Strategy, one, as soon as you make defence central, that naturally encompasses quite a few of the others anyway, including digital, including advanced manufacturing, including aspects of professional and financial services. Those are among the reasons why I think we're right to talk in terms of a dividend, a gross dividend, a skills and jobs dividend. I think we are right to talk in terms of a spatial dividend as well, lifting the fortunes of all parts of the UK."*

## STEEL

Clearly the defence equipment described in this report, from Dreadnought Submarines to the proposed Tempest aircraft, will have a high demand for steel. However, despite it being critical as a building block for our military, the MOD does not treat steel as a 'strategic asset', requiring support and protection in procurement decisions.

This is despite a report by the Royal United Services Institute (RUSI), which argued:

*"UK steel is heavily reliant on foreign capital and increasingly reliant on foreign technology. This has the benefit of bringing inward investment, but for a systemically important industry also creates risks. Decisions important to the UK economy are made internationally according to imperatives which may not always be in the country's long-term interest."*

The report goes on to say:

*"In a volatile world where supply chains are increasingly weaponised and the UK is more isolated after leaving the EU single market, the ability of the country to withstand large-scale disruption to global commodity markets should have weight in decisions about whether key industries should be supported to remain competitive."<sup>32</sup>*

This issue was taken up in June 2025 by Tan Dhesi, the Chair of the House of Commons Defence Committee, who questioned the Ministry of Defence on its use of British-made steel in defence procurement. Dhesi also asked whether steps are being taken to support domestic steel production through military expenditure.

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<sup>32</sup> 'At the Crux: UK Steel Mix in the Energy Transition', Dan Marks, Royal United Services Institute for Defence and Security Studies, March 2023.

In reply, the-then Minister of State for Defence, Maria Eagle, said that the UK steel sector

*“provides vital support to the UK’s defence capabilities”,*

but acknowledged that defence contractors buy steel from non-UK sources due to specific technical requirements.

Part of the problem seems to be a lack of information and critical engagement with government. UK Steel, the trade association for the steel industry, has argued that UK companies have had patchy levels of integration into defence supply chains, despite repeated industry attempts to engage. Companies report that often officials and contractors are unaware of what products and grades of steel are available domestically.<sup>33</sup>

Meanwhile, the Defence Industrial Strategy, which we described earlier, states:

*“We need to better understand our supply chain vulnerabilities, where we need to bolster businesses in the UK, and strengthen our approach to managing critical supply chains to guarantee continued access ... Areas where action is needed, in partnership with the sector, to strengthen UK and allied capability include: steel, construction, energetic material, batteries, semiconductors and rare-earth elements.”*

## THE EVERYDAY ECONOMY

Jed Ellis, the Defence Convenor at Rolls Royce, made the point earlier about the importance of his employer to the wider economy around Bristol. This is true of many communities. A large employer, what might be called an anchor institution, creates high numbers of jobs in itself, and its workforce spends its money on goods and services in the local area.

The importance of those jobs was noted by Rachel Reeves herself, before she became Chancellor. In 2019, Reeves, who was Chair of the House of Commons Business Select Committee at the time, published a report called ‘The Everyday Economy’.

In this report, Reeves calls for a ‘political economy of everyday life’, made up of three constituent parts:

*“[W]ork and wages, families and households, and the local places people belong to. Purposeful and dignified work defines what the Labour Party stands for, whilst good wages are the principal means of distributing the rewards of economic prosperity. Families in all their shapes and sizes are society’s most precious assets; love and relationships are not only what matter most to people, but family households are vital to economic prosperity and security. They create social stability, sustain the workforce and pass on our moral and cultural inheritance from one generation to the next. Finally, a*

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<sup>33</sup> Defence Procurement Position Paper, UK Steel, May 2024.

*place of belonging is important in defining where people make their home and where they form a sense of community.”<sup>34</sup>*

Central to those places is what Reeves describes as the ‘Everyday Economy’:

*The everyday economy is made up of the services, production, consumption and social goods that sustain all our daily lives. Its activities include transport, child care, health, social care, education, utilities, broadband, social benefits and the low-productivity, low-wage sectors of hospitality, retail, food processing and supermarkets. It is made up of the private, public and social sectors and is distributed across all regions of the country.<sup>35</sup>*

Reeves goes on to highlight the central importance of this everyday economy:

*“To begin to transform the British economy, the first task is to develop a national plan for improving the quality, pay and productivity of jobs in the everyday economy. Of course, we need more high-skilled, high-productivity jobs in the traded sector, but we have neglected the parts of the economy where most people work and spend their money as consumers and taxpayers.”<sup>36</sup>*

The idea of the ‘everyday economy’ is not new. Others have described it as the ‘foundational economy’, which means the same thing.<sup>37</sup>

Andy Haldane went on to argue for an industrial strategy that covers not just the eight most important sectors, as emphasised by the Government, but the wider economy as well:

*“In some ways the bigger point I’d make ... is that as well as getting four square behind your winning sectors, the eight sectors identified in the White Paper, in this case the one that is defence, that is not a reason for not investing significantly in what is sometimes called the foundational economy, which currently is the repository of all too many of those not good jobs, insecure, low pay, all the things we know, and that you need, if you are to have a properly inclusive growth and industrial strategy. To combine a top down, sectoral approach - defence those kinds of things - with a bottom up, skills-based approach.”*

Andy’s approach would extend the idea of an industrial strategy based on defence to one which embraces the wider communities in which defence establishments are based.

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<sup>34</sup> ‘The Everyday Economy’, Rachel Reeves MP, 2018, p. 9.

<sup>35</sup> ‘The Everyday Economy’, Rachel Reeves MP, 2018, p. 30.

<sup>36</sup> ‘The Everyday Economy’, Rachel Reeves MP, 2018, p. 32.

<sup>37</sup> For example, ‘Foundational Economy: The infrastructure of everyday life’, new edition, produced by The Foundational Economy Collective, was published in March 2022.

## THE ROLE OF SMALL AND MEDIUM SIZED ENTERPRISES

So far in this report we have met two large, unionised companies, Rolls Royce in Bristol and Airbus Defence and Space in Stevenage. The Government has, however, also emphasised the role of SMEs in its Defence Industrial Strategy. So what is their role?

