

Government backs 3D X-ray technology to capture images of diseased bones in 40 seconds

- New advanced imaging centre will generate precise 3D images of the internal structure of objects from aircraft wings to bones
- £81 million government investment will help businesses to speed up development of high-value products and help avoid costly manufacturing errors
- laser centre furthers the pioneering work of 2018 Physics Nobel Prize winner Donna Strickland and comes as UN marks [International Day of Women and Girls in Science](#)

A new advanced imaging centre will receive £81 million government support, housing super-bright lasers to produce state-of-the-art 3D X-rays in just 40 seconds.

This will help speed up the development of new medical treatments, bring down the cost of manufacturing and identify design improvements.

This innovative technology will be available to UK businesses at the new [Extreme Photonics Applications Centre \(EPAC\)](#) in Oxfordshire. This could benefit pharmaceuticals to airplane wings, batteries for electric vehicles or even artificial organs – boosting the UK's manufacturing sector, including across health and medicine.

These new technologies will be able to speed up the development of new treatments. For example, high resolution 3D imaging of a diseased bone with existing technology can take hours or days: the new systems will produce detailed 3D X-rays in just 40 seconds.

Opening in 2024 at the [Harwell Science and Innovation Campus](#) in Oxfordshire, the new centre will bring together industrial, scientific and defence industries so that they can exploit its world-leading capabilities.

These plans come as the UN today marks International Women and Girls in Science Day which aims to encourage women and girls to pursue a career and subjects relating to science and technology.

The new national research centre will build on the work undertaken by 2018 Physics Nobel Prize Winner, and third woman in history to receive this accolade, Donna Strickland – alongside Arthur Ashkin and Gerard Mourou. Her work to develop high-intensity ultrashort pulses of light beams transformed whole sectors including medicine technology and is now a common technique in laser surgery, among other disciplines.

Science Minister Chris Skidmore said:

Today's launch of the £81 million advanced imaging centre will enhance the UK's leading role in laser technology, including revolutionising medical imaging.

I'm especially delighted to be launching the centre with Physics Nobel Prize winner Donna Strickland – only the third woman in history to achieve this award – on International Day of Women and Girls in Science.

Physics Nobel Prize Winner Donna Strickland said:

Science education helps develop skills in problem solving and critical thinking necessary to address some of the world's biggest challenges. When we encourage girls and women to engage with science, they bring more diversity to science and fresh perspectives that can only help in finding innovative solutions.

[UK Research and Innovation \(UKRI\)](#) Chief Executive Professor Sir Mark Walport said:

From informing the design of next generation aerodynamic aircraft components to examining 3D images of human bones, the new Extreme Photonic Applications Centre has applications across many sectors of the economy.

This technology will create advances in the science and understanding of materials imaging. UKRI will work with a range of industry partners to realise its potential.

Funding is provided through the government's £830 million Strategic Priorities Fund, with additional investment from the Ministry of Defence, and forms part of the commitment to significantly boost research and development funding across every part of the UK.

The Strategic Priorities Fund supports high-quality discipline research and development priorities, with investment also going towards autonomous systems and national collections.

Notes to editors

EPAC will rely on laser technology developed by the [Science and Technology Facilities Council's \(STFC\)](#) Central Laser Facility at the Rutherford Appleton Laboratory, part of the Harwell Research and Innovation Campus.

Funding is provided from UK Research and Innovation's (UKRI) Strategic Priorities Fund (£71.5 million) with further investment of £10 million from the Ministry of Defence.

About the Strategic Priorities Fund

The £830 million [Strategic Priorities Fund \(SPF\)](#) supports high quality multidisciplinary research and development priorities and is delivered through UK Research and Innovation.

[Naming employers who fail to pay minimum wage to be resumed under revamped rules](#)

- Employers who fail to pay their workers the National Minimum Wage to be publicly named
- review of public naming scheme ensures government calls out cases of abuse
- changes to National Minimum Wage regulations will ensure compatibility with modern pay arrangements, protecting workers while reducing the burden on businesses

The naming scheme will resume calling out businesses failing to pay their workers the National Minimum Wage, while increasing support for employers to comply with NMW legislation. The changes, which will see naming rounds occur more often, will enhance the effectiveness of the measure as a deterrent.

