

# Research and analysis: Computational modelling: Blackett review

This report sets out the findings of a review looking at the rapid evolution of UK computational modelling capability, and how it could be better used in both the public and private sectors.

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## Press release: Stanford-le-Hope man fined over £7,000 for fly-tipping

A man has been ordered to pay more than £7,000 in fines, compensation and costs after he admitted leaving mixed commercial waste on land owned by Thurrock Council.

Billy Prince illegally dumped the waste at a compound located on land at Stanford Road, Stanford-le-Hope, Essex in May 2015.

The compound is used to store street cleaning and highways team equipment and is not an authorised waste collection facility or site permitted for authorised waste disposal.

On 11 May 2015, Prince used a vehicle owned by his employer to unlawfully deposit a quantity of mixed commercial waste at the compound.

CCTV showed a vehicle which was later found to have been driven by Prince depositing waste at the site.

There was a large yellow sign at the compound entrance that stated 'No Tipping'.

The Environment Agency investigated the incident and determined that the offending was deliberate and undermined legitimate waste management activities. The offending caused inconvenience to the council and clean-up costs.

Prince was sentenced at Chelmsford Magistrates' Court last week. The court heard Prince had pleaded guilty at the earliest opportunity and was 'very remorseful' of his actions, having lost his job as a result.

He was fined £2,000, ordered to pay compensation to Thurrock Council to the value of £3,970, costs of £1,105 and a victim surcharge of £120.

Environment Agency Enforcement Team Leader Lesley Robertson said she was pleased with the sentencing outcome, and it showed that the courts were

taking such incidents seriously. She said:

A community order or custody, as well as a financial penalty, could have been imposed. As this was a single offence the penalty was reduced and the magistrates felt a financial penalty, which totalled more than £7,000, was appropriate.

This shows that even with a single fly tip the penalties are very high.

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## [News story: Improving the manufacture of new medicines: apply for funding](#)

Innovate UK has up to £10 million to invest in projects that develop innovative manufacturing methods for producing medicines.

Funding is part of the Industrial Strategy Challenge Fund to support leading-edge healthcare. This challenge will invest £181 million over 4 years to speed up patient access to new drugs and treatments. It should return £1 billion to the UK economy.

[Find out more about this challenge.](#)

## **New approaches must deliver big improvements**

The competition is seeking new approaches that can:

- improve commercially-viable manufacturing processes
- scale-up the production of new medicines through reliable and robust methods
- increase yield of active ingredient
- lower cost of production and goods

Medicines that are in scope are:

- advanced therapy medicinal products
- natural product medicines
- nucleic acid-based drugs
- prophylactic vaccines
- protein or peptide biopharmaceuticals
- small molecular weight pharmaceuticals
- virus and phage therapeutics

The competition will fund a variety of projects across different markets, technologies and medicines. These can include feasibility studies, industrial research and experimental development.

[Find out more about how Innovate UK supports innovation in health and life sciences.](#)

## Competition information

- the competition opens on 12 March 2018, and the deadline for applications is at midday on 9 April 2018
- projects must be led by a business and must include at least one SME
- we expect projects to have costs between £50,000 and £1.5 million and to last between 6 months and 30 months
- projects with costs below £100,000 can be led by an SME working on its own or with partners, while projects above £100,000 must be led by a business working with partners
- businesses can attract up to 70% of their project costs
- a briefing event will be held on 20 March 2018

[Find out more about this competition and apply.](#)

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## [News story: Exercise TOXIC DAGGER – the sharp end of chemical warfare](#)

40 Commando Royal Marines and The Defence Science and Technology Laboratory (Dstl) have staged the UK's biggest annual exercise to prepare troops for Chemical, Biological, Radiological and Nuclear (CBRN) operations. Exercise TOXIC DAGGER is supported by Dstl, along with Public Health England (PHE) and The Atomic Weapons Establishment (AWE), and is the largest exercise of its kind in the country.