With 220-230 employees, Polar Technology is based in Eynsham, Oxfordshire. This makes it another example, along with Airbus Defence and Space, of a defence company within the 'golden triangle'. The company didn't start as a defence company, however, and wouldn't call itself a defence company today, but it is expanding into that space, as a spokesperson for the company told this report:

*"We have two broad areas of manufacturing expertise. One is in composites and the other is in metallics ... That used to be two separate companies, which we've now formed under one brand of Polar Technology. The origins of the business grew from motorsport initially, that's the background of our owners... but in the last five or so years we've really looked to diversify and expand in the aerospace and defence markets. That is very much the trajectory of the business over the next five to ten years. I reckon at the moment we are probably at 25 per cent and we're looking to increase that to over 50 per cent, in terms of the share of the markets, our share that is aerospace and defence."*

Polar Technology is working with BAE Systems to produce the composite shell for the Striker Two fighter pilot helmet. This will be the brand-new iteration of a helmet currently used by Typhoon fighter pilots. As the Polar Technology spokesperson told us:

*"It's embedded with electronics that enable virtual reality, so that the pilots can see almost 360 degrees. We provided the actual composite shell and we also provide an optics frame that's produced through 3-D printing, and that's a project that we've worked on with BAE Systems for the last three or so years and it's ramping up to full production now."*

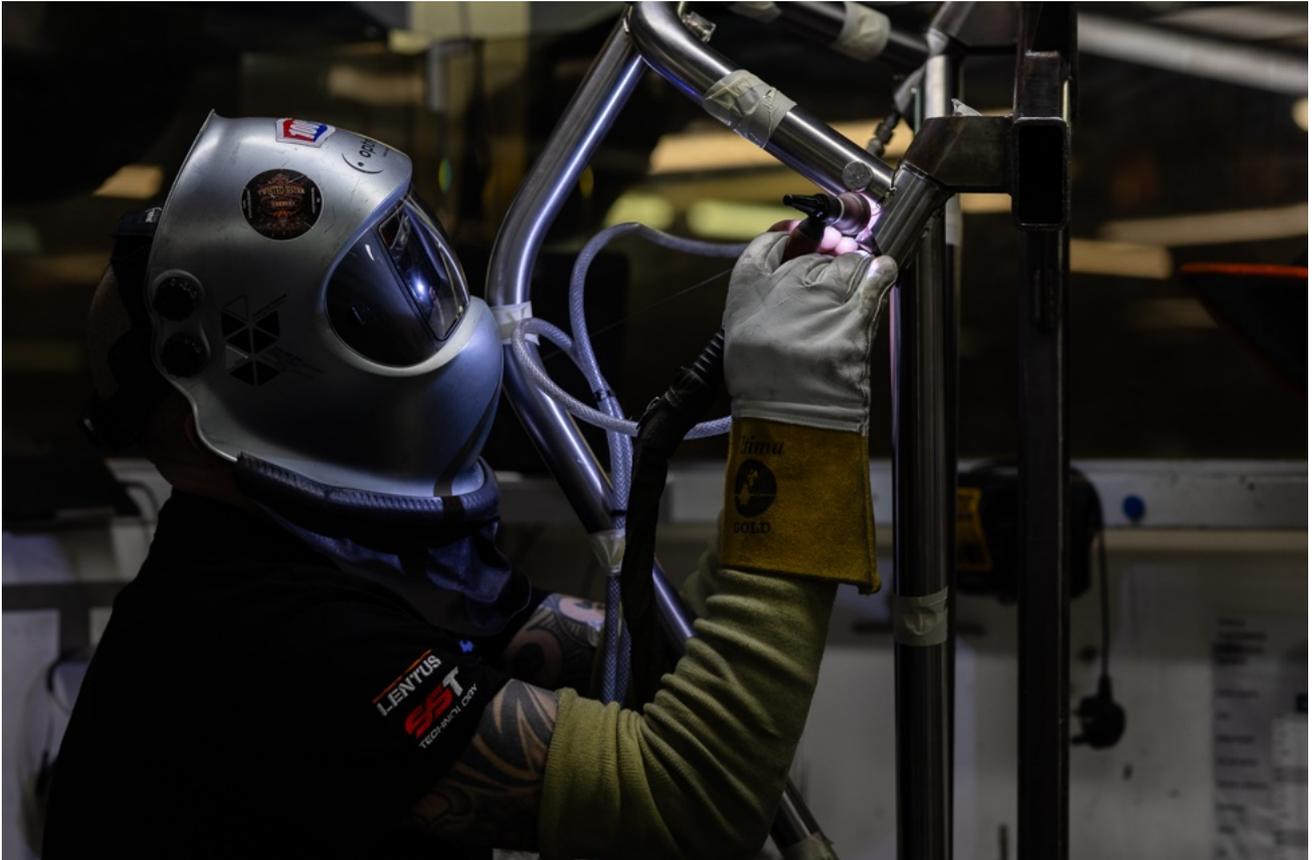
Polar Technology also produces safety critical structures. One such structure is a weapon mount frame to go on the side of the Grey Wolf helicopter. Another is the rollover protection assembly, which is a type of metallic frame that is fitted onto a Jackal, a type of armoured vehicle used by the British Army and the Royal Air Force.

So how should we be thinking about the balance between primes like Rolls Royce and Airbus on the one hand, and SMEs like Polar Technology on the other? Polar Technology's spokesperson told this report:

*"If you wanted our pitch for why that money should go to companies like ours, it's about speed and agility, and flexibility as well. So whereas for all of their strengths, primes tend to get bogged down in admin or all of the delays that come with having a company of that size, SMEs are inherently agile and able to respond and adapt to new enquiries in a way that those bigger companies simply can't... So with all of the advantages of our background in motorsport, for example, it means that we are taking the lessons that we're learning from that, in that fast moving environment, and then are able to apply them to longer term contracts in the aerospace and defence industries."*

Polar Technology's spokesperson was keen to emphasise, like Nigel Chandler of Airbus quoted above, that this is not an either/or. In fact, we need both primes and SMEs. Polar Technology doesn't believe we currently have the balance right, however. Their spokesperson welcomed the commitment, within the Defence Industrial Strategy, of a new Defence Office for Small Business Growth and a new SME commercial pathway.

SMEs are an important part of the economy. We will see later that they tend to be more innovative than larger firms and the speed and agility described by Polar Technology's spokesperson above contributes to that innovation. But this report is about good industrial jobs, which are deeply necessary, especially with populism on the rise in former industrial communities. The balance between larger companies and SMEs is one, therefore, that must be reflected upon. What is true is that both Nigel Chandler of Airbus Defence and Space, and Polar Technology, are both correct when they say that the balance between larger and smaller companies is not an either/or: we need both.



**A welder at work**  
**Copyright: Polar Technology**

## WHAT ARE THE CHALLENGES IN ACHIEVING A 'DEFENCE DIVIDEND'?

This increase in defence spending has arrived very suddenly. This raises questions about the capacity of both companies and government to move quickly, if jobs are to be created and secured in the UK. Greg Clark explained this challenge:

*"If you've been used to a lower level of defence spending, as we have, then the system is optimised for that level of spending. If you suddenly increase the level of spending, then actually you don't get the volume increase that is proportional to the funding increase, because the system can't cope, it needs to expand.*

*What could be the consequence of that? It could be that some of the spending goes to organisations, companies that can surge capacity more quickly, and they may be overseas, they may be bigger suppliers.*

*So I think if you have such a policy, which is the right policy, then that should be accompanied by a deliberate programme to look at the capacity and the responsiveness of our defence suppliers, in detail, because obviously it's an increase in the defence budget, but it's on particular things ... new forms of technology, drones and the software aspects of that are going to be important.*

*We need to make sure that we have the ability to do these things domestically... Yes, this can create jobs, but it won't automatically, it requires activism on the part of the government."*

Of course, the urgency of this situation has been created by the election of Donald Trump and his attitude to defence spending among NATO countries. This has resulted in a particular challenge, as Greg explained:

*"...if you knew you could increase spending in three years time, you've got the opportunity to do that, but it's been increased in response to an international situation and by a new government quickly, so you've kind of got to, as it were, build the railroad as the train is moving, that's where we are."*

The Defence Select Committee summarised the challenge in its report, 'The UK Contribution to European Security'. This stated:

*"The UK's defence industrial base is not yet configured for sustained collective defence. It faces challenges in capacity, skills, innovation, procurement, and financing. The [Strategic Defence Review] and Defence Industrial Strategy outline a reform agenda, but implementation will be key. The Government must ensure that defence finance is accessible, predictable, and resilient – including for SME's and start-ups."*

## PROCUREMENT

Procuring at speed is a challenge, as we saw during the Covid-19 pandemic. The Ministry of Defence has been procuring weapons at speed for Ukraine, but historically it has tended to work more slowly, and culture change is difficult.

