

# CHIPS WITH EVERYTHING

DRD's Ed Bowie examines how competition law could help resolve the global chips challenge

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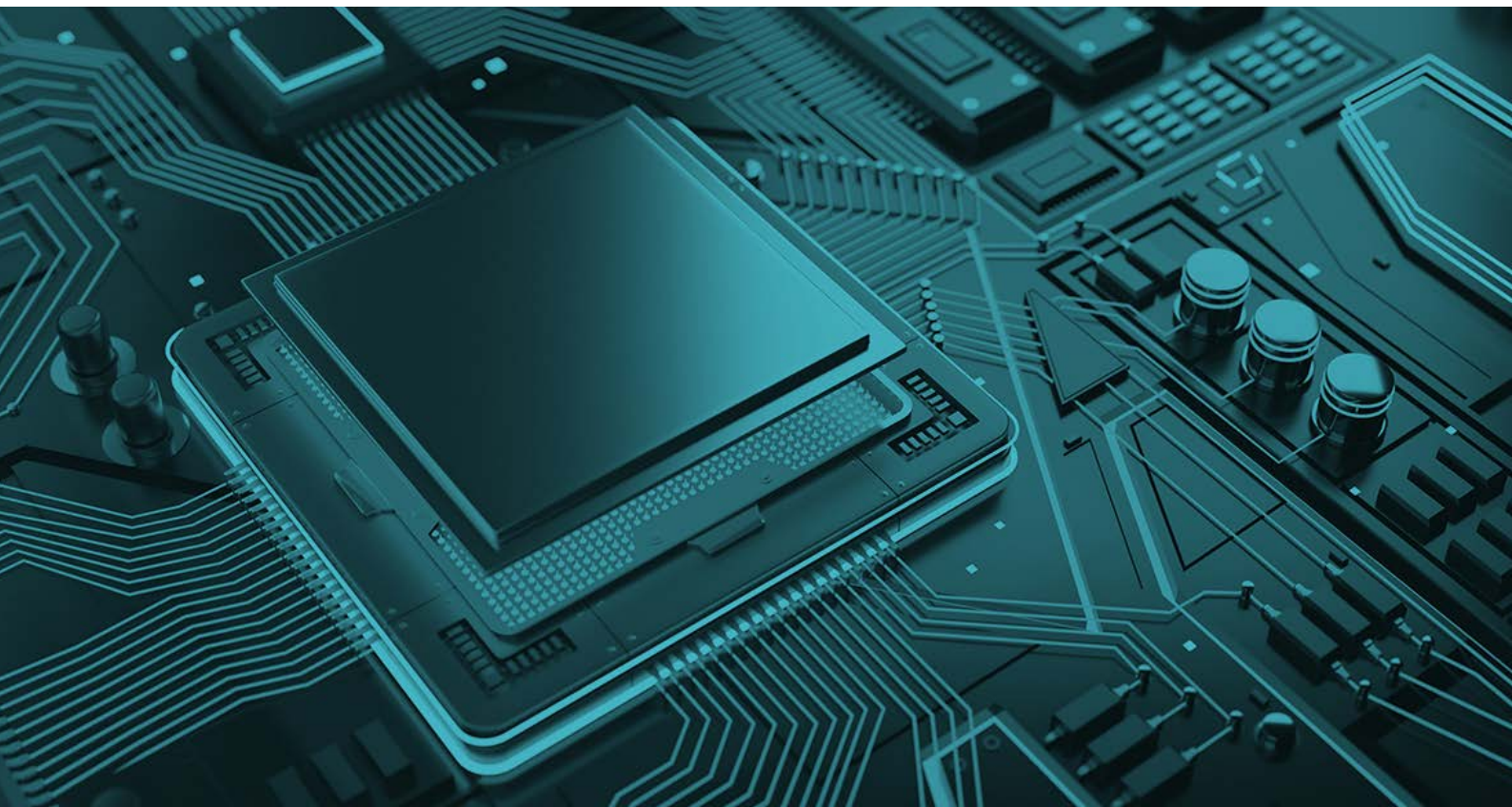
## Introduction

Semiconductors are the central component of computer chips and help power our modern way of life. They make our electronic technologies smaller, faster and more sophisticated.

