

Press release: GPS wristband for surfers among winning ideas from young space entrepreneurs

A group of school children from Cornwall and a student from Wiltshire have won a competition for ideas on how satellites could improve life on Earth, Science Minister Sam Gyimah announced today (Friday 13 April).

Ellie Jones, Jessica Knight, both 15, Summer Jeffery and Emily Haddrell, both 14, from Truro, scooped £7,500 for the best group entry in the UK Space Agency competition with their Surf Safe concept. Ieuan Higgs, from Chippenham, received £7,500 for the best individual entry for his Infrastructure Planning and Development Analysis Tool.

The SatelLife Challenge supports the development of science, data handling and technological skills, complementing the Government's Year of Engineering campaign which is championing careers in science, technology, engineering and mathematics to the next generation.

Science Minister Sam Gyimah said:

"The UK leads the world in building satellites and we want to encourage young people like those entering this competition to get involved in every part of our thriving space sector.

"The creative use of data from space can solve many challenges and help establish successful businesses. It's a vital part of the Government's Industrial Strategy to back the entrepreneurs of tomorrow as we build an economy that's fit for the future."

Ellie, Jessica, Summer and Emily's idea was for a wristband that uses satellite location data and communications services to identify the locations of swimmers and surfers in the sea.

Ellie Jones said:

"It was so exciting, finding out about the competition. We had never done anything at all like this before. As students living in Cornwall, the sea has always been important to us and from the very start we knew we wanted to do something involving the beach. It was such a surprise to find out we had won and every one was so happy when we got the email, for a long time, it didn't seem real.

"This whole experience has been amazing, we really enjoyed having the opportunity to do something like this. It has definitely given us the confidence to pursue STEM careers moving forwards."

When combined with tidal and rip tide data, this could provide real time tracking and identification of people approaching known danger areas, and

provide coast guards or the Royal National Lifeboat Institution (RNLI) with potentially life-saving information.

Jon Oxenham, RNLI's Community Safety Manager, said:

"It's great to see young people thinking about water safety and creating new ideas which could save lives at sea. At the RNLI we are always trying to find new ways to save lives through innovation, data analysis, and new technology."

Ieuan Higgs' winning idea was for a tool that would map change in urban areas using satellites and algorithms, identifying where building is taking place and potential sites for development.

Ieuan, who is studying Computer Science at the University of Reading, said:

"I thought it would be an exciting opportunity to do a project on a topic I am very passionate about. I came up with my idea after combining my knowledge of current space technology with my areas of interest in Computer Science – using both to form a realistic business solution I thought would be both useful and achievable. It came as a massive shock to see that I was one of the winners, but it was certainly a welcome one! This unexpected result has given me the confidence to continue researching and working on my ideas in my spare time."

The competition is split into three age groups: 11 – 16; 16 – 18; 18 – 22, and a further seven entries from across the age categories were awarded £5,000. The judging panel was made up of experts from the UK Space Agency, the European Space Agency, the Satellite Applications Catapult in Harwell and industry.

All nine winning entries will be able to pitch their ideas to a panel of 'dragons' from the space sector. In 2017 the competition winners were offered a mix of support including an offer to build a prototype, thousands of pounds worth of space on Amazon Cloud Services, access to data, business development advice and a visit to a satellite factory.

With one in four of all telecoms satellites already built substantially in Britain, the government's Industrial Strategy includes plans to work with the industry to grow the space sector and establish commercial space launch services from the UK for the first time.

Today's announcement follows the news that Oxfordshire-based firm [Reaction Engines has secured a further £26.5 million](#) to support the development of SABRE™ – a revolutionary new class of aerospace engine combining jet and rocket technologies. The new strategic investors are Boeing HorizonX Ventures, the investment arm of the world's largest aerospace company Boeing; and Rolls-Royce, which has been at the forefront of British engineering for over a century.

Full list of winners:

Ieuan Higgs, 20, from Chippenham, Wiltshire (Best individual project)

Infrastructure Planning and Development Analysis Tool: This tool would map change in urban areas using satellites – it would identify where building has or is taking place and areas where there is potential for development or where an area is becoming run-down. This change detection would use algorithms rather than be totally manual.

Ellie Jones, 15, Jessica Knight, 15, Summer Jeffery, 14, and Emily Haddrell, 14, from Truro, Cornwall (Best group project)

Surf Safe: This concept is for a wrist band that uses satellite location data and communications services to identify the locations of swimmers, surfers and other people just off the shoreline in the sea, which could be combined with tidal and rip tide data, to provide real time tracking and identification of people getting close to known danger areas. This could be used by coast guards, RLNI and other rescue agencies in the event of an incident.

Kari Lawler, 15, from Castle Bromwich, Solihull

Capturing Earth's changes: An application that uses Machine Learning Deep Artificial Neural Network to regularly ingest and analyse Earth Observation data to learn what the Earth looks like, and detect changes and patterns across the globe. The application would also be able to identify the causes of natural disasters through providing details of historical events, to help with preparation and prevention in the future.

