[Press release: New figures show large numbers of businesses and charities suffer at least one cyber attack in the past year](#)

- Over four in ten of all UK businesses suffered a breach or attack in the past 12 months.
- Most common attacks were fraudulent emails followed by cyber criminals impersonating an organisation online.
- Strong reminder to bosses to act ahead of new data protection laws coming into force on 25 May.

With one month to go until new data protection laws come into force, UK businesses are being urged to protect themselves against cyber crime after [new statistics](#) show over four in ten (43%) of businesses and two in ten charities (19%) suffered a cyber breach or attack in the past 12 months.

This figure rises to more than two thirds for large businesses, 72% of which identified a breach or attack. For the average large business the financial cost of all attacks over the past 12 months was £9,260 with some attacks costing significantly more.

The most common breaches or attacks were via fraudulent emails – for example, attempting to coax staff into revealing passwords or financial information, or opening dangerous attachments – followed by instances of cyber criminals impersonating the organisation online, then malware and viruses.

Minister for Digital and the Creative Industries, Margot James, said:

> We are strengthening the UK's data protection laws to make them fit for the digital age but these new figures show many organisations need to act now to make sure the personal data they hold is safe and secure.

> We are investing £1.9 billion to protect the nation from cyber threats and I would urge organisations to make the most of the free help and guidance available for organisations from the Information Commissioner's Office and the National Cyber Security Centre.

As part of the Government's Data Protection Bill, the Information Commissioner's Office (ICO) will be given more power to defend consumer interests and issue higher fines to organisations, of up to £17 million or 4 per cent of global turnover for the most serious data breaches. The new Bill requires organisations to have appropriate cyber security measures in place

to protect personal data.

The Government is introducing [new regulations](#) to improve cyber security in the UK's critical service providers in sectors such as health, energy and transport, and we have established the world-leading National Cyber Security Centre (NCSC) as part of plans to make the UK one of the safest places in the world to live and do business online.

Ciaran Martin, CEO of the NCSC, said:

> Cyber attacks can inflict serious commercial damage and reputational harm, but most campaigns are not highly sophisticated.

> Companies can significantly reduce their chances of falling victim by following simple cyber security steps to remove basic weaknesses. Our advice has been set out in an easy-to-understand manner in the NCSC's small charities and business guides.

The new statistics also show, among those experiencing breaches, large firms identify an average of 12 attacks a year and medium-sized firms an average of six attacks a year. Smaller firms are still experiencing a significant number of cyber attacks, with two in five micro and small businesses (42 per cent) identifying at least one breach or attack in the past 12 months, which could impact profits and reduce consumer confidence.

However, the survey shows more businesses are now using the Government-backed, industry-supported Cyber Essentials scheme, a source of expert guidance showing how to protect against cyber threats.

It shows three quarters of businesses (74 per cent) and more than half of all charities (53 per cent) say cyber security is a high priority for their organisation's senior management.

Organisations have an important role to play to protect customer data. [Small businesses](#) and [charities](#) are urged to take up tailored advice from the National Cyber Security Centre. Larger businesses and organisations can follow the [Ten Steps to Cyber Security](#) for a comprehensive approach to managing cyber risks and preventing attacks and data breaches.

Organisations can also raise their basic defences and significantly reduce the return on investment for attackers by enrolling on the Cyber Essentials initiative and following the regularly updated technical guidance on [Cyber Security Information Sharing Partnership](#) and the NCSC website.

Information Commissioner, Elizabeth Denham, said:

"Data protection and cyber-security go hand in hand: privacy depends on security.

"With the new data protection law, the General Data Protection Regulation (GDPR) taking effect in just a few weeks, it's more important than ever that organisations focus on cyber-security. That's why we've been working with the Department for Culture Media and Sport (DCMS) and the National Cyber Security Centre (NCSC) to offer practical security steps that organisations can consider to keep data safe.

"We understand that there will be attempts to breach systems. We fully accept that cyberattacks are a criminal act. But we also believe organisations need to take steps to protect themselves against the criminals. I'd encourage organisations to use the new regulations as an opportunity to focus on data protection and data security.

"Increasing the public's trust and confidence in the way people's data is handled is our priority and good data protection practice will go some way to making the UK the safest place to be online."

Organisations which hold and process personal data are urged to prepare and follow the [guidance and sector FAQS](https://ico.org.uk/for-organisations/resources-and-support/getting-ready-for-the-gdpr-resources/ freely available from the Information Commissioner's Office. Its dedicated advice line for small organisations has received more than 8000 calls since it opened in November 2017, and the Guide to the GDPR has had over one million views. The regulator also has a GDPR checklist, and 12 steps to take now to prepare for GDPR.