Interviewed for the Financial Times, Lisa Quest, a partner at the consultancy Oliver Wyman who led the UK's Defence and Economic Growth Taskforce, argues that government must increase the speed to market:

*"This means changing the way in which the defence ministry procures, and looking at directly contracting with parts of the supply chain."*<sup>38</sup>

Grace Cassy of Chatham House says that speed in procurement requires a different attitude to risk:

*"Citizens, Parliament and the media must also walk this path, accepting that the new world requires different ways of thinking about risk. If a new sensor or drone cannot deliver a 10 year value for money statement, or becomes obsolete in months, that is not a failure. It is the new reality given the pace of development in technology and especially AI."*<sup>39</sup>

## SKILLS

Securing the skills we need for a step-up in defence spending is another difficulty, but government must respond. Interviewed before publication of the Government's Post-16 Education and Skills White Paper, Greg told this report:

*"It's going to be a challenge ... I think it needs a colossal effort to get that right, and I don't see, to be candid, anything so far - I think Government has the right intentions, but I think it needs a muscularity and intensity of purpose on skills that I haven't so far seen. So I think that is a concern."*

This report will return to the issue of skills below.

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<sup>38</sup> 'The Tricky Path to a Defence Dividend', Charles Clover, Delphine Strauss, Sylvia Pfeifer and Laura Pitel, Financial Times, 5 November 2025.

<sup>39</sup> 'I was part of the team behind the UK's Strategic Defence Review: Here is what shaped our thinking', Grace Cassy, Associate Fellow, UK in the World Programme, 2 June 2025: <https://www.chathamhouse.org/2025/06/i-was-part-team-behind-uk-strategic-defence-review-here-what-shaped-our-thinking>

## CO-OPERATION WITH EUROPE

Brexit has caused well-reported problems with contracting across Europe. Such a problem has manifested recently in the breakdown of discussions for the UK to join the Security Action for Europe (SAFE) programme.

Among its conclusions, the Defence Select Committee report, 'The UK Contribution to European Security', argued:

*"It is vital that the British defence industry is not sidelined or excluded from working with their European counterparts – that will be the key measure (in relation to defence) of success when assessing the Government's relationship with the EU. The Government will need to ensure that its ongoing defence relationship with the EU produces benefits which are demonstrable and adequately explained to the UK public."*<sup>40</sup>

However, negotiations for the UK to participate in SAFE collapsed in late November 2025, with Brussels demanding the UK pay €2bn to join, while the UK offered €200m. Both sides were disappointed with the collapse, with internal EU warnings from countries, including Germany, Sweden, Italy and the Netherlands, that it would send a retrograde signal as the war in Ukraine continues<sup>41</sup>.

Even pro-Europeans blamed this on the EU, with the Labour MP and Chair of the Labour Movement for Europe, Stella Creasy, writing:

*"Europe is perfectly capable of putting games before gains, too. Talks over UK participation in the EU's €150bn Security Action for Europe (SAFE) fund stalled when the commission demanded an exorbitant entry fee to show Brexit doesn't bring benefits."*<sup>42</sup>

This is disappointing, to say the least. The defence of Europe is too critical an issue to be the subject of such a spat between the UK and the EU. The only person happy with this outcome will be President Putin. At the time of writing, attempts were being made to reopen negotiations about UK participation in SAFE. Those negotiations must succeed.

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<sup>40</sup> 'The UK Contribution to European Security', Defence Select Committee, HC-20, November 2025, p. 58-9.

<sup>41</sup> 'UK talks to join EU defence fund break down', Financial Times, 28 November 2025.

<sup>42</sup> 'Britain is stuck with a failed Brexit that neither citizens nor leaders want. Here are three ways to fix that', Stella Creasy MP, The Guardian, 8 December 2025.

# WHAT MAKES INDUSTRY SUCCESSFUL?

The defence sector has specific and particular characteristics, but many of the factors that make wider industry successful also apply to defence.

## INNOVATION

To succeed, an industry needs to be innovative. Breakthroughs in science and technology are continuous, but those breakthroughs need to be applied to industry. Companies that succeed in innovation will be more productive, allowing them to either reduce prices or produce better products for the same price. Consumers will tend to favour those better products, making the company more profitable and better able to invest back in the business, creating a virtuous circle. Companies that fail to innovate, on the other hand, will find themselves uncompetitive and, ultimately, unsustainable.

Paolo Surico of the London Business School has advised the Labour Government on the economic benefits of defence spending. Surico's key claim is that extra defence spending worth one percent of GDP could raise GDP by up to 2 per cent in the long-term, and boost productivity by 0.3 per cent over 15 years, provided the money is spent on research and development<sup>43</sup>.

Many large companies, where trade union members work, have strong relationships with universities in pursuit of research and development. Rolls Royce in Bristol, for example, partners with the University of Bristol to develop and advance composites technology for insertion into Rolls-Royce components, structures, and systems. The company sponsors a number of PhD students through the National Composites Centre. Rolls Royce nationally works with a wide range of universities, including Oxford, Cambridge and Cranfield.

## THE ROLE OF THE STATE IN INNOVATION

Free market economists used to argue that innovation is primarily a private sector activity. In recent years, this argument has been challenged. Andy Haldane told this report:

*"[M]any of the greatest technological leaps forward in the US, which is in some ways a hotbed of frontier innovation since the war, have come out of [the Defence Advanced Research Projects Agency] DARPA... It has come out of state-led, defence oriented innovation, including the Internet, the iPhone and all manner of things... that would speak very strongly to defence-led R&D spend being one of, if not the key driver of, the technological frontier."*

Enrico Moretti, Claudia Steinwender and John Van Keenan, of the National Bureau of Economic Research, based on Cambridge, Massachusetts, see connections between public and private sector research and development. Their research examines the impact of government funding

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<sup>43</sup> 'The long-run effects of government spending', Juan Antolin-Diaz and Paolo Surico, American Economic Review, July 2025.

for R&D - and defence-related R&D in particular - on privately conducted R&D and its ultimate effect on productivity growth.