The government has also increased the threshold for naming employers, meaning that firms which owe arrears of more than £500 in National Minimum Wage payments to their workforces will now be named. The threshold was previously £100. This new proportionate approach will mean that some businesses falling foul of the rules by minimal sums will not be named, provided they correct any errors. These businesses that underpay by less than £100 will have the chance to correct their mistakes without being named, still have to pay back workers and can face fines of up to 200% of the arrears.

Business Minister Kelly Tolhurst said:

Anyone who is entitled to the minimum wage should receive it – no ifs, no buts – and we’re cracking down on companies that underpay their workers.

We also want to make it as easy as possible for employers, especially small businesses and those trying to do right by their staff, to comply with the NMW rules, which is why we’re reforming regulations.

The government is today changing regulations to widen the range of pay arrangements available to business employing 'salaried hours workers', which are workers who receive an annual salary in equal instalments for a set number of contracted hours. Under these changes, workers who are often paid hourly or per day and consequently have different pay checks every month, such as those in the retail industry, can be classified as salaried workers. The changes will provide more flexibility in how salaried workers are paid, without reducing protections for workers. At the same time, businesses employing these workers are less likely to be caught out by the NMW legislation due to the differences in their hours from one month to the next.

These changes include:

- permitting additional payment cycles for salaried workers, including fortnightly and 4-weekly cycles, providing choice and flexibility to employers and workers
- allowing employers to choose the 'calculation year' fit for their workers, helping them to better monitor the hours worked by salaried workers and identify potential underpayment of wages
- ensuring salaried workers can receive premium pay, for example for working on Bank Holidays, without losing their entitlement to equal and regular instalments in pay

These changes are expected to come into force on 6 April 2020, subject to normal Parliamentary approvals.

Matthew Taylor, Director of Labour Market Enforcement, said:

I welcome today's announcement by the government and believe employers will benefit from the greater clarity these revisions bring to the minimum wage rules for salaried workers.

Particularly welcome is the news of the reintroduction of the NMW Naming Scheme, that both recognises the sharper focus advocated by my predecessor and follows a stronger compliance and education approach to help employers get it right.

Additionally, the government has decided that employers offering salary sacrifice and deductions schemes will no longer be subject to financial penalties if the scheme brings payment below the National Minimum Wage rate (which can be up to 200% of arrears). For example, benefit schemes where staff buy products from their employer and pay for these via salary deductions. The waiver will be subject to strict criteria – including that the worker has opted into the scheme. Deductions of NMW for uniform and other items connected with the worker's employment will continue to be penalised. Full details will be published later today in the National Minimum Wage enforcement policy document.

As well as making changes to the rules, the government is doing more to support businesses to comply with National Minimum Wage, so that they pay their staff correctly first time. The government will:

- improve NMW guidance available through the GOV.UK website, making it more accessible and easier to navigate. This includes new thematic guides on specific compliance issues, such as pay deductions and uniform policy. This revamped guidance will be published shortly.
- proactively support new, small businesses. HMRC will visit selected new, small businesses to educate them on the National Minimum Wage and support those businesses in getting their practices right from the start
- provide more support via a helpline for employers who operate deduction or salary sacrifice schemes. Employers will be able to access support and information directly from HMRC

This update to National Minimum Wages regulations comes ahead of a major overhaul of labour market enforcement, with the creation of a Single Enforcement Body to crack down on employment law breaches, set to be announced as part of the forthcoming Employment Bill.