The survey also revealed:

*Larger businesses and charities are more likely than the average to identify cyber attacks. Breaches were more likely to be found in organisations that hold personal data and where employees use their own personal devices for work.

*A huge proportion of all organisations are still failing to get the basics right. A quarter (25 per cent) of charities are not updating software or malware protections (27 per cent) and a third of businesses (33%) do not provide staff with guidance on passwords.

*More than one in 10 (11 per cent) of large firms are still not taking any action to identify cyber risks, such as health checks, risk assessments, audits or investing in threat intelligence.

Notes to editors:

*Media enquiries – please contact the DCMS News and Communications team on 020 7211 2210. Read the Cyber Security Breaches Survey 2018.

*The Cyber Security Breaches Survey 2018 was carried out for DCMS by Ipsos MORI, in partnership with the Institute for Criminal Justice Studies at the University of Portsmouth. A telephone survey of 1,519 UK businesses (excluding agriculture, forestry and fishing businesses) and 569 UK registered charities was undertaken from 9 October 2017 to 14 December 2017. The business sample included 1.004 micro and small firms (with 1 to 49

staff), 263 medium firms (with 50 to 249 staff) and 252 large firms (with 250 or more staff). The data have been weighted to be statistically representative of these two populations.

*Full survey findings and technical details can be found on [this page](#).

*The Cyber Security Breaches Survey is an Official Statistic and has been produced to the standards set out in the Code of Practice for Official Statistics.

*The Cyber Security Breaches Survey 2018 was carried out for DCMS by Ipsos MORI, in partnership with the Institute for Criminal Justice Studies at the University of Portsmouth. A telephone survey of 1,519 UK businesses (excluding agriculture, forestry and fishing businesses) and 569 UK registered charities was undertaken from 9 October 2017 to 14 December 2017. The business sample included 1,004 micro and small firms (with 1 to 49 staff), 263 medium firms (with 50 to 249 staff) and 252 large firms (with 250 or more staff). The data have been weighted to be statistically representative of these two populations.

*The Cyber Security Breaches Survey comes on the back of recent Government action to boost cyber security, including:

*Announcing a [new £13.5 million cyber innovation centre](#), located in the Queen Elizabeth Olympic Park, to help secure the UK's position as a global leader in the growing cyber security sector.

*The Government is encouraging all firms to act: the 10 Steps to Cyber Security provides advice to large businesses, and the Cyber Essentials scheme is available to all UK firms and charities. The Cyber Aware campaign aims to drive behaviour change amongst small businesses and individuals, so that they adopt simple secure online behaviours to help protect themselves from cyber criminals.

*Ipsos MORI surveyed 1,519 UK businesses and 569 UK registered charities by telephone from 9 October 2017 to 14 December 2017.

*The proportions of medium and large businesses achieving the Cyber Essentials standards have risen steadily since 2016 – up from 4 per cent to 13 per cent of medium businesses and from 10 per cent to 25 per cent of large businesses.

*The survey found 38% of businesses and 44% of charities (surveyed between October and December 2017) had heard of the [new incoming data protection laws](#). Of those aware, 27% of businesses and 26% of charities had made changes to their operations as a result. Of these, just under half of those businesses and over one third of charities, made changes to their cyber security practices.

Press release: High-Tech headgear helps promote safer driving

The Government company, responsible for the country's motorways and major A roads, has developed a free app to raise drivers' awareness of their blind spots.

What Highways England's Virtual Reality App looks like

The app can be accessed on a smart phone attached to a simple pair of cardboard goggles so drivers can use it before they get behind the wheel.

John Walford Commercial Vehicle Incident Prevention Team Leader said:

> We have set ourselves the long term vision that no-one should be harmed while travelling or working on our roads, and within that it is doing all we can to help reduce collisions involving lorries because they tend to have a greater impact when they do occur.
>
> They most commonly occur when trucks change lanes or attempt to overtake and using this technology allows us to provide a realistic environment for commercial vehicle drivers so that they can experience the impact of not using their mirrors to check blind spots. It's just one of the steps we're taking to help improve safety for this valuable group of drivers and ultimately everyone who uses our network.

The app includes 5 road safety scenarios for both left and right hand drive vehicles and has been developed to stress the importance of adjusting mirrors to cater for driving in a different way when in the UK. The blind spot app has 5 scenarios:

- mirror adjustment
- identifying vehicles in blind spots
- joining a motorway from a slip road
- overtaking
- tailgating

It is on show at this week's Commercial Vehicle Show taking place at the NEC in Birmingham, with Highways England giving the free headsets to visitors.