Specialists in CBRN from Dstl and AWE are able to create realistic exercise scenarios based on the latest threat information. Completing the training and exercising against these scenarios provides a challenging programme for the Royal Marines to demonstrate their proficiency in the methods to detect, assess and mitigate a CBRN threat.

The three-week programme included Company-level attacks and scenarios concerning CBRN vignettes, concluding with a full-scale exercise involving government and industry scientists and more than 300 military personnel.

Major Rob Garside, from 40 Commando Royal Marines, said:

Working with Dstl means we have the most up-to-date information and a realistic exercise. This ensures we are well prepared for a CBRN operating environment. It is vital we can make rapid decisions and are able to protect and support specialists who come in to deal with any incident. On operations these specialists are on hand to advise and we must ensure we already have a strong understanding of their capabilities and what they require of us as a military force.

The Dstl lead for CBRN exercises said:

40 Commando would be first on the ground in the event of a CBRN incident. We ensure they're up to date on the latest threats and make the exercise truly realistic. They not only have to provide a fighting force in an unstable environment, they must also be able to assess the scene and know what they're dealing with.

That's where Dstl, PHE, AWE and the Defence CBRN Centre come in, as we provide the technical information the Marines require.

Find out more about [Dstl's CBRN work](#)

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## **[News story: David Davis' Foundations of the Future Economic Partnership Speech](#)**

Good morning.

It's a pleasure to be here in Vienna.

A city which, like Paris, Berlin, Amsterdam and of course London, has earned its status as one of Europe's truly global cities.

These are places which shape the nations in which they are situated.

And the ideas and values of those of us who are proud to call ourselves Europeans – as well as being Austrian, French, German, Dutch or indeed British.

I suspect that nowhere is that more true than Vienna, which has a long history as a capital of ideas.

Indeed, I suspect that when the Vienna Circle gathered in the Cafe Central in this city, they produced more challenging ideas in a day than many universities do in a decade.

Ideas that form the intellectual basis of modern politics.

These global cities bring us together.

This week alone, in London's great universities, students from across Europe will be taught the ideas of the Austrian School of Economics.

While your incredible Vienna State Opera will see a leading English soprano star in work by Handel, a Londoner born in Germany.

And just this morning tens of thousands of Austrians will go to work to earn a living from companies which are owned or headquartered in the United Kingdom.

These are the current, lived, shared experiences, and they point the way to a shared future which will continue after Brexit.

Now I know that since our Referendum much thought, throughout Europe, has gone into what Britain's relationship with the European Union really means.

Whether a close partnership is really possible with a nation that, by the decision of its people, is leaving the structures designed to produce such a relationship.

And whether Britain is going to be the same country it has been in the past.

Dependable,

Open,

Fair,

A bastion of Parliamentary democracy,

And a defender of liberty, and the rule of law.

Well, to cut to the chase – we are.

We were before we joined the European Union, we are while we are members, and we will be after we have left.

And I'm here to explain not just why we must continue to work together as the closest of partners and friends, but also how we should go about doing it.

We are currently negotiating the Implementation Period, a crucial bridge to our new partnership.

And next month we will start detailed discussions on exactly how our new relationship will look, which is why this tour of Europe is happening today.

But before we begin that process I believe there are two important principles which can help us point in the right direction.

The first is Britain's determination to lead a race to the top in global standards.

The second is the principle of fair competition, which underpins the best elements of the European economy, and which we must work hard to spread.

## **The vote to leave**

Throughout all of this, it is essential to keep in mind the reasons Britain voted to leave the European Union.

It was not, and never will be, a rejection of European ideals, our shared values and civilisation.

When we joined the European Community it was to participate in an economic organisation which has since adapted in ways that might work for many European nations, but does not work for the United Kingdom.

Our Referendum was a straightforward choice: a decision to move away from pooled sovereignty in favour of more control of our own destiny.