Dylan Todd, 17, from Totnes, Devon

Measuring LED usage: This idea would use a spectrometer from space to identify whether light from the Earth is emitted from LEDs or from standard lights. This is important because LEDs are better for the environment as they are more energy efficient and progress in this area is of interest to environmentalists and the scientific community as well as local authorities and governments.

Ben Schofield, 21, Thomas Green, 19 and George Nightingale, 19, from the University of Sheffield

Automated Person Detection: This idea uses drones for search and rescue. This is currently a military capability but the team showed how it could be used in a civilian capacity to identify life and deliver aid. They propose using machine learning to improve the ability of the drones to spot life.

Jasmine Hurley, 16, Jack Whinnom, 17, Megan Goss, 17, Kieron

Robson, 17 and Matthew Jones, 17 from Bedlington, Northumberland

Displaced Person Aid: This idea looks at people who are internally displaced and how satellites can help meet their needs rather than those who are refugees. One opportunity for its use would be when there is a natural disaster such as a hurricane where it could provide information in advance for people who would need to move out of the way of the storm.

Thomas Franchi, 20, Christopher Law, 19, and Hammad Jeilani, 20 from London

MEDrone: This idea uses satellites and drones to help people in isolated areas who cannot access basic health care such as vaccines, birth control or medicine. This would use satellite data to find a remote region, then a drone to gather terrain data from the air, sending the information back via satellite. The drone would then land and allow people to use Skype to talk to health professionals. The drones could also transport swabs or samples and medicine.

Ella Richards, Eleanor Champion and Maddie Harvey, all aged 13, from Truro, Cornwall,

Illness Tracker: This app aimed to map and model the spread of infectious disease. This would not only help individuals who wanted to avoid illness, but also health authorities in getting medication to the right place. It would use the GPS elements of satellites and comms for remote locations.

Tek Kan Chung, 18, from the University of Cambridge

Satellite Imagery for Traffic Management: This idea used satellites to identify traffic areas of problems and re-route people. The idea would use real time data, and then use pace cars to control traffic and reduce phantom traffic jams.

[Press release: New curbs on bogus holiday sickness claims](#)

The rules will fix the legal costs that can be claimed in package holiday sickness claims, closing a loophole which the travel industry believes has helped fuel a rising number of claims. This claims epidemic, the industry fears, is raising the prospect of higher travel costs for British tourists.

The rules will come into effect in the coming weeks – ensuring the curbs will be in place before the next summer holiday season.

Up to now, legal costs in overseas package travel claims have not been controlled, which has meant costs for tour operators can spiral out of all proportion to the damages claimed. This has led many operators to settle holiday sickness claims out of court, rather than challenge them.

Industry experts believe this has been a major factor in a rise in claims which has sparked concerns that Britain's reputation overseas is being damaged and that British tourists will face higher package holiday prices.

Justice Minister Rory Stewart said:

Claiming compensation for being sick on holiday, when you haven't been, is fraud.

This damages the travel industry and risks driving up costs for holidaymakers.

This behaviour also tarnishes the reputation of British people abroad. That is why we are introducing measures to crack down on those who engage in this dishonest practice.

According to the travel industry, there has been a substantial increase in claims, which some have estimated to be as high as 500% in recent years.

While uncontrolled costs have discouraged tour operators from challenging claims, they have also emboldened claims management companies to encourage tourists to pursue holiday sickness compensation, with touts reportedly operating in European resorts.

To help tackle this, Ministers asked the Civil Procedure Rule Committee, which is responsible for setting rules on legal costs, to look at bringing package holiday claims within the fixed recoverable costs regime. This would mean tour operators would pay prescribed costs depending on the value of the claim and length of proceedings, making defence costs predictable and assisting tour operators to challenge bogus claims.

The Committee has now agreed to this rule change – the rules will be updated on Monday, and will come into effect shortly. More detail will also be published on the Government's approach, alongside its response to a recent call for evidence.

The Government is committed to tackling the country's compensation culture, and recently introduced a Civil Liability Bill which includes measures to reduce the unacceptably high number of whiplash claims and allow insurers to cut premiums.

Other reforms include the forthcoming ban on cold calling and tougher regulation of claims management companies.

Notes to editors

The Association of British Travel Agents (ABTA) reports a 500% increase from around 5,000 claims in 2013 to around 35,000 claims in 2016. This is despite the fact that travel industry data on the global trend for reported incidence of illness in resorts has actually declined in recent years.

Since October 2017, four couples were either sentenced or ordered to pay significant legal costs by the court after making false package holiday sickness claims. These cases were private prosecutions brought by tour operators Thomas Cook, TUI and Red Sea Holidays.

[Press release: PM call with President Trump: 12 April 2018](#)

A Downing Street spokesperson said:

“The Prime Minister spoke to President Trump about Syria this evening.