Although developed for commercial vehicle drivers, the app could also benefit private motorists by giving them a sense of what commercial vehicle drivers experience every day. For example, helping them to understand the location of commercial vehicle blind spots and hence reduce the potential for unnecessary accidents.

The virtual reality app is just an example of the safety initiatives that

Highways England has developed as part of its commercial vehicle incident prevention programme. The programme includes initiatives to improve the design and maintenance of commercial vehicles and initiatives to assist operators and drivers.

Examples include:

- a joint initiative with police using HGV cabs to target dangerously driven vehicles (one of the cabs with police representatives will be at the Show);
- the installation of sophisticated tyre/vehicle measurement (tyre pressure, tyre tread depth, vehicle weight, axles heat) technology at key locations;
- initiatives with the Health & Safety Executive and the police to improve load security; and interventions to reduce diesel spillages which damage the carriageway and cause long delays.
- development of truck stop apps in Polish and Romanian (they can also be seen at the Commercial Vehicle Show).

General enquiries

Members of the public should contact the Highways England customer contact centre on 0300 123 5000.

Media enquiries

Journalists should contact the Highways England press office on 0844 693 1448 and use the menu to speak to the most appropriate press officer.

Press release: UK astronomers open new window on the Universe

The detailed information of this census of over one billion stars, which comes from the Gaia mission, allows their positions and distances to be mapped to unprecedented precision giving us a 3-dimensional map of our Milky Way Galaxy.

This new release of information shows us 600 times more stars than previously available, covering a volume 1,000 times larger than Gaia's own first data release two years ago, with precision some one hundred times improved. These results allow improved study of almost all branches of astronomy: from traces of the formation of the Solar System; through how stars evolve; through the current structure, the assembly and evolutionary history of the Milky Way; to mapping the distribution of Dark Matter in the Galaxy; to establishing the distance scale in the Universe; to discovery of rare objects.

This second data release allows progress in all these studies by providing not only distances and apparent motions across the sky for 1.3billion sources, but also very precise measurements of brightness and colour for an even larger catalogue of 1.7billion sources. Seven million stars have their line of sight velocities measured, providing full 6-dimensional – three space positions, 3 space motions – information, determining full orbits for those stars in the Milky Way. This is the information needed to weigh the Galaxy, and determine the distribution – and perhaps the properties – of Dark Matter, the mysterious substance which dominates the mass of the Galaxy and the Universe.

Credit: ESA/Gaia/DPAC

The mission is reliant on the work of UK teams at the Universities of Cambridge, Edinburgh, Leicester, Bristol, the Mullard Space Science Laboratory (MSSL) at UCL London and the Science and Technology Facilities Council's (STFC) RAL Space facility, all of whom are contributing to the processing of the vast amounts of data from Gaia, in collaboration with industrial and academic partners from across Europe.

Professor Gerry Gilmore from the University of Cambridge, UK Principal Investigator for the UK participation in the Gaia Data Processing and Analysis Consortium, and one of the original proposers of the mission to ESA, said:

"The combination of all these unprecedented measures provides the information for astronomers to take the next big steps in mapping the formation history and evolutions of stars and our Milky Way Galaxy. There is hardly a branch of astrophysics which will not be revolutionised by Gaia data. The global community will advance our understanding of what we see, where it came from, what it is made from, how it is changing. All this is made freely available to everyone, based on the dedicated efforts of hundreds of people. There are so many exciting things to do better with the exquisite Gaia data we anticipate new science papers appearing every day after this release."

UK participation in the European Space Agency mission itself has been funded by the UK Space Agency and scientists and engineers from around the UK played key roles in the design and build of Gaia.

The UK Space Agency has already contributed £15 million to Gaia and is committed to spending a further £4 million on processing and analysing the data.

Dr Graham Turnock, Chief Executive of the UK Space Agency, said:

"We're working with industry and academia to support cutting-edge science that will lead to new discoveries about our Galaxy.

"The UK involvement in this exciting mission shows that our academics and engineers are world leaders in the space sector. As part of ESA we will continue to be at the forefront of research and deeply involved in missions such as ExoMars, with its Airbus-built rover, and the BepiColombo mission to

Mercury."

One of the new aspects of the Gaia data released today are radial velocities derived from Gaia spectra. Gaia releases radial velocities for some 7million stars, many times more than have been measured in the history of astronomy up to now, with vastly more to come in future releases.