So when my colleagues and I take decisions around the Cabinet table about Brexit...

It's with the intention of ensuring choices about Britain's future are taken by Britain's parliament, directly accountable to the British people.

It's not in order to undermine Europe, or to act against the interests of our nearest neighbours.

Having the European Union and its member states succeed, as our closest friends and allies, is absolutely in our national interest.

And if that doesn't seem obvious, just look at the ways we have used our sovereignty since the Referendum vote itself.

On Saturday our Prime Minister Theresa May explained the United Kingdom's steadfast commitment to European security.

At home, we're delivering an ambitious environmental plan, that aims to leave the environment in a better state than that we found it in.

We have a modern industrial strategy which makes targeted investments to address long-term needs.

And responding to the revolution in modern working practices through the Taylor Review, which aims to ensure workers get the best possible combination of protection and opportunities from the modern economy.

These are the signposts to what the United Kingdom will look like after we

have left the structures of the European Union.

## **Race to the top**

Because when it comes our economic and regulatory systems, and how Britain will use our additional sovereignty, we face a new global context.

The world stands on the brink of the next phase of globalisation.

With competition from across the world and advances in new technology like autonomous vehicles, artificial intelligence and 'smart' technologies which will transform our lives once again.

And as the tectonic plates of the global economy shift ever more rapidly, we must be ready.

So it is the choice of our country and the government of which I am a part – not, as some in continental Europe seem to fear, to lead a competitive race to the bottom...

But to lead a global race to the top.

Because the future of standards and regulations – the building blocks of free trade – is increasingly global.

And the world is waking up to it.

I was struck by what Emmanuel Macron said earlier this month, and I quote him:

If we do not define a standard for international cooperation, we will never manage to convince the middle and working classes, that globalization is good for them.

That's Mr Macron. I could not agree more.

But we have to act on that insight.

For the UK, that means building on the reputation that we already have, as new technologies evolve and develop.

Because if we want to turn inventive ideas into successful industries...

This will require effective, and supportive, regulation.

Regulation which gives confidence to firms considering investment, and to consumers considering how they might use them.

Take the automotive industry – where the game-changing development of driverless cars, properly managed, will make travel faster, cheaper, more reliable and safer.

This is a brand new technology which requires a brand new legal framework: covering insurance, testing regulations, data, privacy, ownership and liability.

While the UK has some of the most creative and exciting facilities and opportunities for automotive investment in the world.

Sustainable growth has to be supported by regulatory environments which deliver for consumers, passengers and wider society – without creating a crushing administrative burden for business.

So we are striving to set the global agenda for effective regulatory frameworks that keep consumers and passengers safe.

Which is why we are developing a long-term regulatory framework for self-driving vehicles, while updating our Code of Practice for testing them.

And we are also introducing new legislation, so that the use of self-driving vehicles can be covered by compulsory insurance.

The same is true for drones.

I soon expect to receive my deliveries from Amazon by drone.

In fact – at this moment, weather permitting, at my home in Yorkshire – a robot lawnmower, designed in Sweden and built in the North East of England, will be mowing the grass.

But if we are to realise the full potential of new aerial drone technology, we must also maintain our world-class aviation safety record – and address security and privacy concerns.

To that end, the Government has set out fresh measures and new legislation, that will build the regulatory framework to ensure that drones are used safely.

Making us one of the first countries in the world to bring forward specific laws in this area.

Because by leading from the front and setting standards, you can drive innovation and enable new technology to thrive.

And by making it global, as President Macron proposes, we can give confidence to consumers without handicapping industry.

## **International cooperation**

This race to the top is essential to tackle our shared challenges.

Work to combat climate change, for example, has to be done at an international level.

Air pollution, rising sea levels greenhouse gases do not respect national or



even continental boundaries.

So international collaboration, such as the Paris Climate Agreement, is vital if we are going to protect our environment for future generations.

