

# News story: UK company delivers first Euclid flight hardware

e2v, in Chelmsford, has developed a new Charge Coupled Device (CCD) imaging sensor for the space telescope and the first four have now been delivered to the Mullard Space Science Laboratory (MSSL), in Surrey. The remaining CCDs for the Visible imager (VIS), will be delivered over the coming months.

The UK Space Agency is funding MSSL to lead the European instrument consortium that is developing and building Euclid's Visible imager, to be delivered to ESA. The mission, due for launch in 2020, should revolutionise cosmology by improving our understanding of the evolution of the very fabric of the Universe since its birth in the Big Bang, around 13.8 billion years ago.

During its 6 year mission, Euclid's 36 CCDs will be bombarded with charged particles from the space radiation environment, causing damage. Supported by the UK Space Agency, the Open University's Centre for Electronic Imaging is working with MSSL to simulate this environment and conduct experiments to understand the impact of charged particles on detector performance, so that radiation damage effects can be removed from the eventual science images.

The entire VIS instrument will generate 610 megapixel images – 25 times larger than a top-of-the-range digital camera and with much better image quality. The field of view of VIS is 0.78 degrees x 0.7 degrees – slightly larger than the area covered by a Full Moon – and the spacecraft will manoeuvre to conduct a survey over the course of the mission.

The second instrument on Euclid, the French-led Near-Infrared Spectrometer and Photometer (NISF), is also making progress, and its first detectors are expected to be delivered in the spring. Light gathered by Euclid's 1.2 metre diameter primary mirror will be split and sent to the two instruments. Together they will map the 3D distribution of several billion galaxies spread over the entire extra-galactic sky.

This will enable scientists to determine in unprecedented detail the properties of the mysterious dark energy and dark matter which are thought to make up most of the Universe.

The UK Space Agency is also contributing to the development of the scientific data processing capability for Euclid, with UK involvement being led from Edinburgh's Institute for Astronomy.

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# Speech: Sustainable cities: building a UK partnership case for Karnataka

Ladies and gentlemen,

It gives me immense pleasure to be speaking here today at sustainable cities: building a UK partnership case for Karnataka.

I have been in Bengaluru for over a year now and I now know why it is called the start up city, innovation city and known by many other names.

In spite of the multiple names, the strength of a city is its people. I won't cite statistics in a room full of experts. We are aware that cities are growing at much faster rate due to inflow of people in search of better jobs, amenities and a better standard of living. But at the same time, this inflow is putting pressure on the available resources and that is why urban planning becomes crucial.

The choices that are made today on building designs, waste management, water, energy and food systems, urban ecosystem management, transportation, infrastructure development and retrofitting will have critical implication for future urban habitats.

It is therefore vital to have an integrated and innovative approach as we try to future-proof our cities in the light of changing climate, rising energy prices, increasing demand for water and space.

The UK supports the 'Make in India' campaign, as does UK business. The UK is also committed to supporting India's goal of '100 Smart Cities'. Karnataka is developing Mangaluru, Shivamogga, Belagavi, Hubballi-Dharwad, Tumakuru, Davangere and also Bengaluru as smart cities.

UK companies are keen to support India across the entire span of the four-pillar smart city framework/sustainable urbanisation. We have expertise in infrastructure – from smart transport and mobility to water and waste management – in digital – particularly in fin tech and e-commerce – and in design, professional services, healthcare and e-governance.

2012 London Olympics is a good example of developing East London on the principles of sustainable urbanisation where the Olympic Park was created on once contaminated industrial land. 240 electric and hybrid cars were used, food packaging used was compostable, sourcing of materials for various structures was sustainable, and water harvesting, natural lighting lightweight building materials were used. Post the games the waste generated was waste was diverted from landfill, with 62% of that waste being reused, recycled or composted.

- UK's capabilities lie in urban design, planning and architecture
- UK construction and civil engineering firms lead major urban infrastructure developments worldwide

- there are now over 3,384 low carbon emission buses in the UK. 1,500 hybrid electric buses and 15 pure electric buses also run on London roads. Around 3,000 buses are expected to run on biodiesel, renewable biodiesel from waste products, including cooking oil and tallow from the meat processing trade
- 3.6 GW is generated from off-shore wind, more than anywhere else in the world
- UK is the first developed economy to commit to phase out unabated coal by 2025
- UK remains committed to tackling climate change at home and supporting developing nations to deliver their own climate change goals

Sustainability requires holistic consideration of social, economic and environmental dimensions of urban challenges to develop solutions that meet future needs.

I look forward to hearing your views on sustainable solutions to developing sustainable cities in India.

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## [Press release: Preferred candidate for Chair of Office for Students announced](#)

The Department for Education has today (7 February 2017) announced that Sir Michael Barber is the preferred candidate to become Chair of the Office for Students (OfS).

Sir Michael was selected for the role following an open and transparent recruitment process, overseen by the office of [The Commissioner for Public Appointments](#).

The Office for Students is a new public body being established in law by the [Higher Education and Research Bill](#). It will combine the existing regulatory functions of the [Higher Education Funding Council for England](#) (HEFCE) and the [Office for Fair Access](#) (OFFA), and will create and oversee a regulatory environment in higher education which puts the interests of students at the heart of the system, focusing on choice and competition.

Sir Michael Barber is a leading thinker and practitioner on public service delivery and has been at the forefront of global thinking in education for the past 20 years including in higher education, for example as a member of the [Browne Review of higher education funding](#).