From vehicles and cellphones to healthcare innovations and infrastructure, chips really are in everything and now underpin the global economy. It is **estimated** that more than 100 billion are used daily across the world.

That dependence is only set to grow. A particular source of that growth will come from computer processing units - including Central Processing Units, which enable programmes to run on computers, and Graphical Processing Units, which produce a computer's display image. As artificial intelligence, computer technologies and the Internet of Things develop, so too will our reliance on the chips that power them.

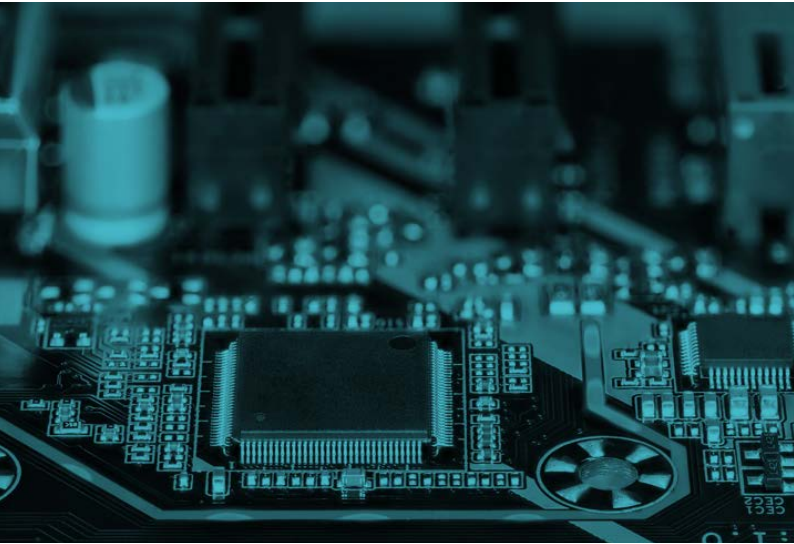
With a global shortage of these materials and significant national security implications at play, a bold approach is required in order to enable allied countries to build their capabilities in this vital area. The restrictions that competition law impose on the ability of firms to coordinate may be one area that deserves some fresh thinking.





## The UK is lacking a coordinated policy approach

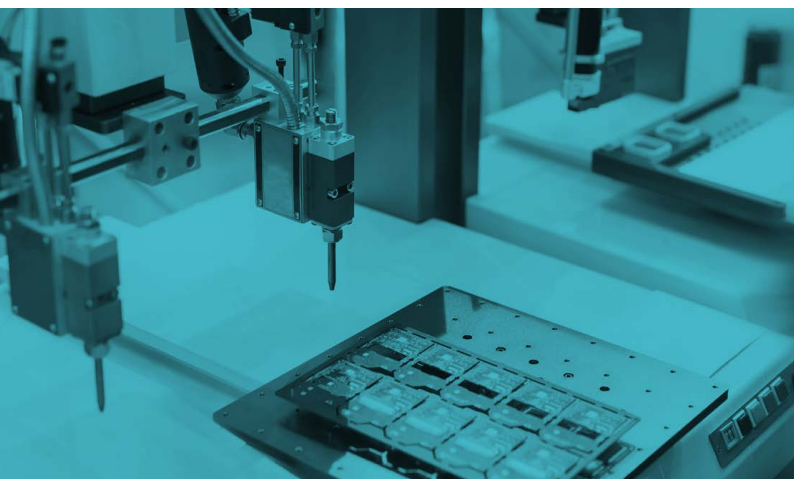
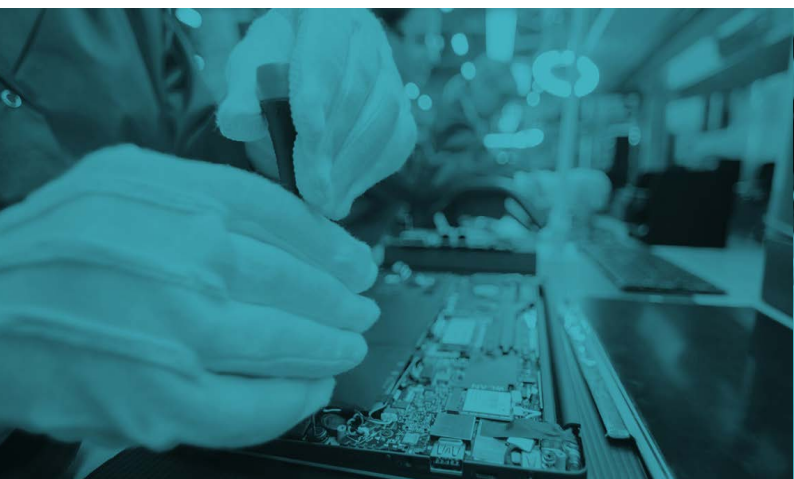
The UK has been slow off the mark in bringing forward policies to strengthen its position in the production of chips. With the shortage contributing to widespread **supply chain disruption**, the UK is playing catch-up from something of a standing start.