They uncover evidence of “crowding in” rather than “crowding out,” as rises in government-funded R&D result in significant increases in private sector R&D. This is important; as noted above, some economic liberals argue that government funding “crowds out”, that is to say reduces, private sector activity. Yet Moretti, Steinwender and Van Reenan find that, on average, a 10 per cent increase in government-financed R&D generates 4.3 per cent additional privately funded R&D. They also detect international spillovers, as increases in government-funded R&D in a particular industry raise private R&D in the same industry in other countries.<sup>44</sup> The result of all this is the elusive productivity gain that has been lacking, at least in the UK, since the financial crisis of 2008.

## SMES AND INNOVATION

Alongside the state and the role of large companies, small and medium sized enterprises (SMEs) are important. The Financial Times argues the extra defence spending must spur innovations by small, high-tech firms developing dual use technologies. It notes that John Healey, the UK Defence Secretary has committed to increasing direct spending with SMEs to £7.5 billion by 2028, a 50 per cent increase compared with recent levels. Healey has said:

*"We want to make the UK the best place in the world to start and grow a defence firm".<sup>45</sup>*

It is widely understood that SMEs are more innovative than larger companies. This can be shown, for example, by the fact that the number of patents per employee falls as companies take on more people<sup>46</sup> Evidence also suggests that the largest firms as measured by sales (turnover) are those that utilise lobbying most intensively.<sup>47</sup>

Phillipe Aghion won the Nobel Prize for Economics in 2025. In his 2021 book, ‘The Power of Creative Destruction: Economic Upheavals and the Wealth of Nations’, Aghion, along with Celine Antonin and Simon Bunel, ask the following question:

*"[Y]esterday's innovators often become today's entrenched incumbents. As they grow, they invest increasingly more resources in lobbying and political connections, at the*

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<sup>44</sup> ‘The Intellectual Spoils of War? Defense R&D, Productivity and International Spillovers’, Enrico Moretti, Claudia Steinwender, and John Van Reenan, NBER Working Paper No. 26483, November 2019.

<sup>45</sup> ‘The Tricky Path to a ‘defence dividend’, Charles Clover, Delphine Strauss, Sylvia Pfeifer and Laura Pitel, Financial Times, 5 November 2025.

<sup>46</sup> See, for example, ‘The Power of Creative Destruction: Economic Upheavals and the Wealth of Nations’, Phillipe Aghion, Celine Antonin and Simon Bunel, 2021, p. 246.

<sup>47</sup> Dellis and Sondermann, quoted in ‘The Power of Creative Destruction: Economic Upheavals and the Wealth of Nations’, Phillipe Aghion, Celine Antonin and Simon Bunel, 2021, p. 88.

*expense of innovation. How then can we both reward innovation and prevent yesterday's innovators from using their innovation rents to prevent the entry of competitors?"<sup>48</sup>*

## SKILLS

Successful industry also needs access to relevant skills, the lack of which is a long-standing UK problem. As the Financial Times reported on 22 October 2025:

*"More than a quarter of job vacancies in England today are due to skills shortages. Not enough people study qualifications that match the economy's needs; some take on hefty debts to study poor-quality degrees when they would be better off in vocational courses or apprenticeships. Nearly one million people aged 16 to 24 are not in education, employment or training at all."<sup>49</sup>*

Greg Clark acknowledged the nature of the problem:

*"My home town is Middlesbrough, and Middlesbrough, since its heyday, has had an employment problem, it's been one of the places of highest unemployment in the country, and yet when in the past I have spoken to businesses and employers there, they say they've got well-paid jobs on offer, but they can't find the people with the skills to be able to take them up... I'm not a kind of laissez faire capitalist, and if the government is responsible as it is for things like education and through colleges and other things, through training, through research and development, I think it's got to be active rather than passive."*

Greg went on to say:

*"I think [skills is] the one area of public policy ... in which I think we have, for reasons I don't fully understand, failed to achieve anything like the potential or even what is needed..."*

*If you're investing in skills, these skills have to be deployed in the future, and so it's about anticipating what you will need in the future, possibly by employers who don't exist yet ... so that's almost a definitional problem. But you don't, in my view, just give up. You've got to find ways to address this."*

Interviews conducted for the report 'Securonomics: the contribution of a defence industrial strategy' found skills bottlenecks in welding, plating and electrical engineering. Senior managers spoke of an absence or shortage of Further Education training courses close to where defence industries are situated, with several colleges closing their courses for financial reasons. At the graduate level, a shortage of qualified engineers was due to the low percentage of women studying engineering, thereby narrowing the talent pool, as well as an

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<sup>48</sup> 'The Power of Creative Destruction: Economic Upheavals and the Wealth of Nations', Philippe Aghion, Celine Antonin and Simon Bunel, 2021, p. 92-3.

<sup>49</sup> 'A Bold Plan to Close Britain's Skills Gap', Financial Times Editorial, 22 October 2025.

attraction of engineering graduates to data analytics and quantitative analysis for consulting and financial companies, and peer pressure against defence as a career choice<sup>50</sup>.

## SKILLS WHITE PAPER

In October 2025, the Government published its Skills White Paper. This reaffirmed previous announcements in relation to the defence sector: A £182 million package to boost the talent pipeline for the defence industry, including five new Defence Technical Excellence Colleges, targeted short courses for people working in defence, investments in higher education, regional STEM initiatives and the creation of a Defence Universities Alliance. There have been many attempts to renew the UK's skills system over the years. Clearly time will be needed to establish whether the latest White Paper succeeds in its task, but it is a reason for optimism that Philip Augar, who carried out a Post-18 Education and Funding Review for the Government of Theresa May, sees the White Paper as building on, rather than ripping up, what went before. Augur wrote of the White Paper in the Financial Times<sup>51</sup>:

*"...with its system wide approach, this strategy is the best I have seen. It deserves support".*

Andy Haldane argued that people and their skills, not projects, should be the focus of government investment:

*"... I look at [the Government's] Spending Review and it's largely a plan for projects, rather than people. I think the balance of that is wrong, not least because, last time I looked it took people to build houses, railways, and to build power plants. They don't build themselves ...*

*I think we know we don't have the people or at least the skills of the people to do that, that's why we have had to import them, over the last 10 or 20 years, because we haven't been growing enough of our own... Growing your own certainly takes years, you could argue it's a generational effort, and the fact that of [Government investment announced in the Spending Review], only an extra billion was for people and skills, whereas more than 100 billion was for projects is for me the wrong balance. It's true of innovation as well – who innovates and invests, it's people!"*

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<sup>50</sup> 'Securonomics: the contribution of a Defence Industrial Strategy', William Freer and Paul Mason, Council on Geostrategy, March 2025, p. 24.

<sup>51</sup> 'A New Education Landscape Emerges for England', Philip Augar, Financial Times, 27 October 2025.



**Photo: FV4034 Challenger 2 – TankFest 2017**

**Credit: Alan Wilson from Stilton, Peterborough, Cambs, UK, CC BY-SA 2.0 <<https://creativecommons.org/licenses/by-sa/2.0/>>, via Wikimedia Commons**

## GOOD JOBS

How does this relate to good jobs?

It is often assumed that if we invest in skills and innovation, leading to higher productivity, and we achieve steady growth and low inflation, good, well paid jobs will automatically follow. Yet history shows that this is not the case. It is certainly the case that we cannot achieve good jobs without the skills and innovation, but achieving those good jobs requires something else.

