

# Press release: Ploughshare successes continue to support UK prosperity

Ploughshare Innovations, the technology commercialisation arm of the Defence Science and Technology Laboratory (Dstl), is pleased to announce an increasing number of growth and economic benefits it has provided to the UK economy, including the creation of hundreds of jobs and multi-million pound export deals.

The latest report, commissioned by Ploughshare and conducted by independent economics consultancy SQW, shows an increase in the benefits Ploughshare has delivered since the previously published report in 2015.

The economic impacts include:

- The creation of a maximum of 585 jobs, an increase of 85
- An increase of 70% in exports from £44 million to £75 million
- £118 million Gross Value Added (GVA), a measure of goods and services produced, increased by £53 million
- Spin-out companies have attracted £140 million investment, an increase of £10 million

In addition to quantitative contributions, Ploughshare's activities have also provided wider qualitative benefits to both industry and society.

The commercialisation of technologies has contributed to the development of new products for the Ministry of Defence (MOD), including advanced vehicle armour, electronic warfare software, and bio and chemical threat detection. In addition to improving UK capability, this also supports UK supply chains. For example, 85% of the suppliers for the vehicle armour product worldwide are UK-based. Beyond defence, notable applications include portable diagnostic devices to detect viruses, which were trialled in Sierra Leone to support those affected by Ebola.

James Kirby, CEO of Ploughshare Innovations commented:

This latest report again demonstrates the success that Ploughshare has become. By commercialising the best Intellectual Property (IP) created at Dstl we maximise their investment in technology research and provide wider benefits to both humanity and the UK's prosperity and security.

Graham Farnsworth, Head of IP Group at Dstl added:

Our collaboration with Ploughshare is providing amazing opportunities to develop our technology for wider applications. It also provides our scientists with personal and professional

benefits by being involved in the commercialisation process which in turn has a positive impact on the whole IP creation process.

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## **News story: Consultation on proposals to protect London–Exeter rail passengers**

The Competition and Markets Authority (CMA) raised concerns over the award of the franchise to FirstGroup and MTR because FirstGroup already operates the Great Western franchise, the only other train service between London and Exeter.

The companies were given the opportunity to avoid an in-depth ('phase 2') investigation by offering proposals (known as 'undertakings in lieu of reference') to the CMA to address the concerns identified. The companies have now offered to cap unregulated fares between London and Exeter on both South Western and GWR services by linking these to prices on a number of other comparable routes where competition remains.

They have also proposed to maintain the availability of cheaper advance fares on both services – again by comparing with similar routes where competition remains.

The CMA has decided that there are reasonable grounds for believing these proposals, or a modified version of them, might be acceptable to remedy the competition concerns it has identified by protecting passengers using both London–Exeter rail services.

As part of its process, the CMA is now undertaking a public consultation on the proposals. The deadline for responses is 8 August 2017.

Details on this consultation will be found on the [case page](#) along with full text of the decisions, all other information about the investigation and how to submit a response. The CMA has until 20 September 2017 to consider whether to accept the undertakings, although it may decide to extend this deadline to 15 November 2017 if it decides that there are special reasons for doing so.

The CMA's consultation on the proposals comes in advance of the start of the franchise, due on 20 August 2017.

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# News story: Call for sponsors and partners for GREAT Festival of Innovation, Hong Kong

The Department for International Trade (DIT) is organising a high profile GREAT Festival in Hong Kong in Spring 2018. The spectacular 4-day festival will promote and increase the UK's trading relationship with Asia.

The aim is to use the festival to build new and long lasting partnerships with UK and Asian businesses, all focused around the theme of innovation.

The festival will bring together the best and brightest innovators to foster new partnerships.

Companies participating will access talent and thought leaders in areas such as infrastructure and finance, technology, innovation, healthcare, education and consumer goods to name a few. Sponsorship offers a truly unique platform for companies in these sectors to:

- gain significant commercial exposure through a strategically important international event held in a growing and well established international market
- showcase the very best ideas, products, expertise and services to an influential Asian audience through a major media and communications programme around the festival
- align with the UK's brand and values through the world recognised GREAT Campaign
- promote products and services to Asian consumers online via DIT's [e-exporting programme](#)
- participate in thought leadership debates and meet the world's leading innovators in one place
- work in partnership with DIT to create and distribute digital content and amplify audience reach across Asia
- meet and discuss important issues with the government representatives taking part in the festival
- showcase your innovation to the influencer audience across Asia

All our sponsorship and partnership opportunities can be tailored to help individual businesses exploit the platform that the GREAT Festival provides.

