[Press release: Out of this world ideas win funding in space competition](#)

Innovative ideas from crime-fighting drones to tracking down trolleys are among the winners of the UK Space Agency's SatelLife competition for young people.

The winners, all aged between 11 and 22, will now go on to pitch their ideas to a panel of industry experts in the hope of gaining further support to develop them. In previous years this has led to job offers, extra funding and support to build prototypes.

Lowena Hull, a student from Portsmouth, scooped the overall individual prize of £7,500 for her idea to track abandoned supermarket trolleys. Four teenagers from Cornwall won the overall group prize of £7,500 for an app to find public toilets.

Space is one of the fastest growing sectors in the UK and it is estimated an additional 30,000 new career opportunities could be created by 2030. Now in its third year, the SatelLife competition aims to encourage young people to think about how satellites impact our everyday lives and learn more about the careers available in the sector.

Science Minister Chris Skidmore said:

> These extraordinary ideas on how to use space technology for everyday problems are a testament to the inventiveness of our brilliant young people.
>
> We are backing the UK's thriving space sector in our modern Industrial Strategy to make sure young people, like all those who took part in this competition, have opportunities to work in this exciting industry in the future.

The UK is already a world-leader in satellite building and we are backing plans for the first spaceports which will see satellites launched into space from British soil for the first time.

Lowena Hull, 17, an A-level student from Portsmouth, who came up with her winning idea after seeing abandoned shopping trolleys in her area, said:

I started looking into it and the more research I did the more I realised it's a massive issue and really bad for the environment. I heard about the SatelLife competition online and it looked like such a great competition. Space has always been a topic that has fascinated me and I've grown more interested as I've got older.

Now my idea is something I'd like to take further. It's a good opportunity to get supermarkets involved and it would benefit them as well as councils and the government and everyone who lives in the areas affected.

[SatelLife Winner2019](#)

Emily Gravestock, Head of Applications at the UK Space Agency, said:

The quality of entries this year was very high. We were particularly pleased to see such a wide variety of satellite applications being used. These young people clearly recognised the diversity of areas that satellites impact on our day-to-day lives.

Once again, we were impressed by the inspiration and knowledge of young people and I look forward to seeing how they develop their ideas in the future.

The SatelLife competition is split into 3 age groups: 11 – 14; 15 – 18; 19 – 22. 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. The total prize fund is £50,000.

Gemma Wilson, Knowledge Exchange Manager at the Satellite Applications Catapult in Harwell, who was one of the judges, said:

The applications that have won were of excellent quality. The detailed work that has gone into them were, in some cases, as good as the companies that come and work with the Satellite Applications Catapult.

With major parts for one in four of the world's telecommunications satellites already built 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.

There has been significant growth in the UK space sector in recent years which provides £14.8 billion in total income and employs nearly 42,000 people.

Overall individual winner

Trolley Tracker — Lowena Hull, 17, from Portsmouth

Prize: £7,500

Trolley Tracker is a tool that uses satellites to monitor the location of supermarket trolleys taken off site and allows them to be reclaimed. In 2015 1.5 million trolleys were taken from supermarkets and abandoned, with significant environmental impacts. This system would enable local authorities and supermarkets to better manage this problem and help solve a previously hidden issue.

Overall team winners

Satoilite — Judd Phillips, 15, Calvin Hulance, 14, Matthew Old, 14, and Joel Armstrong, 14, from Newquay, Cornwall

Prize £7,500

This is a service, using an app, which will allow people to find public toilets when travelling. Toilets can be rated by users and reserved by those who have an urgent need — such as those with hidden disabilities such as inflammatory bowel diseases.

Runners-up

Satellite detection system — Patrick Motley, 19, Blaise Umbagodo, 21, Alberto Tinta, 22, from the University of Derby

Prize: £5,000

This tool will allow improvised explosive devices (IEDs) and other unexploded bombs to be identified in warzones, and then use drones and precision satellite positioning to increase the safety of bomb disposal teams. This will also use machine learning to improve the safety of this project.

Using Satellite data to track plane crash survivors — Charlie Knott, 12, Evie Mansfield, 12 and Max Morgan, 11, from Helston, Cornwall

Prize £5,000

This project proposes the use of GPS trackers that could either be attached to lifejackets or deployed to passengers alongside oxygen masks in planes, in the event of an emergency. The tracker would be linked to the seat number of the passenger, showing where individuals are in the event of a crash and assisting rescue services.

Dro999 — Luca Franchi, 17, from Sydenham, London

Prize: £5,000

This supports emergency services by deploying emergency drones, both for medical needs and to support detection of crime. Drones can potentially reach crime scenes or casualties ahead of vehicles. By carrying cameras or basic medical equipment such as an epipen they can help ensure an efficient response.

Satellite Controlled Gun — Grace Morgan, 12, from Wimbledon, London

Prize: £4,000

This project will use geo-fencing technology to prevent guns being used in areas where they could do most harm, such as near schools or at events. This tool would add a locator to the gun, which will prevent it firing when it's detected to be in a particular area.

Race Spectator — Daniel Currie, 16, from Middlesbrough

Prize: £4,000

This app will allow supporters to track friends and family members competing in running races. In big city marathons there is already a tracker available to do this, but it is not currently available for smaller races or those off road. This app would change that.

Using satellites to prevent agricultural fires from polluting cities — Alex Hayman, 17, from Colyton in Devon

Prize: £4,000

In some countries, such as Thailand and India, city pollution is often generated by farmland being burnt. This proposal looks to use satellite information to inform farmers when they can burn their fields safely to ensure that the smoke, and therefore air pollution, is taken away from cities and has less of an impact on the public.

Ensuring sustainable finance using satellite data — Ewan Wright, 22, from Barnet, London

Prize: £4,000

It is important for investors, insurance companies and others to understand the risks posed by climate change. By using satellite data the impacts of climate change, and natural disasters can both be modelled in advance, and identified after an event has happened, allowing interested parties to understand the impacts and respond accordingly.

Satel-Access — Jack Johnson, 17, from Camberley in Surrey

Prize: £4,000

This is a portable wearable device which uses satellite data to provide information about your surroundings for those with accessibility needs. These would include people with buggies, those with disabilities or those with invisible disabilities such as the need for hearing loops and autism friendly areas.

The app would provide the location of features such as drop curbs, hearing loops and wide doorways to ensure that those with additional access requirements can enjoy the same freedoms as others.