Dani Rodrik, Professor of Economics at the John F Kennedy School of Government at Harvard University, argues that we have a good jobs problem:

*“For workers without college degrees, manufacturing and related services have been the traditional source of good jobs - the basis for income mobility and a pathway to the middle class. But globalisation, deindustrialisation, automation, and generally skill-biased technological change have reduced demand for workers who lack higher levels of education, shrinking the supply of such employment opportunities. Since the 1980s there has been an evident failure of the economy to produce adequate numbers of good jobs to sustain a prosperous and growing middle class. Medium-pay jobs have seen an absolute decline while low- and high-pay jobs have expanded, a phenomenon known as labor market polarisation.”<sup>52</sup>*

More controversially, Rodrik sees limited opportunities for new jobs in manufacturing. Rodrik acknowledges that:

*“Manufacturing plays an outsized role in driving innovation, and it is key to national security. It will play a critical role in the green transition... Governments have legitimate reasons to ensure they have a solid manufacturing base.”*

He adds, however, that:

*“[T]oday’s manufacturing typically requires significant capital outlays and a relatively skilled, but small workforce.”<sup>53</sup>*

And yet... This report has provided ample evidence of the number of high skilled, well paying jobs that exist in the defence sector. As well as being important for innovation, and being central to a vital future industrial sector, i.e. the green economy, as Rodrik acknowledges, manufacturing is also internationally tradable in ways that, for example, growing the care sector is not.

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<sup>52</sup> ‘An Industrial Policy for Good Jobs’, Dani Rodrik, John F. Kennedy School of Government at Harvard University, The Hamilton Project, September 2022.

<sup>53</sup> ‘Shared Prosperity in a Fractured World: A New Economics for the Middle Class, the Global Poor and Our Climate’, Dani Rodrik, 2025, p. 101.

It is widely accepted, including among manufacturing workers, that the UK will not once again become the workshop of the world in the way that it was for much of industrial history, but there is a danger of falling manufacturing jobs becoming a self-fulfilling prophesy.

This argument against a significant role for manufacturing employment also flies in the face of some important recent evidence. In her article 'Defence jobs boom as Germany's arms companies go on hiring spree', the Financial Times journalist Laura Pitel reported in January that almost 83,000 people worldwide worked in the defence-focused divisions of five of Germany's biggest companies and four of its fastest-growing start-ups. This is a 30 per cent increase since 2021, before Russia's full-scale invasion of Ukraine, when the figure stood at 63,000. Pitel adds that since 2022, Germany's defence ministry has signed arms contracts worth a total of €207bn. Last year alone represented €83bn, an increase from €23bn in 2021.<sup>54</sup>

So how to create more good jobs, in defence, wider manufacturing, and elsewhere? First, this must become a specific aim of government policy, with investment directed towards high skill, high wage work. Governments have huge spending power and so they have the ability to shape markets. If governments pivot their own investments to good work projects, this can make a real difference.

Defence industries, such as those represented by CSEU member unions, include a high volume of firms that employ large numbers of people, so those companies need to be supported. Of course, no company can be given a blank cheque, but the UK needs its anchor companies as other countries do. We have seen that those large companies are usually integrated into their local economies and provide further jobs, both in their supply chains and indirectly through other local goods and services that are purchased by the company's employees.

More generally, assuming that good pay and high skills are elements of good work, strengthening the role of trade unions and collective bargaining is another way to ensure such good work. The Labour Government has taken an important step in this direction with the passage of the Employment Relations Act. It is long established that unionised workers enjoy better pay and conditions than their non-union counterparts, so this is one, concrete, good work measure.

Employee voice is often associated with union membership. Giving employees freedom and autonomy to design their own working practices, as far as is possible, is another contributor to good work. The ideas that workers contribute can increase operational efficiency and so this approach benefits the company, as well as reducing boring, repetitive work structures. Employee voice can also act as a check on the introduction of new technologies. Union members recognise the benefits of technology and rarely seek to block its introduction when it can lead to genuine improvements in productivity and profitability. There is a question, however, regarding whether technology always leads to such improvements. The economist Daron Acemoglu, who we will meet again in the next section, has spoken of 'so-so technologies' and we should consider whether a technology is simply a cheap way of replacing workers, losing their expertise in the process.

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<sup>54</sup> 'Defence jobs boom as Germany's arms companies go on hiring spree', Laura Pitel, Financial Times, 12 January 2026.

Acemoglu says:

*“When hype takes over, companies start automating everything - including tasks that shouldn’t be automated, You end up with no productivity gains, damaged businesses, and people losing jobs without new opportunities being created.”<sup>55</sup>*

Earlier in this report, Andy Haldane, reminded us of the US Defence Advanced Research Projects Agency (DARPA) and how defence-led innovation has resulted in products such as the i-Phone. In his latest book, Dani Rodrik calls for a new innovation programme, which he calls ARPA-W - ARPA Workers. Such an agency, he argues:

*“would focus on technologies that are best suited to complement human labour and ingenuity and augment less educated workers’ capabilities. It would prioritise technologies that expand the range of tasks these workers can perform and increase their ability to customise services to specific needs and types of customer demand. The overarching objective would be to allow workers to do what they cannot presently do, instead of displacing them by taking over the tasks that they already do.”<sup>56</sup>*

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<sup>55</sup> ‘Daron Acemoglu Warns: The Real AI Threat Isn’t Job Loss — It’s “So-So Automation”’, Atilla Yeşilada, PA Turkey, October 13, 2025.

<sup>56</sup> Dani Rodrik, ‘Shared Prosperity in a Fractured World: a new economics for the middle class, the global poor and our climate’, 2025 p. 121.

# AI, TECHNOLOGY AND THE WORLD OF WORK

In order to be innovative, or at least in order to be as innovative as possible, a person needs to be skilled. Or does s/he? Will AI be leading the innovation in future, rather than people?

Andy Haldane told this report:

*"I'm sceptical of that... when it comes to the real game changey innovations ... rethinking how something is done in a more root and branch way, that's a people thing, aided by AI and aided by technology, but ultimately that's down to people, not machines, and if you invest too little in people, you get less of that type of innovation ..."*

Trade unionists interviewed for this report saw AI as both an opportunity and a threat. To maximise the opportunity, and minimise the threat, we should develop AI - and wider technology - in ways that complement work, rather than replace it.

In 'Power and Progress: Our thousand year struggle over technology and prosperity', two economists from the Massachusetts Institute of Technology, Daron Acemoglu and Simon Johnson, offer a call to arms:

*"Society and its powerful gatekeepers need to stop being mesmerised by tech billionaires and their agenda. Debates on new technology ought to centre not just on the brilliance of new products and algorithms but also on whether they are working for the people or against the people."<sup>57</sup>*

This can start with investors themselves, who can demand transparency on whether new technologies will automate work or create new tasks, whether they will monitor or empower workers, and how they will affect political discourse and other social outcomes. Indeed, on the monitoring of workers, which has become an important part of the trade union negotiating agenda with respect to AI, Acemoglu and Johnson suggest that governments could decide not to enforce patents on technologies that are aimed at worker or citizen surveillance.