Additional information

- a worker is classified as doing 'salaried hours' work if they are paid a set number of hours each year under their contract and an annual salary in equal weekly or monthly amounts
- workers cannot currently be classified as salaried hours if they are paid every 2 or 4 weeks. These workers are 'time-paid' workers, paid hourly or per day. This will change, giving greater stability to workers and clarity about earnings. It is likely to affect a relatively small number of workers, particularly in the retail industry
- premium payments: under the current NMW rules, premium payments (such as for working on a bank holiday) can prohibit workers from being treated as salaried workers under the NMW regulations and this could affect enforcement by HMRC

The government is committed to NMW enforcement:

- budget for enforcing £27.4 million for 2019 to 2020, up from £13.2 million in 2015 to 2016
- in 2018 to 2019, HMRC identified £24.4 million in arrears, for over 220,000 workers
- in 2018 to 2019, a record amount of penalties (over 1,000) issued, totalling over £17 million

Storage limit for frozen eggs, sperm and embryos to be reconsidered

People could have their frozen eggs, sperm and embryos stored for longer, as the government today launches a call for views on whether the current law to store them for 10 years should change.

Currently the storage period is limited to a maximum of 10 years, after which people must choose whether to undergo fertility treatment, or have their frozen eggs, sperm and embryos destroyed.

Only those stored for medical reasons, such as cancer treatment and premature infertility, can be preserved for longer – up to 55 years in total.

The consultation will consider whether the limit should be extended in line with significant improvements in freezing technologies.

Both men and women may choose to freeze their sperm or eggs for a variety of reasons, such as wanting to have children in future but not having a partner, or to preserve them while being treated for cancer.

The consultation will also consider arguments about whether women are disproportionately affected by the current time limit.

The number of women choosing to freeze their eggs has increased by 257% in the last 5 years. There were 1,462 egg freezing cycles in 2017 compared with 410 in 2012.

If a woman freezes her eggs in her 20s when her fertility is at its peak, she has a better chance of achieving a healthy pregnancy. However, if frozen at this age, the 10-year storage limit will expire in the woman's 30s, which may be too early for some to start a family.

Currently, the most common age for women to freeze their eggs for treatment is 38, when the likelihood of a successful pregnancy from using these eggs is much lower.

The government will also consider:

- the safety and quality issues related to prolonged storage
- the additional demand for storage facilities that will arise if the statutory time limit is increased

Minister for Care Caroline Dinéage said:

Every person should be given the best possible opportunity to start a family, which is why it is so important that our laws reflect the latest in technological advancements.

Although this could affect any one of us, I am particularly concerned by the impact of the current law on women's reproductive choices. A time limit can often mean women are faced with the heart-breaking decision to destroy their frozen eggs, or feel pressured to have a child before they are ready.

As the number of people seeking this storage rises, we want to hear from the public about whether the law is fair and proportionate, and ensure everyone is empowered to choose when they become parents.

Sally Cheshire CBE, Chair of the Human Fertilisation and Embryology Authority (HFEA), said:

The HFEA welcomes the launch of the consultation on the gamete and embryo storage limits.

As the fertility regulator we have heard the voices of patients and clinicians calling for a review and extension of the current time limit for egg, embryo and sperm storage.

While any change to the 10-year storage limit would be a matter for Parliament as it requires a change in law, we believe the time is right to consider what a more appropriate storage limit could be that recognises both changes in science and in the way women are considering their fertility.

Major boost for bus services as PM outlines new vision for local transport

Bus services across the country will be transformed with simpler fares, thousands of new buses, improved routes and higher frequencies, the PM will announce today.

In a statement to Parliament, the PM will announce £5 billion of new funding to overhaul bus and cycle links for every region outside London.

He will set out a new vision to level up local transport connections throughout the country, making every day journeys easier, greener and more convenient.

The package of investment will boost bus services by focusing on a range of priorities, set to include:

- Higher frequency services, including evenings and weekends, to make it easier and less restrictive for people to get around at any time of day
- More 'turn up and go' routes where, thanks to higher frequency, people won't have to rely on timetables to plan journeys
- New priority schemes will make routes more efficient, so that buses

avoid congested routes and can speed passengers through traffic

- More affordable, simpler fares
- At least 4,000 new Zero Emission Buses to make greener travel the convenient option, driving forward the UK's progress on its net zero ambitions

Today's new 5-year funding package builds on the Government's determination to make buses work better for their passengers. The details of these programmes will be announced in the upcoming National Bus Strategy, to be published later this year at the Comprehensive Spending Review, and follows the allocation of £170 million last week to support more electric buses, increase rural mobility and trial new 'Superbus' services.