## **Partnership packages at GREAT Festival of Innovation, Hong Kong**

Bespoke partner rights packages for businesses can be developed – providing either direct financial support or value in kind support in the form of a free product or service. Expressions of interest for value in kind support are sought for:

- creative services and production
- business support services
- AV equipment and support
- marketing, PR and media and communication services
- catering and beverage products

Any company wanting to register an expression of interest, in either cash or value in kind sponsorship, should contact Steven Anderson, Head of Sponsorship and Partnerships, Department for International Trade.

## **Hong Kong and the GREAT Festivals**

Hong Kong and Asia is a hugely important market for British companies.

UK exports to Hong Kong alone are worth over £8 billion and with over 600 British companies established in market, it remains a significant market in which to grow your business. It is widely regarded as one of the most dynamic trading markets in the region. As one of the world's largest trading economies, it remains a hugely important market for British business looking to do business in Asia.

This is the third GREAT Festival following highly successful 'GREAT Festivals of Creativity' in Istanbul in 2014 and Shanghai in 2015. Watch highlights of the Shanghai GREAT Festival.

[Shanghai GREAT Festival](#).

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## **News story: Leading the world in battery technology: apply for funding**

New funding opportunities worth up to £85 million have been unveiled by Business Secretary, Greg Clark under the Industrial Strategy Challenge Fund's Faraday Challenge. These aim to make the UK a world leader in low carbon vehicle technology.

They include funding to:

- support the UK's position as a leader in the design, development and manufacture of future batteries for vehicle electrification
- set up a new facility to work on new technologies to propel the development of low carbon vehicles, through the [Advanced Propulsion Centre](#) (APC)

In addition to the Faraday Challenge opportunities, up to £25 million has been allocated for connected and autonomous vehicles.

# **A challenge to support the low carbon economy**

The Faraday Challenge is one of a series of challenges set by the UK government as part of its Industrial Strategy. It will see £246 million invested in battery technologies over the next 4 years.

A total of £1 billion will be invested across all of the challenge areas.

## **Faraday Challenge competitions**

### **Battery innovation for the electrification of vehicles**

- the [Department for Business, Energy and Industrial Strategy](#) (BEIS) and Innovate UK have up to £30 million available for collaborative research and development projects for new battery technologies, and up to a further £10 million for feasibility studies
- the competitions open on 25 July 2017, and the deadline for applications is at midday on 14 September 2017
- we expect collaborative research and development projects to range in size from £1 million to £15 million and last up to 3 years
- we expect feasibility studies to range in size from £150,000 to £1 million and last between 3 and 12 months
- businesses could attract up to 70% of their project costs

### **National battery manufacturing development facility**

- the APC has up to £45 million to support one project to develop a virtual centre for battery research to make technology more accessible and affordable for business
- the competition opens on 25 July, and the registration deadline is midday on 13 September 2017
- work must be carried out in the UK
- project build is expected to last a maximum of 24 months, with the construction complete and the facility operational by early 2020
- you may be eligible for up to 100% of your project costs if you or the delivery organisation is a non-profit research organisation

### **Research into batteries**

Separate to these competitions, the Faraday Challenge will support activities across research, innovation and scale up. This includes a call by the [Engineering and Physical Sciences Research Council](#) (EPSRC) to establish a virtual research institute, plus associated research into battery development.

## **Autonomous vehicles competitions**

The Business Secretary also announced 2 competitions to encourage projects that show how connected and autonomous vehicles can work in the real world. These will be funded by the [Centre for Connected and Autonomous Vehicles](#) (CCAV).

## **New connected and autonomous vehicle technologies**

- up to £23 million is being made available for collaborative research and development projects, and up to a further £2 million for feasibility studies
  - the competitions open on 25 July 2017, and the deadline for applications is midday on 25 October 2017
  - we expect collaborative research and development projects to range in size from £500,000 to £4 million and last between 18 and 30 months
  - we expect feasibility studies to range in size up to £250,000 and last between 12 and 18 months
  - businesses could attract up to 70% of their project costs
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## **Speech: Boosting earning power everywhere**

### **Introduction**

Provost, Mr Mayor, David, ladies and gentlemen

It is an enormous pleasure to be back here in this great city of Birmingham, at this renowned University, and in the company of the new Mayor of the West Midlands to talk about Industrial Strategy. I'd like to welcome Bob Sleigh and my ministers; Claire Perry, Margot James and David Prior.

A year and a week ago, on the evening of the day that I was appointed Secretary of State for Business, Energy and Industrial Strategy I came to this University for my first public engagement and it is great to be back.