Of course, an attitude from investors such as that suggested by Acemoglu and Johnson is difficult to imagine in the current climate, because of the prevailing hegemonic attitude towards technologies, whose role in economic progress is rarely challenged. A desire to cut labour costs is attributed by the authors to the prevalence of the so-called 'Friedman doctrine', which argues that the only responsibility of business is to make profits. In our troubled age, with populist politics feeding on discontent, a new narrative about shared prosperity is required.

Acemoglu and Johnson propose specific technologies to redirect technology, including:

- Market incentives for redirection, meaning that government subsidies should be offered for developing more socially beneficial technologies. Subsidies are more potent, they argue,

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<sup>57</sup> 'Power and Progress: Our thousand year struggle over technology and prosperity, Daron Acemoglu and Simon Jonghson, p. 393.

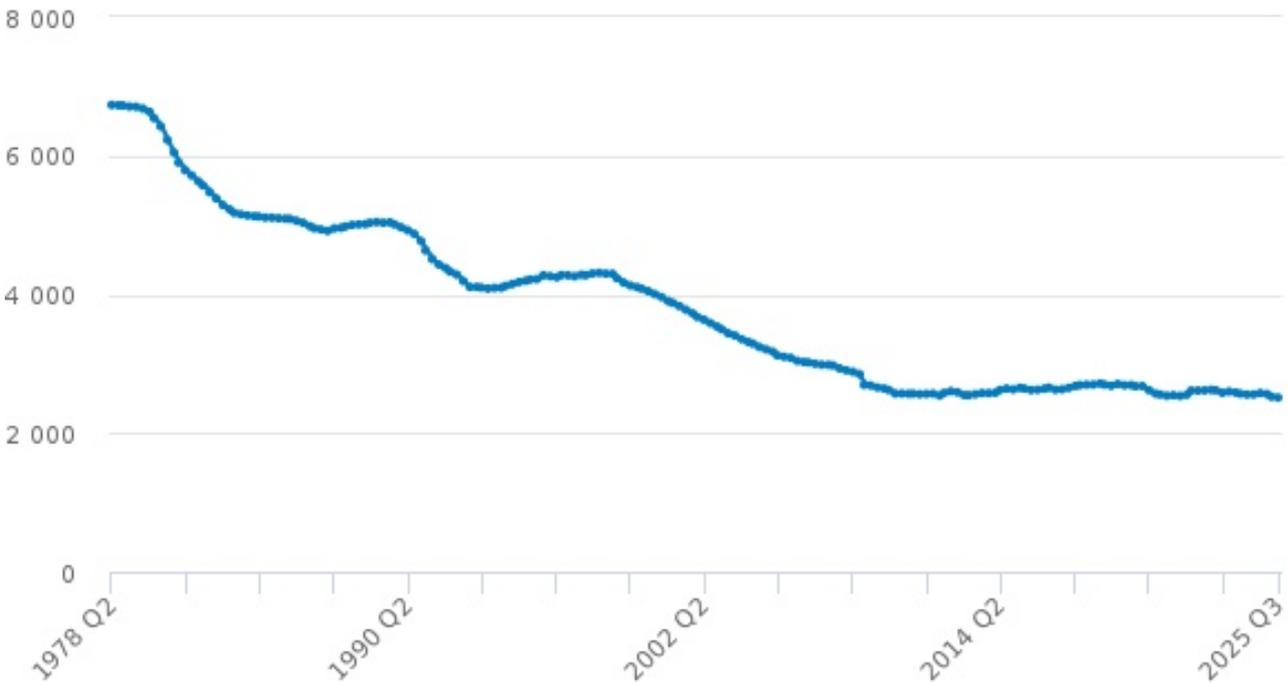
when they dovetail with changes to social norms and consumer preferences, as we see with our experience of renewable energy.

- Tax reform, including the radical idea of significantly reducing or even fully eliminating payroll tax, such as employer National Insurance Contributions (NICs) in the UK. We tax labour much more highly than we tax equipment and software capital; reducing the disparity between the two would encourage more employment.
- Investing in worker skills, making them more productive and therefore reducing the incentive to replace them with machines.
- Perhaps most controversial of all, breaking up big tech. Acemoglu and Johnson argue that, with Google dominating search, Facebook commanding social networking and Amazon being the central player in e-commerce, big business has become too powerful and that is a problem in and of itself.

# BRINGING DEFENCE JOBS TO INDUSTRIAL COMMUNITIES

Britain's manufacturing sector has been in decline for decades. This can be seen in Figure Three.

**Figure Three: UK manufacturing jobs (thousands)**



Source: Office for National Statistics

Figure Three shows that, in the second quarter of 1978, the year before the election of Margaret Thatcher's Government, UK manufacturing employment stood at 6,732,000. By the third quarter of 2025, this figure was 2,511,000. Britain's manufacturing sector was, of course, based in particular industrial communities, usually outside of London and the South East.

These communities have deep industrial heritages, often with the skills and infrastructure that makes them perfectly suited to future defence production.

This argument was also made in 'Securonomics: the contribution of a defence industrial strategy':

*"As it attempts to spread defence investment, the MoD should be careful not to disrupt successful clusters and regional industrial cultures. But cities such as Stoke on Trent, mayoralities such as Tyneside, and all three devolved nations have strong industrial*

*infrastructures and workforces with skills which translate well to the defence sector (such as the automotive industry) and which could respond to targeted inward investment if engaged at the right level of governance.”<sup>58</sup>*

Greg Clark saw this as an important opportunity:

*“... if I take an area of the country that I grew up in, on the East Coast, Teeside’s strengths were in marine engineering... and I guess by the time we got into this century, the opportunities in both had started to shrink.*

*“But there has been a revival, because a lot of the skills that are needed for the offshore wind industry, for example, and for clean energy generally, actually owe a lot to the heritage but also the practice of some of the skills that were there. So it doesn't surprise me that places like Teeside and Humberside - Grimsby, Cleethorpes, etc - have established themselves as important centres of engineering excellence and manufacturing jobs in offshore wind and renewables, because it draws on the heritage that was there.”*

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<sup>58</sup> ‘Securonomics: the contribution of a Defence Industrial Strategy’, William Freer and Paul Mason, Council on Geostrategy, March 2025, p. 35.

# CONCLUSIONS AND RECOMMENDATIONS

This report has described the proposed increase in defence spending in the UK, in response to a change in direction from the US President, Donald Trump, away from the post-war norm. It has discussed the ambition of the Labour Government to reap a 'defence dividend' from this spending, creating economic growth and good jobs across the UK.

This report has set out the Government's defence policy, as described in the Strategic Defence Review and the Defence Industrial Strategy. It has also considered the changing nature of warfare, as witnessed in Ukraine. The report has then discussed some of the challenges associated with achieving a 'defence dividend', including capacity and skills issues, while also considering what makes industry successful more generally and how to target the creation of good jobs.

Based on the evidence gathered, this report makes the following recommendations.