“They agreed that the Assad regime had established a pattern of dangerous behaviour in relation to the use of chemical weapons.

“They agreed it was vital that the use of chemical weapons did not go unchallenged, and on the need to deter the further use of chemical weapons by the Assad regime.

“They agreed to keep working closely together on the international response.”

[Press release: Cabinet meeting: 12 April 2018](#)

This afternoon Cabinet met and received an update on the attack against innocent civilians in Douma, Syria, on Saturday.

The Prime Minister said it was a shocking and barbaric act which killed up to 75 people, including children, in the most appalling and inhumane way.

Cabinet agreed that the Assad regime has a track record of the use of chemical weapons and it is highly likely that the regime is responsible for Saturday's attack.

The Prime Minister said it was a further example of the erosion of international law in relation to the use of chemical weapons, which was deeply concerning to us all.

Following a discussion in which every member present made a contribution, Cabinet agreed it was vital that the use of chemical weapons did not go unchallenged.

Cabinet agreed on the need to take action to alleviate humanitarian distress and to deter the further use of chemical weapons by the Assad regime.

Cabinet agreed the Prime Minister should continue to work with allies in the United States and France to coordinate an international response.

[Speech: We must stand up for an effective non-proliferation regime](#)

Thank you very much Mr President. Many thanks indeed to our Bolivian colleague for his briefing and the work of his Committee. We welcome the new coordinators and may I say at the start that we were very pleased to be paired with Equatorial Guinea in terms of capacity building.

Mr President, 1540 was the first subject I worked on when I came to the Security Council ten years ago, my first time here, so I am very pleased to have opportunity to talk about it today and to be able to say that for the United Kingdom, the 1540 Committee is a vital component of the international order. We need to empower it to fulfil its mandate. We need to support it to the hilt.

Mr President, as a number of us have said this week already, we risk seeing a situation that the Council should dread: that chemical and biological weapons become a routine part of fighting and regrettably, we have been confronted in very recent times by multiple incidents of the use of weapons of mass destruction by non-state actors. The UN Joint Investigative Mechanism found Da'esh used mustard gas on at least two occasions in Syria. There are multiple instances of mustard gas use by Da'esh in Iraq. In Australia, a planned chemical terrorism attack was thwarted in July last year. These incidents clearly exemplify why the 1540 Committee and its work to prevent the proliferation of nuclear, chemical and biological weapons by non-state actors is so important.

These events, Mr. President, are awful enough. Yet in acts of unbelievable irresponsibility, those risks have been exacerbated by the use of weapons of mass destruction by state actors. The chemical weapons attacks in Douma, the attempted murders in Salisbury are the most recent instances but we also have the assassination of Kim Jong Nam in Malaysia and the horror of Khan Sheikoun

a little over a year ago.

Mr President, I take this opportunity to say that in respect of Salisbury and the invitation from this Council to keep members updated, we have requested a Security Council meeting next week where we would like to brief on the outcome of the OPCW findings. It is a worrisome pattern this state use of WMD and it clearly undermines our collective efforts to deter and eradicate the use of these weapons by state and non-state actors alike.

We very strongly support the work to increase states capacity and we are encouraged that there are now only 13 non-reporting states. Any non-reporting is troubling but it is good number is going down. And as I say, we were delighted to be paired with Equatorial Guinea and provide support.

But it is clear that we stand on the cusp of a nightmare –where weapons of mass destruction are used with impunity. Where our citizens live in real fear of an indiscriminate attack at any time and without warning. It is not enough just to condemn this. We need to find a way to take meaningful action and ensure that there are meaningful consequences for perpetrators. We have all benefitted from the international order that has kept us safe since the end of World War II. It behooves all of us, Mr President, to make every effort to uphold this international architecture.

It is clear that not all countries share this view and we have talked about that several times this week so I just want to say that in respect of this particular Committee 1540, there is one Council member who has sought at every opportunity, to slow progress and dilute the substance of every proposal whether this is Programme of Work deadlines, calls to action and efforts to take progress forward, all of these have sadly been consistently been watered down and the Panel of Experts has even been prevented from travelling. Mr President, if we are serious about dealing with the threats that this Committee was set up counter then this state of affairs can't continue.

Since last February the 1540 Committee has met formally only once and the actions agreed in the 2017 Programme of Work have barely made progress. That means also that the commitments made in the relatively modest Resolution 2325 have not been fulfilled. The new Programme of Work has only just been agreed, two months later than legally mandated and in these two months, the Committee was left without a clear steer of objectives and activities to pursue.

Mr President, I cannot think of any legitimate reason why any country would want to affect the work of the 1540 Committee adversely in this way and I appeal to everybody round the table to redouble efforts so that we have an ambitious programme of work for the Committee. We must stand up for the universal norms and standards we have spent decades building to create an effective and powerful non-proliferation regime whether that deals with state actors or it deals with non-state actors.

Thank you very much Mr President.