Cycle routes will also see a major boost across the country with over 250 miles of new, high-quality separated cycle routes and safe junctions in towns and cities to be constructed across England, as part of the multi billion pound package announced today.

Dozens of new 'Mini-Holland' schemes will be taken forward to transform town centres across the country to make them safer to get around. These pilots of low-traffic neighbourhoods, will see government working closely with local councils to reduce lorry traffic, making side streets safer to walk, cycle and play in while maintaining the vehicle access people need to get around.

As a core part of the Government's work to create a long-term cycling programme and budget, all new routes will be built to tough new design standards, ensuring more people can cycle safely and making getting around by bike a more convenient option.

Prime Minister Boris Johnson said:

Local transport connections have a truly transformative role to play in levelling up infrastructure across the country.

Our daily journeys for work or leisure are about so much more than just getting from A to B – they are the key to accessing skilled jobs and opportunities, boosting businesses and unlocking economic growth for towns, cities and regions across this country.

That's why improving connectivity by overhauling bus services and making cycling easier than ever is such an important step forward, to make sure every community has the foundations it needs to thrive.

Transport Secretary Grant Shapps said:

We want everyone across this country to have the transport services they need to improve their lives and opportunities – to do that, we must invest in the here and now.

Through today's buses funding we'll be bringing about a transformation in bus services to every community, speeding up journeys and capping fares to make high-quality services the norm.

Our long-term commitment to cycling could not be clearer, with money for new routes, more cyclist support and new 'Mini-Holland' schemes, set to make our streets the safest they have been for cyclists.

Chancellor Sajid Javid said:

We want to level up transport services in every region of the UK. As part of the plan, we are investing £5 billion in bus and cycle links.

The extra funding will improve people's everyday journeys, making them quicker and easier.

Government convenes latest Honda Swindon Taskforce

Business Secretary Andrea Leadsom held the latest meeting of the Honda Swindon Taskforce today (10 February 2020).

Meeting in Swindon, the Taskforce brought together civic leaders, local partners and MPs, Honda, Unite the Union, sector representatives and government officials to discuss support for employees affected by Honda's decision and how best to stimulate more economic growth in Swindon.

Business Secretary Andrea Leadsom said:

Honda's decision to close manufacturing operations in Swindon was a significant blow to the local community. Since it was set up, the Honda Taskforce has worked hard to support the workforce and the supply chain, as well as to find a positive way forward for developing the site.

We are clear that Swindon remains a vital location for advanced manufacturers to invest – in large part thanks to the skills of the

dedicated local workforce.

The Taskforce reviewed support work undertaken to date and discussed future priorities and work going forward, including:

- announcing that Swindon will benefit from the £3.6 billion Towns Fund supporting an initial 100 Town Deals across England
- announcing that Swindon Borough Council will benefit from the £1 billion Future High Street Fund
- a new Institute of Technology for Swindon delivering higher technical education in STEM subjects including digital, engineering and manufacturing, health and life sciences
- the £16 million supply chain programme, designed to raise workforce capability and increase the productivity of the UK's automotive supply chain, that is available to Honda suppliers

Swindon and the surrounding area is a particularly attractive place for investors, as Swindon College will lead one of 12 prestigious new Institutes of Technology, whilst a new £16 million programme is providing support to SME businesses in the automotive supply chain.

The Taskforce and the government remain fully committed to providing ongoing support to local leaders, Honda employees and the wider supply chain.

The Honda Steering Group that supports the Taskforce also continues to meet, focusing on helping to mitigate impacts on the Swindon workforce as well as those operating within the supply chain.