## RAISING THE DEFENCE BUDGET

As we saw at the beginning of this report, the Government is committed to raising defence spending, from 2.3 per cent of GDP in 2024 to 2.6 per cent of GDP by 2027, with the aim to reach 3.5 per cent by 2035, an increase of £40bn per year in today's terms. That is a huge increase. Governments can find smaller, or even mid-sized, amounts of money by reprioritising spending, but this is an increase of a different order.

Polling suggests that the public at best partially understands the threat, with 32 per cent of people polled even believing it is likely that the UK will be at war in five years time. Yet the public believes both economic challenges and climate change to be bigger threats to the UK's security than military conflict, and the figures vary according to political preferences.<sup>59</sup>

According to the Financial Times, government officials are exploring different ways to find the extra funds needed. These include fresh public-private partnerships that use private finance to bolster defence, as well as a new multilateral defence bank with UK allies.<sup>60</sup>

On 25 January 2026, the Liberal Democrats argued for the creation of defence bonds. These would be issued to the public and would echo the 'war bonds' created during the First and Second World Wars. The Liberal Democrats said the bonds could raise up to £20 billion for capital spending on defence over the next two years.<sup>61</sup>

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<sup>59</sup> See 'Britons give qualified support to more spending on defence', Richard Rose, UK in a Changing Europe, 12 November 2025.

<sup>60</sup> 'Starmer seeks to end military funding delay', Lucy Fisher and Sam Fleming, Financial Times, 3 February 2026.

<sup>61</sup> 'Ed Davey calls for defence bonds to fund £20bn boost to military spending and reduce reliance on US', Liberal Democrats press release, 25 January 2026: <https://www.libdems.org.uk/press/release/ed-davey-calls-for-defence-bonds-to-fund-pound20bn-boost-to-military-spending-and-reduce-reliance-on-us>

All of these ideas should be explored and, in considering the Liberal Democrat proposal, this would show a commitment to cross-party working in order to meet a major challenge facing the UK.

However, if, on examination, none of those ideas would deliver the increase needed, the Government must consider revising its fiscal rules.

It should be emphasised that fiscal rules are important. Market confidence is vital in a modern economy, with the mini-Budget of Liz Truss and Kwasi Kwarteng a reminder of what happens when that confidence is lost.

However, the fiscal rules exist for a purpose and if the Government can show a clear economic reason for adjusting those rules, the markets would be likely to understand. In other words, if the Government could convince the markets of how this investment in defence would strengthen the economy, by creating strong companies and good jobs around the UK, with well paid, highly skilled employees paying taxes, and consuming goods and services in their local economies, thereby bolstering economic growth, then it is the opinion of this report that a change in the fiscal rules in response to international events that were entirely unseen when Labour took office is one that the markets would bear.

***Recommendation: The Government should set out a timeline for an increase in defence spending to 3.5 per cent of GDP by 2035, considering all plausible ways of funding this increase, and adjusting its fiscal rules if necessary, to achieve this outcome.***

## SECURITY OF DEFENCE SPENDING

One of the biggest issues faced by business is long-term security of defence spending. Defence projects are often massive in scale, lasting decades from conception to delivery to use, and without that security, firms are reluctant to invest. The large companies interviewed for this report argued that the long-term security of defence spending, rather than the figure itself, was their biggest concern.

In January, discussing global business trends, the Financial Times reported that:

*“Share prices and revenues at defence groups have soared thanks to higher military spending since Russia's full-scale invasion of Ukraine in 2022.”*

The report goes on to say:

*“Whether industry revenues can keep growing at the same rapid pace depends, in large part, on whether a peace deal can be struck between Russia and Ukraine. Investors in European defence stocks have reacted negatively every time the prospects appeared close, demonstrating underlying scepticism about whether Europe's movement will continue in the absence of war.”<sup>62</sup>*

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<sup>62</sup> ‘Trends to Watch in Global Business This Year’, Financial Times, 3 January 2026.

Industry executives, the report argues, believe that increased defence spending will continue even in the event of an end to the war, but the attitude of investors is a useful reminder that such a belief could be fickle.

A number of voices have argued that we should be spending more quickly on defence. Andy Haldane described the 2025 increase in spending as a “useful augmentation”, but not “game changing” in his interview for this report. Tan Dhesi called on the Government to follow Germany’s lead and to change its fiscal stance, to allow greater spending now. Moreover, as Andy pointed out, the Government has the aspiration of spending three per cent of GDP on defence in the next Parliament, so bringing this forward would both boost spending more quickly and provide more ballast behind which private enterprise can ‘crowd in’.

***Recommendation: By bringing forward its increase in defence spending to 3.5 per cent of GDP as soon as possible, the Government can give business the confidence it needs to invest in long-term projects.***

## THE ROLE OF DEFENCE WITHIN THE INDUSTRIAL STRATEGY

Andy told us that defence should be the central pillar of the Government’s Modern Industrial Strategy. Geopolitics and the defence of the UK is one of the most pressing challenges facing us and the defence sector is not only central to that mission, but it can provide a major boost to UK growth, through exports and job creation across the UK.

As Andy told us, defence interacts with many other of the IS-8 sectors anyway. However, while defence is clearly vital to the industrial strategy, the other IS-8 sectors are also extremely important. We cannot, for example, take our eye off the climate threat, so government investment in clean energy cannot be sacrificed. For this reason, the uplift in defence spending should not be based on cuts to other areas.

Defence must interact with the Government’s steel strategy. In February 2025, Community - one of the four CSEU unions - published ‘Steel Reforged’, which set out a series of recommendations to secure and boost the UK steel industry in the years ahead<sup>63</sup>.

As the trade body UK Steel has argued, there needs to be a step-change in relations between the Ministry of Defence and the steel sector. This should follow best practice examples of other departments, such as the Department for Transport, where regular formal engagement forums have been established and embedded.

UK Steel makes two further recommendations, both of which are supported in this report. First, the UK steel industry should be represented on the Defence Suppliers Forum, where it can make a valuable contribution to work streams on supply chain resilience, social value, climate change and capability management. Second, the Ministry of Defence should sign the UK Steel Charter, which is a commitment that shows how organisations are changing procurement processes to include more UK-made steel and support the economy.<sup>64</sup>

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<sup>63</sup> ‘Steel Reforged: Strong foundations for a sustainable economy’, Community, February 2025.

<sup>64</sup> Defence Procurement Position Paper, UK Steel, May 2024.

**Recommendation: The uplift in defence spending should not be based on cuts to other areas.**

**Recommendation: The industrial strategy must dovetail with the steel strategy.**

**Recommendation: The UK steel industry should be represented on the Defence Suppliers Forum.**

**Recommendation: The Ministry of Defence should sign the UK steel charter.**

## THE BALANCE BETWEEN THE SOUTH EAST AND THE REST OF THE UK

An advantage of boosting defence spending is that it doesn't force policymakers to choose between the so-called 'golden triangle' of London, Oxford and Cambridge on one hand, and the rest of the UK on the other. Many approaches to creating economic growth either boost the South East of England, or they augment the economy across the rest of the UK; a focus on defence does both.

