

UK Space Agency launches multi-million pound drive to design hospital of the future

The hospital could use technologies and techniques pioneered on missions to Mars or the International Space Station to help treat patients and make life easier for hard-working NHS staff.

Up to £5 million of UK Space Agency funding is available to support a joint initiative with the Hampshire Together: Modernising our Hospitals and Health Services programme. The programme is part of the government's Health Infrastructure Plan, which includes the provision of 40 new hospitals across England by 2030.

The space-enabled services could be inspired by a whole range of activities and technologies pioneered by the UK's growing space sector, which currently contributes nearly £15 billion to GDP and supports 42,000 jobs. They might include new diagnostic tools, improved logistics by tracing goods or using drones, improving hospital parking or better patient reach using tele-rehabilitation or care.

Science Minister Amanda Solloway said:

The UK is a world leader in using space technology and data to tackle the challenges we face on Earth, and this initiative is another example of how one of our most thriving sectors is driving improvements in everyday life.

As we build back better from the pandemic, I am confident that UK businesses large and small will come forward to produce some truly awe-inspiring ideas to help design this space-age hospital, support our heroic NHS staff and ultimately save lives.

Health Secretary Matt Hancock said:

This trailblazing collaboration – bringing together exceptional scientists from the UK Space Agency and Hampshire Together – will help us apply space age innovations to building hospitals of the future.

The UK is unashamedly pro-tech and these government-backed medical advancements will give our amazing NHS access to some of the most innovative technologies.

Credit: ESA

Space is already playing an important role in supporting healthcare. The UK Space Agency has provided funding for projects to help the NHS tackle the Coronavirus pandemic, including electric drones that navigate via satellite-enabled GPS, carrying COVID-19 samples, test-kits and PPE to improve delivery times and free up transport infrastructure.

Health technologies inspired by space technologies have helped provide real-time diagnosis of bowel cancer, developed more compact 3D X-ray machines and improved healthcare in the community through both remote diagnostics and an app targeting people at risk of social isolation and mental health issues.

The Hampshire Together programme is a partnership between a wide range of bodies responsible for the health and wellbeing of the people of north and mid Hampshire, focused on ensuring that any investment is made not just in hospital buildings – but in local people.

Tony Mears, Associate Director of Innovation for the Hampshire Together programme, said:

We are delighted to be working with the UK Space Agency as part of our programme. It opens up new opportunities for us in terms of innovation and technology and shows our commitment to incorporating new ideas into our plans for the future.

The UK Space Agency has really helped the NHS to overcome the challenges posed by COVID-19 and we are excited to see how we can use this innovation-by-nature sector to help provide the best health and care services for people across Hampshire in the future.

The call for space-inspired ideas is supported by the European Space Agency's Space Solutions, through their Business Applications programme, in which the UK is the leading investor. The UK continues to be a leading member of ESA, which is independent of the EU, having committed a record investment of £374 million per year in November 2019.

A panel of experts, including representatives from the UK Space Agency, Hampshire Together and ESA, will assess the proposals for how space-derived technologies can contribute to the design, development and utilisation of services for any new hospital and its surrounding community.

The successful projects, which could be new ideas, or using technology that already exists in a different way to support healthcare, will then be incorporated in any new facility, as well as the wider health system. Where appropriate, these ideas will also be used to improve services across the area before the construction of any new buildings.

Arnaud Runge, Medical Engineer at ESA's European Space Research and Technology Centre, said:

In the past but also more recently throughout the COVID-19 crisis, the use of space technologies and satellite data has proven to be an essential driver for innovation in the healthcare sector to address existing and new challenges.

We are delighted to extend our fruitful collaboration with the UK Space Agency and NHS in this exciting initiative and demonstrate how space can contribute today to shape the hospital of tomorrow.