And in consumer standards, we will play a full role in the push for global standards in car safety, supporting the work of the United Nations.

So we will build on the leading reputation we have, and take other countries with us, as new challenges emerge.

And yes – that will mean continuing to work with other European countries to drive new standards.

This is an area where we should be respectful partners, not suspicious competitors.

## **High standards**

The United Kingdom is incredibly well placed to make this work.

We have an unrivalled track record in promoting high standards, both at home and abroad.

Standards for products and services that originated from our own national bodies are adopted the world over, in a wide range of sectors.

Eight out of ten of the most used and implemented standards worldwide, ranging from product quality to environmental management, originated in the UK.

The international standard for making large-scale events more sustainable – developed for the 2012 London Olympics – is now being put to good use at the Winter Olympics in Pyeongchang.

While we have been a member of the European Union, the UK has been instrumental in the design of its rules.

Why? Because we are a leading proponent of the rules based international system.

Be that in security, in defence or trade.

From Linz to London, from Salzburg to Stirling – we have helped lead the way in protecting employees from exploitative working practices.

Protecting shoppers from shoddy goods.

Ensuring patients are safe and have access to the best public health protection.

And holding businesses to high standards.

While in the European Union, the United Kingdom led the charge for business

practices and more accountability to the benefit of all involved.

Just look at our record:

- On safety at work, our industrial workers are the safest in Europe. The fatality incidence rate, as it is delicately known, is the lowest in Europe, thanks, not to European legislation, but to British laws initially passed in the early and mid-70s
- Britain was one of the first Member States to introduce the right to flexible working hours for parents and carers in 2003
- In financial services we go well beyond the minimum European standards by ring-fencing retail banking from more risky investment activity, and we've taken the lead in pushing for higher capital ratio requirements
- We've spearheaded a change in culture in the banking and insurance industries, with new regimes to address mismanagement. There's nothing in European legislation which goes as far
- We have led the way in implementing measures to reduce multinational tax avoidance, and are one of only three European Union countries to operate a tax disclosure regime
- We pushed for – and have always defended – a rigorous state aid system with robust enforcement mechanisms within the European Union
- The United Kingdom was the first country in the world to set legally binding targets to reduce our greenhouse gas emissions. That saw us reduce our emissions by 40% since 1990 – faster than any G7 country or European country
- And after Brexit, plans are in the pipeline for a new, independent body that would continue to uphold environmental standards

We will continue our track record of meeting high standards, after we leave the European Union.

## **Our commitment**

Now, I know that for one reason or another there are some people who have sought to question that these are really our intentions.

They fear that Brexit could lead to an Anglo-Saxon race to the bottom.

With Britain plunged into a Mad Max style world borrowed from dystopian fiction.

These fears about a race to the bottom are based on nothing, not our history, not our intentions, nor our national interest.

Frankly, the competitive challenge we in the UK and the European Union will face from the rest of the world – where 90 percent of growth in markets will come from – will not be met by a reduction in standards.

We will never be cheaper than China, or have more resources than Brazil.

This challenge can only be met by an increase in quality, an increase in service levels, an increase in intellectual content.

So while I profoundly disagree with those who spread these fears – it does remind us all that we should provide reassurance.

And that's why it's a message delivered by every member of Britain's government as we meet our European counterparts.

Whether it's Theresa May's commitment to maintaining and enhancing workers rights.

The Chancellor's powerful advocacy for the stability of the European banking system.

Michael Gove's crusading zeal to improve animal welfare and environmental outcomes.

Or my friend the Foreign Secretary, who explained in an important speech last week how ending membership of the European Union institutions would not stop our shared European culture, values, civilisation.

## **Ongoing trade with the EU**

This race to the top has a clear read across to our exit negotiations.

The future trade talks will be a negotiation like no other.

We start from a position of total alignment, with unprecedented experience in working with one another's regulators and institutions.

The agreement we strike will not be about how to build convergence, but what we do when one of us chooses to make changes to our rules.

