

# 10 projects funded to extend UK's leadership in Earth Observation

The flagship SERMON project led by RAL Space and supported by the UK Space Agency will use microwaves to examine the atmosphere in order to improve weather forecasting.

The equipment will be tested onboard a converted aircraft but could in future be deployed on small satellites or high-altitude drones.

Other UK Space Agency supported projects include developing 3D printing techniques which could lead to light-weight materials being used instead of metals for key components of weather satellites, reducing weight and cost, and improving gravity measurements which are important for our understanding of climate science and oceanography.

Graham Turnock, CEO of the UK Space Agency said:

It's incredible to think that with the touch of a button we can direct firefighters to the precise location of wildfires in Australia and observe detailed levels of air pollution over London, but these are just two examples of Earth Observation space technology in action.

Earth Observation technology provides us with the eyes and ears for monitoring our planet and underpins dozens of scientific fields, from oceanography to meteorology, so I'm delighted to announce this new funding which is being matched by industry to maintain momentum in science innovation, job creation and growth.

This investment has come through the [Centre for Earth Observation Instrumentation](#) (CEOI), which is the UK Space Agency's national Earth Observation technology R&D funding programme.

The funding was announced this afternoon at the Policy Exchange think tank in London UK, where Science Minister Chris Skidmore made the keynote speech.

The ten projects receiving a share of £2m are split into Pathfinder, Fastrack and Flagship categories.

The Pathfinder projects include an innovative flat lens from the University of Glasgow which would save weight over traditional curved lenses and a reconfigurable software defined radio receiver called Babel, developed by In-Space.

The FastTrack projects HYMAS-X, 3DPAMS and META-TEL from the Universities of Cambridge, Cardiff and the National Physical Laboratory will deliver technologies to improve remote sensing of the atmosphere, for more accurate

weather forecasting and monitoring air quality.

LEGO from the University of Surrey and CAGE from Teledyne e2v will develop gravity sensors, useful for studying the Earth's surface in fields such as oceanography, climate science, and oil and gas prospecting.

Other FastTrack developments include Leonardo and Surrey Satellite Technology Limited (SSTL) adapting an infrared camera which could be used to monitor fires, volcanoes and human activity from space and a project from Craft Prospect Limited which will aim to improve the operation and management of small satellite constellations.

The global satellite-based Earth Observation market is buoyant and growing. Market studies estimate that the industry was worth \$43.7 billion in revenue in 2017 and is expected to reach \$66.1 billion in 2020.

The UK has world-leading satellite Earth Observation capability, from developing and building missions to managing and exploiting data and creating trusted applications and services. Earth Observation services are already supporting £92 billion worth of the wider UK economy and are growing rapidly.

As part of the Government's Industrial Strategy, the UK Space Agency is building on this strength while growing our share of the global space market.