During the last year I have been in the West Midlands on average every three weeks and there is good reason for that.

This city and this region, embody many of the opportunities that we have in creating an industrial strategy for the nation.

The city region with the strongest growth of all the big cities in the UK – including London.

A city region that has created over 100,000 private sector jobs since 2010.

A region of advanced manufacturing, of services, of education, of artistic and cultural excellence – all reinforcing each other.

Indeed this great university – one of a constellation of 12 in the region, which contribute over £1 billion to the economy – is a living embodiment of how civic leadership, business prosperity and educational excellence can work

together. When Joseph Chamberlain as Mayor of Birmingham contemplated the prospect of this University he said:

I believe no greater project has ever been proposed to a city.

He would be very proud of this University today, in what it gives to the city and to the West Midlands, and indeed to the nation and to the world.

It is a particular thrill for me that the West Midlands now has, in Andy Street, an elected Mayor able to lead this region forward.

I say a particular thrill because my time in government has been motivated by the conviction that our future success, not just as an economy but as a society, should be founded on the regional strengths and local leadership that has been the source of prosperity in the past.

I proposed City Deals, which became Devolution Deals with the establishment not just of a Mayor but with devolved budgets and powers to make that leadership count.

Andy and I have always believed that the West Midlands Devolution Deal should be the foundation – not the end point – of further empowerment of the Region as a vital part of our Industrial Strategy.

The Mayor wrote to the government 2 weeks ago setting out proposals for further devolution of powers.

I am delighted to announce today that we will begin talks with the Mayor and the Local Authorities over the coming weeks, with a view to agreeing a further devolution package that will ensure that he has the powers he needs to support delivery of the industrial strategy in the West Midlands.

## **Brexit**

At the heart of the industrial strategy for the West Midlands is trade. The growing success of the economy here has been based on the rising demand for the goods and services produced by the people of the West Midlands to be sold to customers globally.

The Black Country promotes the strengths of its area under the slogan 'Made in the Black Country, Sold around the world'.

From cars to components, from financial services to computer games, from cultural excellence to food and drink, not forgetting the students who come from overseas to study at the universities, this region depends absolutely on trade with the world.

People who voted for Brexit did not vote to be less prosperous.

And similarly in a region of trade in a nation of trade, people did not vote to trade less – including with our European neighbours.

Often, when I travel overseas, I encounter the assumption that the vote for Brexit was part of a global move towards protectionism – for trading less, for retreating from the world.

I always say that in Britain nothing could be further from the truth.

Both the Leave and the Remain campaigns wanted Britain to trade more, not less.

That is why we have been clear at the outset of the negotiations with the European Union that we want to see a comprehensive free trade agreement that will maintain tariff and barrier free trade with our European partners.

And the West Midlands is one of the best examples in the country of how each product created, in services as well as manufacturing, is part of a network. There is scarcely a product or a service made here for export that is not an advanced combination of components, capital equipment, design, expertise and intellectual property from a wide range of countries.

Indeed, it is one of the triumphs of a modern, advanced economy that what we produce combines the output and ingenuity of so many different people and companies – most of them unknown to each other.

That's why our approach, as the Prime Minister has put it, to be a global champion of free trade, is to want to increase the complex exchange of products and services between countries, not to aim for a sort of national self-sufficiency.

## **Industrial Strategy**

This theme will run through our modern Industrial Strategy. If every part of Britain is to prosper in the future we need to ensure that we become even more specialist and expert and that we have the right policies and institutions in place to drive the productivity – which is to say, the earning power – of the economy, and the people and places that make it up.

I want to thank all of the organisations represented here – and beyond – for the formidable response to the consultation that we have undertaken on our green paper ['Building our Industrial Strategy'](#).

The title of the green paper was chosen deliberately to reflect the fact that this had to be a shared national endeavour.

An effective industrial strategy has to stand the test of time – a short term strategy is a contradiction in terms.

And if it is to endure it has to engage the experience and insights of the entrepreneurs, managers, workers, investors, consumers, scientists, researchers, local leaders – everyone who has a stake in a prosperous future.

The response has been extraordinary.

Over 1,900 written responses – full, thoughtful and creative. From all parts



of the United Kingdom – because this must be a strategy for all 4 nations of the United Kingdom; from new start-ups to big businesses; from organisations from the Premier League to the Wellcome Trust and the Women's Engineering Society.

Later in the year we will respond formally to the consultation with a white paper. But the shape of it is already becoming clear.

## **Our strategy**

At its heart is a recognition that in order for all our citizens to be able to look forward with confidence to a prosperous future, we need to plan to improve our ability to earn that prosperity.