A more sophisticated effort is required so that the difficult balance can be struck between driving economic prosperity and delivering national security. A starting point could be to articulate a coherent strategy to ensure their steady and secure supply.

Instead, a range of disparate initiatives have been brought forward in recent years here in the UK – each of which have been half-formed and are not entirely congruent with the others. These include:

- **The Innovation Strategy**, which designated electronics, photonics and quantum technologies as part of the UK’s competitive capability;
- The former Department for Business, Energy and Industrial Strategy (‘BEIS’) was leading the UK’s **Quantum Strategy** (now expected to be under the purview of the new Department for Science, Innovation and Technology); and
- The British Business Bank’s National Security Strategic Investment Fund, which formed a **key part** of the Government’s Build Back Better plan for growth. The plan was the Johnson government’s attempt to fill the space left by the **abandonment of an industrial strategy**, which can also be added to this disjointed policy mix.



In an implicit recognition that it would be in the UK's national interest to have an approach that is better coordinated, for **over two years** the Government has promised to bring forward a semiconductor strategy. Finally, in December last year, it took a step forward. However, instead of new legislation or investment, the development was to commission a **research project** into the UK's capacity. It hardly gives the impression of a country with a grip on the issue.



Part of that delay may be a result of turf warfare within Whitehall. As the BEIS Select Committee **pointed out**, a number of departments - including the Cabinet Office, HM Treasury and Ministry of Defence, and now the new Departments for Business and Trade, and the Department for Science, Innovation and Technology - have legitimate but varying interests in the development of this industry.

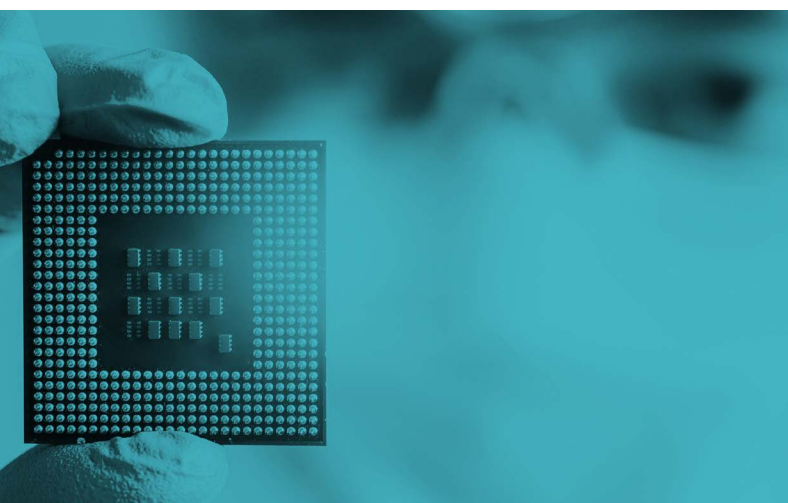
At present, it is unclear which of these will be taking the lead - indeed, if any will be given the mandate to cut through the

congestion and get on with it. Recent changes to the machinery of government and the resulting much clearer emphasis on science and technology should offer the new momentum that is so desperately needed.

## Ad hoc regulatory interventions are insufficient

At the same time and in this policymaking void, investments and difficult cases keep rolling on and stretching ministers and our policy infrastructure.