Neither side should put up unnecessary barriers during this process.

Take a car produced here in Austria to be exported to the United Kingdom.

Currently, that vehicle only has to undergo one series of approvals, in one country, to show that it meets the required regulatory standards.

And those approvals are accepted across the European Union.

That's exactly the sort of arrangement we want to see maintained even after we leave the European Union.

And while we will be seeking a bespoke agreement, reflecting our shared history and existing trade, there are already precedents outside the EU that we can look to.

The European Union itself has a number of mutual recognition agreements with a variety of countries from Switzerland to Canada to South Korea.

These cover a huge array of products – toys, automotives, electronics, medical devices – and many many more.

A crucial part of any such agreement is the ability for both sides to trust each other's regulations and the institutions that enforce them. With a robust and independent arbitration mechanism.

Such mutual recognition will naturally require close, even-handed cooperation between these authorities and a common set of principles to guide them.

And the certainty that Britain's plan – its blueprint for life outside of the European Union – is a race to the top in global standards.

And not a regression from the high standards we have now

It will provide the basis of trust that means that Britain's regulators and institutions can continue to be recognised.

This will be a crucial part of ensuring our future economic partnership is an open one, and that trade remains as frictionless as possible – something particularly important in the context of Ireland.

I am certain that is in the interests of both sides.

And because of that, I am certain that we can get this right.

## **Fair competition**

But of course, it will not be easy.

We are seeking a new framework that allows for a close economic partnership – that recognises the fact that we are leaving the EU.

That recognises our trusted, historic relationship, upon which many of our companies depend.

And the principle of fairness, and fair competition, which is essential to any trade agreement between any two states, will be particularly important here.

Turning this into a functioning economic partnership will be a mutual endeavour – as will the design of mechanisms to ensure both sides respect open trade and fair competition.

But I have three principles in mind which will help illustrate what we mean by fairness.

First, fair competition means that it cannot be right that a company situated in the European Union would be able to be heavily subsidised by the state but still have unfettered access to the United Kingdom market. And vice versa.

The UK has long been a vocal proponent of restricting unfair subsidies to ensure competitive markets.

It is good for taxpayers.

It is good for consumers.

And it ensures an efficient allocation of resources.

These principles are true across the globe, and will continue to be true in the United Kingdom-European Union relationship.

Second, fairness means protecting consumers against anti-competitive behaviour.

The United Kingdom will continue to be a leading advocate of open investment flows after we leave the European Union.

But it cannot mean that an European Union company could merge with a United Kingdom company and significantly reduce consumer choice.

In our interconnected, globalised world, where goods, services and investment flow across borders...

There will still be a mutual benefit to the UK and European Union cooperating to protect our consumers, our taxpayers and our businesses by promoting fair competition.

So we will look to develop ways to deliver our shared goal: ensuring fair competition across the United Kingdom and the countries of Europe.

Because it's in all our interests to make sure that people are properly protected, and have a right to recourse when things go wrong.

And third, fairness means operating with a degree of mutual respect.

Respect in our desire to reach a deal that recognises the distinct legal order of each side.

And in our determination to carry out the sovereign decision of the British people.

If we follow these three critical principles, we will reach an ambitious future partnership that ensures trade remains as open and frictionless as possible.

## **Conclusion**

Brexit will inevitably mean a change in the way British, Austrian and other European Union companies do business.

It has to, if we are to make good on the referendum result, and carve a path for Britain to strike its own trade deals, have its own immigration policy, and make our courts sovereign once more.

My message to you, in this room, is that these goals will not change the kind of country Britain is.

A dynamic and open country.

That supports businesses like yours to grow, to invest, and to innovate in a competitive, open and fair market.

One leading a race to the top in global standards.

Projecting the values of fair competition.

And respecting the democratic decisions of people across Europe .

In a way that benefits the whole of Europe and all its citizens.

Thank you very much.