To enjoy a high and rising standard of living we must plan to be more productive than in the past.

Economists have pointed to what they have called a productivity puzzle in Britain. That we appear to generate less value for our efforts than, say, people in Germany or France. In other words, we have to work longer to get the same rewards.

It's not that we want – or need – people to work longer hours. It's that we need to ensure that we find and seize opportunities to work more productively – as a country, as cities and regions, as businesses and as individuals. If we can do so, we can increase the earning power of our country and our people.

We have great strengths. Our economy has been extraordinarily good at creating jobs. When we look at our closest neighbours, we can be truly proud of the fact almost everyone of working age in this country is in work and earning.

With the introduction of the National Living Wage we have boosted the weekly earnings of the lowest paid workers. To further this approach, we need to boost earning power, too.

Our strategy will create the conditions that boost earning power throughout the country – its people, places and companies.

Working more productively requires higher skills, more investment, and business sectors raising their performance. The benefits must then feed through into higher pay, especially for people in parts of the country whose earnings have not kept pace with the best performing areas. And it means continuing with our success at boosting employment including by reaching people, such as those who are disabled, over-fifty, and in other groups, who find it harder to participate in the jobs market.

We will raise our earning power by focussing on five key foundations of a successful productive economy.

People matter most. Our ability to earn a good living – and, as [Matthew](#)

[Taylor has pointed out recently](#), to have work that is of good quality, in terms not just of pay but of security, opportunities for advancement and fulfilment – depends on people everywhere having the education and training that helps them be productive and competitive.

So the first component of our modern Industrial Strategy will be to invest in skills, particularly through reforming technical education.

Next, innovation. Our earning power depends not just on our education and training but also our capacity then to innovate – to develop new ideas, absorb the ideas developed by others, and to apply them. We have great science and research in this country. But we have not always been so good at commercialising it by transforming it into new enterprises or innovating within existing enterprises.

Place is more important than ever: increasingly we cluster not around natural resources but around other people with skills and ideas which enable us to be more productive. At their strongest clusters of talent and expertise can become magnets to attract businesses and jobs. There is too great an unevenness in the earning power of different cities, towns and counties across the United Kingdom. Addressing the challenges – and the opportunities – faced by different places depends on local knowledge, commitment and leadership, and our industrial strategy will give a bigger role for that than has characterised Britain during decades past.

We need to make sure we have got the physical infrastructure we need to promote economic growth – from transport to super-fast broadband. We will invest in a world-class infrastructure. Efficient clean energy is particularly important. We aim to increase public investment and encourage more business investment alongside it.

As well as physical infrastructure there is the invisible infrastructure of a modern liberal society. Because it is invisible we sometimes under-estimate how valuable this is and the UK is particularly richly endowed with it. For example, trust in the integrity and efficiency of our legal system encourages foreign investment here. The English language is one reason why overseas students want to study here and our creative industries are so successful.

A free press is crucial for tackling corruption and mismanagement of funds – private or public. There is a positive role for government in sustaining this kind of infrastructure as well. The government will ensure our regime for protecting intellectual property remains effective and up-to- date.

We can boost the performance of our businesses by opening up domestic and international markets and helping promising growing companies to scale up. Britain can be the best place in the world to start and grow a business.

We will work with key business sectors where there is a genuine appetite for partnership with government and where government has a useful contribution to make. Government needs to be more open and accessible to business. We can do better at using the sheer scale of public procurement to help SMEs and innovative new businesses. But industrial strategy means more than this – it

means working closely with sectors where there is an appetite to join forces: companies large and small working together to create shared institutions and working with colleges, universities, local leaders and central government to align efforts.

Even as we have been developing our Industrial Strategy we've already made real progress on these fronts.

We have committed to the biggest increase in public science and innovation funding for nearly 40 years, providing £4.7 billion to 2020.

We are ensuring that businesses stay at the forefront of this innovation: our new Industrial Strategy Challenge Fund – worth almost £1 billion – will back areas where the UK has the potential to turn research strengths into a global industrial and commercial lead – I will have more to say about this in a moment.

We have set out how we will reform technical education in this country, implementing Lord Sainsbury's recommendations, simplifying the system and investing in high quality 'T' levels

We are working on sector deals which show how industries and government can work together to improve productivity and competitiveness of their sector.

And through local industrial strategies, the government will help the business leaders, community representatives in each local economy to put a plan together to build on their strength and stimulate local growth.

We have also hugely increased our investment in our infrastructure – new runways, new railways and new car technologies, smart grids and green energy as well as 4G and 5G technologies – which make the country as a whole productive. Here in Birmingham, the galvanising effects of HS2 on investment in the city are already being felt even before the track has begun to be laid.