Using powers that were afforded to the Government under the Enterprise Act 2002, NVIDIA's attempted deal with Cambridge-based chip designer Arm **caught the attention** of the then-Secretary of State for Digital, Culture, Media and Sport, and the Competition & Markets Authority. A Phase 2 review of the deal was ordered on competition and national security grounds, **before it was abandoned** in early 2022 – presumably when the parties read the writing on the wall given the political and regulatory interest it had caught.



More recently, the Government **flexed its muscles and prohibited** Nexperia's acquisition of Wales' Newport Wafer Fab – this time using powers contained in the new National Security and Investment Act 2021. We provided **analysis of that decision here**, including its impact on a critical home-grown industry trying to survive.

The latter was clearly about stopping a 'high-risk' country – in that case, China – from taking control of a strategic asset.

The case of NVIDIA, on the other hand, was purely nationalistic and political: takeover by a US-based investor that was offering to bring capital and deep connections to Arm was hardly worth killing off, given the relative strength in this area of much less friendly countries.



In both cases, the UK chose to deploy competition and national security legislation on an ad hoc basis in an attempt to protect these strategic targets. That has been at the expense of executing a more sophisticated wholesale strategy that would help to guide investment and the supply of these materials.

Taken together, the UK's sluggish wake from its semiconductor slumber means the country is falling behind.



## Nations and blocs are moving forward without us

The issues posed by the UK's slow progress in developing a policy framework are amplified by geopolitical tensions, given the clear dominance of China and Taiwan in the production of chips. Taiwan alone **produces 92%** of the world's most advanced computer chip manufacturing – those that require chemicals, complex software and machines that can cost hundreds of millions of dollars.

This hardly provides an easy entry point for new players – and against this backdrop, Western policymakers are understandably **deeply uncomfortable** with the current makeup of the globe's semiconductor supply.

To put the need for coordination in context, the BEIS Select Committee has **heard evidence** that the cost of constructing a fab that would produce the most complex circuits of the type that Taiwan dominates in would “not get much change out of USD \$20 billion”. They can also take around 10 years to construct. In those circumstances, the UK may as well stay in its slumber if it thinks it can go it alone on a piecemeal basis.



That helps explain President Biden's flagship **US CHIPS and Science Act**, signed into law last year, which is designed to promote US manufacturing through research and development support.

President Macron of France has resisted this, taking the extraordinary step while in Washington D.C. as the guest of Biden's first state dinner to **attack the Act** as a protectionist move that will hamper European competitiveness. Despite these objections, the EU is preparing its own **draft Chips Act**, expected first half of 2023, which largely sets out to do the same thing and aims to grow its share of the market to 20% by 2030. At Keystone's *Antritrust, Regulation & the Political Economy* conference in Brussels last week, EU Commissioner for Competition Margrethe Vestager touched on the pressure coming from the US, but coordination where there are overlapping interests and advantages was still lacking.