**Recommendation: The Government should develop a 'whole UK' approach to its economic and industrial strategies.**

## THE BALANCE BETWEEN SMALL AND LARGE FIRMS

In a similar way, both small and large companies are essential to the UK defence industry. This report has met Airbus Defence and Space, a large company, and Polar Technology, a smaller one, both of which are situated in the 'golden triangle'. And both of these companies have an important contribution to make.

Clearly large companies are vital for projects such as Type 26 Frigates or the GCAP Programme, but as Phillipe Aghion has pointed out, small companies are particularly innovative and we have seen this in the development of drone technology in recent years. Small companies are agile and can repurpose more quickly as events unfold. All major companies lobby and this is legitimate, but trade union should use their influence within companies to ensure that maximum focus remains on innovation, which is ultimately in the long-term interest of both company and its workforce.

**Recommendation: The Government should continue in its efforts to boost both small and large companies in the defence sector, recognising the particular benefits of both.**

## THE BALANCE BETWEEN PEOPLE AND PROJECTS

Another important point raised by Andy was that, of Government investment announced in the Spending Review, only an extra £1 billion was for people and skills, whereas more than £100 billion was for projects. As Andy said, it is people, not projects as such, that deliver economic growth.

**Recommendation: The Government should recalibrate its spending plans to ensure that a larger share of investment goes to ensuring that workers have the skills and capabilities to**

***deliver on its announced projects. A 'people' rather than 'projects' approach to future government investment should be adopted.***

## **DEFENCE COMMISSION**

The Government should establish a body, the Defence Commission, to map out future defence spending in the UK. This should be an advisory non-departmental public body, sponsored by the Ministry of Defence, similar in design to the Low Pay Commission. An independent chair should be joined by industry and union representatives, including from the prime manufacturers of defence equipment, alongside smaller, innovative companies. Experts, including economists, defence experts and spatial planners should be called upon as necessary.

Ministry of Defence led, the Defence Commission should also have representation from HM Treasury, the Department for Business and Trade, the Department of Education and the Department of Work and Pensions.

The job of the Defence Commission should be to examine defence spending over the next six months, one year, two years, five years and ten years, based on latest information and intelligence.

It should ask:

- What do we need immediately and do we have the capacity to produce this in the UK?
- What companies and unions are involved and should be involved?
- What contracts should go out to tender?
- What contracts are best-filled by SMEs at the local level?

Defence experts seconded to the Defence Committee should be constantly watching developments in warfare, most obviously in Ukraine.

- What defence equipment do we know we will need in six-12 months?
- How is warfare changing and what does this mean for the equipment that we plan to procure? Is that procurement still the best way to spend money or have things moved on?

Workforce planners seconded to the Defence Commission should be engaged in these discussions, forecasting the skills that we need in the short, medium and longer term to ensure that we can produce as much defence equipment as possible in the UK.

- Where are the skills gaps today?
- Where are the skills gaps likely to be in one, two, five and ten years?
- How can the Department of Education and the Department of Work and Pensions work together to ensure that we have the skills for the future?

***Recommendation: The Government should establish a body, the Defence Commission, to map out future defence spending in the UK.***

## THE EVERYDAY ECONOMY

The Chancellor, Rachel Reeves, has previously written of the 'everyday economy', sectors like transport, childcare, health, social care, retail, hospitality, etc where most people actually work. Academics like Dani Rodrik of Harvard University have also described the potential importance of this sector. Jobs in these sectors do not typically require a higher education, but they could be improved with a focus on vocational skills. Crucially, they exist in communities across the country. Raising the productivity and the quality of jobs in the everyday economy would boost the economy overall.

Andy persuasively argued that a properly inclusive growth and industrial strategy would combine a top down, sectoral approach with a bottom up, skills-based element.

***Recommendation: Alongside the IS-8, the Government should launch a programme to raise the productivity and job quality of the everyday economy. The Chancellor's own report into the everyday economy should be used as the Government's starting point.***

## A FOCUS ON GOOD JOBS

The neo-liberal experiment introduced by Margaret Thatcher in 1979 was based on a belief that the market knows best. Under the Government of Tony Blair, minimum standards - notably including a National Minimum Wage and new rights to trade union recognition - were introduced. The Government of Gordon Brown introduced an industrial strategy, an approach which was followed by the Conservative-Liberal Democrat Coalition and was championed by an interviewee for this report, Greg Clark, under the Government of Theresa May. What has been missing, however, is an explicit recognition that good jobs themselves should be one of the key aims of economic and industrial policy.

Harvard's Dani Rodrik is right when he says that we have a 'good jobs problem'. It is not enough to expect the market to deliver this by itself. Two obvious ways to promote good jobs is to enable trade unions to bargain on behalf of workers, and to promote employee voice. The Government has taken an important step towards enabling trade union recognition through the passage of the Employment Relations Act although, at the time of writing, the forthcoming passage of secondary legislation will be important to ensure the full benefits of the Act are realised. Good work is not just about pay and conditions, however. Giving workers the power to shape their workplaces through employee voice allows job design that maximises efficiency while allowing work to remain or become challenging and fulfilling.

The Government has huge spending power and the ability to shape markets. A Government focus on good work should help to shape its own investment decisions.

***Recommendation: Government investment should be directed towards high skill, high wage work, using its spending power to shape markets.***

## TECHNOLOGY AND MACHINE USEFULNESS

Technology should be directed to support workers, not replace them. We must also avoid the use of what Daron Acemoglu calls 'so-so technologies'

Investors themselves can demand transparency over the use of new technologies. Are these creating new opportunities or simply automating work? Are they empowering workers or undermining them?

We must also avoid the trap created whereby technology does improve productivity simply because our current stock of workers do not have the skills that could allow them to contribute more to the fortunes of the company.

***Recommendation: Government subsidies should be offered for developing more socially beneficial technologies.***

***Recommendation: HM Treasury should look at the balance of taxation between burdens placed on businesses employing workers compared with those associated with introduction technology, especially when so much of that technology is 'so-so technology'.***

***Recommendation: There should be a tax bias towards employing workers compared to replacing them with machinery.***

***Recommendation: These reforms should be accompanied by a bold programme of increasing employee skills, along the lines of the suggestions above, so that workers are as productive as they can possibly be.***



## ABOUT INDUSTRIAL PARADIGM

Founded by Dr Tim Page, Industrial Paradigm offers bespoke economic research, workshop facilitation and keynotes to companies, trade unions, local authorities and charities. Industrial Paradigm seeks to work with these and other organisations as they address challenges such as creating inclusive economic growth, responding to the climate crisis and managing the rise of Artificial Intelligence, in a way that maintains and develops new and meaningful jobs.

Tim spent 16 years as a Senior Policy Officer at the Trades Union Congress, where he specialised in industrial policy, energy and environment policy, and science and innovation policy. Tim spent three years working in the House of Commons for the Labour Front Bench and, in this capacity, he contributed to the policy development of the National Minimum Wage. Tim also worked with Lord Michael Heseltine on his report, 'No Stone Unturned in Pursuit of Growth', published in 2012, and with Rachel Reeves MP on her pamphlet, 'The Everyday Economy', published in 2018. Most recently, Tim was Head of Economic Strategy and Research at Berkshire Local Enterprise Partnership.

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