Professor Mark Cropper leads the team at Mullard Space Science Laboratory/UCL that made the UK contribution to this spectroscopic processing effort and said:

"Spectra provide the critical information to complement Gaia's astrometry, providing line of sight (radial, Doppler-shift) velocities and precise measures of stellar chemical element abundances. Gaia measures huge numbers of individually low-signal spectra – nearly 20 billion separate spectra to date – which must be carefully combined to deliver their full value. This demanding process is worth the effort! The remarkable map of the changing average radial velocity as we look around the sky is direct evidence of the rotation of our Galaxy."

Dr Floor van Leeuwen from the University of Cambridge has been Project Manager for the UK and European photometric processing work, and is a leading co-author on the example science papers illustrating Gaia's impact on our knowledge of star clusters and satellite galaxies in the outer Milky Way. Speaking of the new findings he said "Groups of dwarf galaxies, including the Magellanic Clouds, can now be observed to be moving around in very similar orbits, hinting at a shared formation history. The accurate observed motions and positions of the globular clusters and dwarf galaxies provide tracers of the overall mass distribution of our galaxy in a way that has not been possible with this level of accuracy before."

STFC helped the set-up of the data applications centre for the project and STFC's current support involves the UK exploitation of the scientific data that is now being yielded from the mission. In addition the photometric data processing software to which STFC contributed, as part of the UK-led team, offers the ability to precisely measure the brightness of the billion objects that Gaia is observing, while contributions from the rest of Europe are charting the positions, distances and movements of those one billion stars.

Professor Ian McCrea, Space Physics and Operations Division Head at STFC's RAL Space said:

"Four years into the Gaia mission and it is incredible to see that our work in the UK on developing the photometric data processing software, that precisely measures the brightness of the billion objects that Gaia is seeing, is now successfully giving us comprehensive and detailed information that helps us better understand our true place in the Milky Way, our home galaxy. With this new data release and those that will follow, I am excited to see what new celestial objects, such as extra-solar planets, brown dwarfs, supernovae, asteroids, and of course, things that we have not even imagined have now been recorded."

Gaia orbits the sun at a distance of 1.5 million kilometres from the earth and was launched by the European Space Agency in December 2013 with the aim of observing a billion stars and revolutionising our understanding of the Milky Way. During its expected five-year lifespan, Gaia will observe each of a billion stars about 70 times.

A special aspect of the Gaia mission is that the teams involved do not keep the results for their own science interests. Instead the Gaia data is released with free access to everyone for analysis and discovery.

[Open tender for ICT Consultancy services – Deadline: 14/05/2018 at 15:00](#)

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[European travel information and authorisation system (ETIAS): Council confirms agreement with European Parliament](#)

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On 25 April, EU ambassadors confirmed an agreement reached between the Council Presidency and the European Parliament representatives on the proposal for a European travel information and authorisation system (ETIAS).

> Today's agreement is another important step in protecting the EU's external borders. By knowing who is coming to the EU before they even arrive at the border, we will be better able to stop those who may pose a threat to our citizens.

Valentin Radev, Bulgarian minister of interior

ETIAS will allow for advance checks and, if necessary, deny travel authorisation to visa-exempt third-country nationals travelling to the Schengen area. It will help improve internal security, prevent illegal immigration, protect public health and reduce delays at the borders by identifying persons who may pose a risk in one of these areas before they arrive at the external borders.

Functioning of the system

The system will apply to visa-exempt third country nationals. They will need to obtain a travel authorisation before their trip, via an online application. For each application, the applicant will be required to pay a travel authorisation fee of 7 euros.

The information submitted in each application will be automatically processed against EU and relevant Interpol databases to determine whether there are grounds to refuse a travel authorisation. If no hits or elements requiring further analysis are identified, the travel authorisation will be issued automatically and quickly. This is expected to be the case for most applications.

If there is a hit or an element requiring analysis, the application will be handled manually by the competent authorities. In this case, the ETIAS central unit will first check that the data recorded in the application file corresponds to the data triggering a hit. When it does or where doubts remain, the application will be processed manually by the ETIAS national unit of the responsible member state. The issuing or refusal of an application which has triggered a hit will take place no later than 96 hours after the application is submitted or, if additional information has been requested, 96 hours after this information has been received.

Before boarding, air carriers and sea carriers will need to check whether third country nationals subject to the travel authorisation requirement are in possession of a valid travel authorisation. From three years after the entry into operations of ETIAS this obligation will also apply to international carriers transporting groups overland by coach.

The travel authorisation will not provide an automatic right of entry or stay; it is the border guard who will take the final decision.

A travel authorisation will be valid for three years or until the end of validity of the travel document registered during application, whichever comes first.

Next steps

Now that the agreement has been confirmed by EU ambassadors, on behalf of the Council, the regulation will be submitted to the European Parliament for a vote at first reading, and subsequently to the Council for adoption.