## Competition law as a cure?

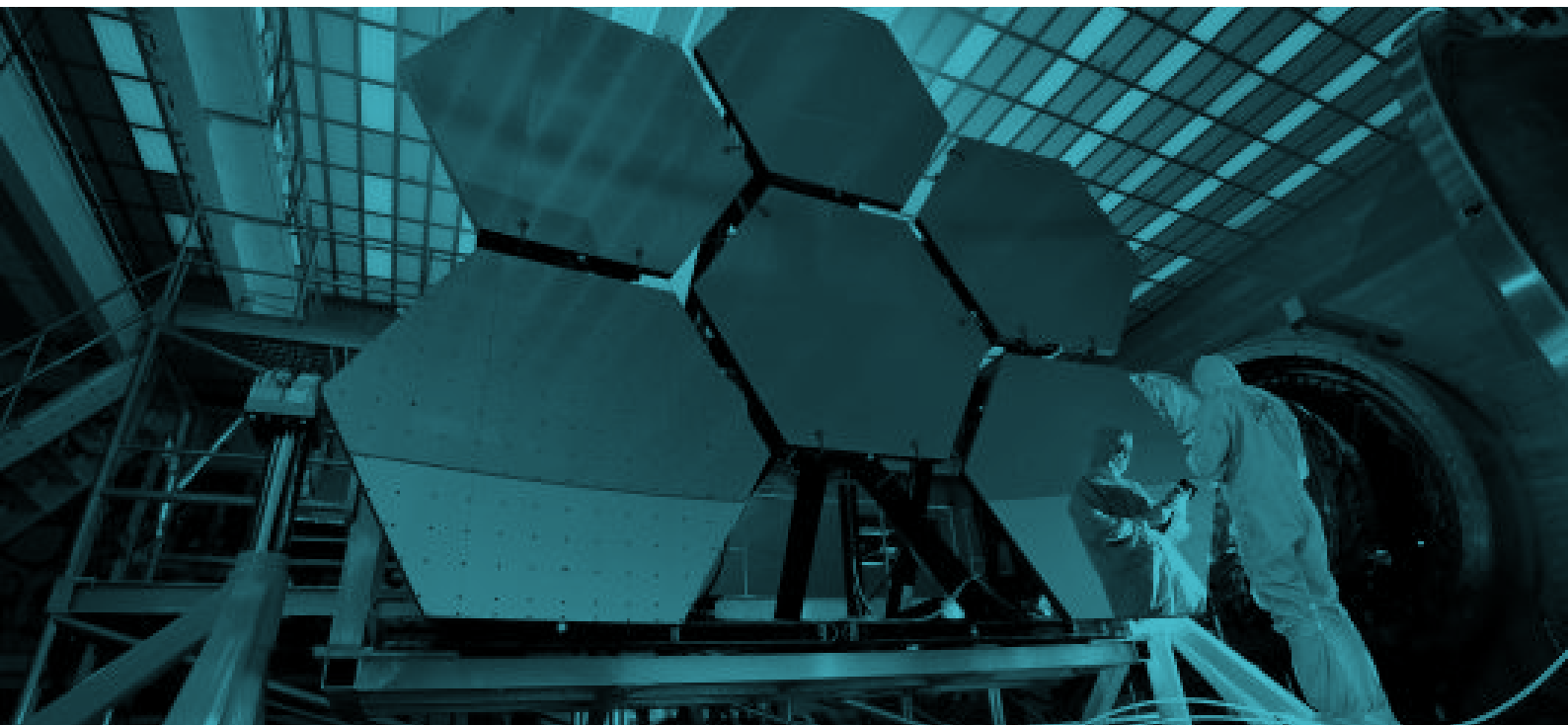
Despite the more energetic interest of the US and EU when compared with the UK's, their policy responses are not necessarily the pathway to prosperity.

The subsidies and tax credits present in those jurisdictions' responses are in many senses a sign of failure in global policy coordination. Macron was right to point out the effect of Biden's plan on EU competitiveness. It is a shame that the EU plan will do the same thing in reverse.

One limitation to having firms work more closely is competition law, particularly where doing so would require individual companies to coordinate and share resources and breakthroughs.

But it is precisely this sort of collaboration that is needed to scale up globally. There is precedent for easing the sorts of restrictions imposed by competition law – seen in the **financial crisis**, during the **pandemic** and just **last week** on **sustainability**. When they want to, policymakers can choose to alter antitrust rules in response to real-world challenges.

Competition prohibitions are just one barrier that may stand in the way of countries coming together to coordinate and take advantage of their comparative advantages. However, the strategic benefits on offer would suggest that they are a barrier worth clearing. Competition law is there to serve the national interest and should be stretched to help deliver on it.





## About DRD

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DRD Partnership is a strategic communications consultancy focused on building value for our clients and protecting their reputations at moments of challenge and change.

DRD helps clients develop a positive deal rationale that is in line with current Whitehall and Westminster priorities. It also provides strategic public affairs and campaign support to help you get your deal cleared.

Our approach combines the deep experience of our senior partner team with rigorous analysis and interrogation of issues. This is to ensure that our programmes deliver meaningful impact.

DRD's partners have held senior roles in government, financial institutions, the law, international corporations, charities and leading public affairs consultancies. By combining our insight into relevant institutions with our experience of engaging stakeholders and delivering campaigns in multiple markets, we ensure that, when clients have only one chance to get things right, we are consistently able to meet and exceed their expectations.

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