## **Industrial Strategy challenges**

One of the strengths of an industrial strategy is to be able to bring together concerted effort on areas of opportunity that have previously been in different sectors, or which require joining forces between entrepreneurs, scientists and researchers, industries, and local and national government.

I want to describe 3 of those today.

The first is the [launch of the Faraday Challenge](#).

We know that in the future the potential for renewable energy is often limited by its intermittency – and so we know that the ability to store energy when it generated to be used when it is needed is the key to much greater deployment.

In Britain we have become a world leader in the deployment – and increasingly

in the manufacture – of offshore wind energy systems.

Our automotive sector has also established itself as one of the most innovative and efficient in the world – not least in the cluster of firms large and small here in the Midlands. The United Kingdom is the largest consumer market for electric vehicles in the European Union.

Our universities have world-class expertise in new energy technologies – not least at this University's Energy Institute and the Energy Systems Catapult and the Energy Research Accelerator located here in the West Midlands.

Joining together the research, development, application and manufacture of energy storage technologies – and specifically battery storage – is a huge opportunity for the energy sector and the automotive sector alike.

So as part of our Industrial Strategy Challenge Fund I am today launching the Faraday Challenge, which will put £246 million into research, innovation and scale-up of battery technology.

The first element will be a competition led by the Engineering and Physical Sciences Research Council to bring the best minds and facilities together to create a Battery Institute.

The most promising research completed by the Institute will be moved closer to the market through industrial collaborations led by Innovate UK.

And the Advanced Propulsion Centre will work with the automotive sector to identify the best proposition for a new state-of-the-art open access National Battery Manufacturing Development facility.

The work that we do through the Faraday Challenge will – quite literally – power the automotive and energy revolution where, already, the UK is leading the world.

We have an automotive industry of global renown. Last year, car production hit a ten year high at 1.7 million units.

And to make sure we are ready for the industry's next stage, to advance our position at the forefront of design and manufacturing, we have invested heavily in expertise and research around autonomous electronic vehicles.

So as my second piece of good news, I'm happy to announce the next phase of that investment. The next wave of our collaborative research and development competition – Connected and Autonomous Vehicles Fund, worth £25 million – is open today.

For the first time we will open proposals to off-road vehicles. We could be ushering in the future vehicles and farming machinery which will not only revolutionise the way we produce food but could greatly improve our productivity.

But the advantages of electrification of transport will also mean a reduction in greenhouse gas emissions, as well as increasing quality of life through

reduced pollution and noise.

As is evident from what I have said so far, among the most exciting opportunities facing the world today is in the ability to generate and consume energy much more flexibly than in the past. So this is why I'm pleased to set out my third and final announcement of this speech.

Today we are publishing '[Smart Systems and Flexibility](#)' – a plan to make the UK's energy system smarter will help reduce energy bills, balance demand on the grid and realise up to £40 billion of benefits. It will allow homes and businesses to better manage their electricity use and open up the possibility of flexible energy tariffs to reduce bills and increase efficiency of the energy system.

But, importantly, it will open up new markets by addressing regulatory barriers to electricity storage, driving down costs for consumers through better demand management, and improving the market for new, innovative systems and business models.

Already energy companies are putting forward some innovative ideas, like E.ON offering a solar panels and storage that lets customers store their solar energy which they can now use day or night, potentially cutting their electricity bill in half.

With each of these announcements, we're seeing earning power made a reality. Because it's not just about batteries and storage – it is about all the technologies that will be needed for a clean, cheap, secure energy future – from big pieces of electrical engineering kit to tiny sensors and intelligent devices that will make up the Smart grid. And we see a determined, joined-up, far-sighted and deliberate approach from government.

And that's why the goal of the Industrial Strategy must always be, ultimately, the creation of good jobs for all, everywhere in the country.

The Faraday Challenge to make Britain the go-to place in the world for battery storage.

A 'Smart Systems Plan' to make Britain one of the best places on earth for energy innovation – to them benefit of consumers, workers, investors and the environment.

Investment in autonomous vehicles so we can lead the world's transition to new ways of transport, as well as its energy transition.

A further Devolution Deal for the West Midlands, reinforcing the opportunities spearheaded by its excellent Mayor.

All part of a modern industrial strategy that is proving a rallying point for confidence and optimism across all sectors and businesses.

The motto of this great city of Birmingham is a single word: 'Forward'.

It is the perfect encapsulation of our aims for our modern industrial

strategy and this is the perfect place to talk about those ambitions today.