Justine Greening, Secretary of State for Education, said:

I am delighted to confirm Sir Michael as the government's preferred

candidate for this vital role as Chair of the Office for Students (OfS).

Sir Michael is a globally respected figure both in the sector and in government with an impressive record in leading and supporting public sector delivery.

The OfS will play a vital role in this government's ambitions for higher education by replacing a regulatory system from a bygone era with framework that can truly respond to the challenges of the 21st century. I welcome Sir Michael's commitment to the opportunities for higher education through the creation of this new body.

Minister for Universities Jo Johnson said:

I am delighted Sir Michael is taking up this crucial role. With his deep understanding of education systems, Sir Michael has a world-class background in delivering HE reform and is the right person to lead the creation of the Office for Students.

The OfS will play a pivotal role in reforming one of our nation's greatest assets – the higher education sector. This new body will drive a focus on choice and competition and rightfully put the interests of students at the heart of regulation.

Sir Michael Barber said:

I am delighted to take on this role and deeply conscious of the degree of responsibility it involves. The higher education sector in England, with its welcome diversity, is a jewel in this country's crown. It has a major role to play in a global Britain and a fairer Britain.

The challenge will be to combine the traditions that make our universities great with the innovation that the decades ahead demand.

Above all the Office for Students will aim to create a framework in which universities are enabled to provide for students both high academic standards and employability for the 21st century.

I look forward to working with everyone to sustain and develop world-leading higher education in this country.

The Rt Hon the Lord Mandelson said:

Michael Barber is an excellent choice. His commitment to education and public service is strong and he knows the importance of

university independence.

The Rt Hon Baroness Gillian Shepherd said:

Sir Michael Barber will bring to this post an outstanding intellect, a proven track record in education and business, and a strongly strategic approach.

Professor Sir Steve Smith, Vice Chancellor, University of Exeter said:

Sir Michael Barber is one of the most thoughtful and impressive educationalists I have worked with. His educational expertise has been sought by the Obama administration and the Pakistan government.

In all his work he has consistently put students first, striving to improve their education whatever their background. He is a tireless advocate for adding value educationally and sees education as a continuum from school to university. I can think of no one better qualified to act in this incredibly important role.

The appointment will be subject to a pre-scrutiny hearing by the [Education Select Committee](#). If appointed, Sir Michael will serve a term of 4 years.

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## [News story: Freight train derailment, Lewisham](#)

From:

First published:

7 February 2017

Investigation into a freight train derailment, Lewisham, London, 24 January 2017.

At around 05:35 hrs on Tuesday 24 January 2017, two loaded wagons of a westbound freight train derailed as they passed over Courthill Loop South Junction, to the south of Lewisham station, while travelling at around 20 mph (32 km/h).

The accident resulted in major damage to the railway infrastructure. The

first of the two derailed wagons overturned and spilt its contents. The train divided in front of the derailed wagons and its brakes automatically applied.

There were no injuries. However, there was major disruption to local train services.

The freight train was the 03:36 hrs service from a loading terminal at Grain, on the Thames Estuary. It comprised a class 66 diesel-electric locomotive and 18 bogie hopper wagons. It was carrying building sand to Neasden, in north-west London. The wagons that derailed were the 16th and 17th from the front. They were both of the JGA type.

The track work at Courthill Loop South Junction was new. It was made up of modular panels of switches and crossings that had been part assembled offsite. They had been delivered and installed as part of engineering work carried out on the weekend of 14 and 15 January 2017. Follow-up engineering work had been carried out at the junction on the weekend before the derailment.

Our investigation will identify the sequence of events that led to the accident and how the wagons derailed. It will also consider:

- the condition of the wagons and how they were maintained
- how the wagons were loaded
- the design of the new track work at the junction and how it was installed
- the condition of the track and its geometry
- any relevant underlying management factors.

Our investigation is independent of any investigation by the railway industry or by the industry's regulator, the [Office of Rail and Road](#).

We will publish our findings, including any recommendations to improve safety, at the conclusion of our investigation. This report will be available on our website.

You can [subscribe](#) to automated emails notifying you when we publish our reports.

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## [News story: Law change demands equal treatment for disabled taxi users](#)

Taxi drivers face a fine of up to £1,000 if they refuse to transport wheelchair users or attempt to charge them extra, in a change to the law announced today (7 February 2017) by Transport Minister Andrew Jones.

From 6 April taxi and private hire vehicle drivers will be obliged by law to:

- transport wheelchair users in their wheelchair
- provide passengers in wheelchairs with appropriate assistance
- charge wheelchair users the same as non-wheelchair users

Transport Minister Andrew Jones said:

We want to build a country that works for everyone, and part of that is ensuring disabled people have the same access to services and opportunities as anyone else – including when it comes to travel. People who use wheelchairs are often heavily reliant on taxis and private hire vehicles and this change to the law will mean fair and equal treatment for all.

The new rules will apply in England, Wales and Scotland affecting vehicles that are designated as wheelchair accessible and will apply to both taxis and private hire vehicles. All taxis in London and a significant number in most major urban centres are wheelchair accessible.

In a change to the law, drivers found to be discriminating against wheelchair users face fines of up to £1,000 as part of provisions being enacted from the Equality Act. Drivers may also face having their taxi or private hire vehicle (PHV) licence suspended or revoked by their licencing authority. Drivers unable to provide assistance for medical reasons will be able to apply to their licensing authority for an exemption from the new requirements.

Robert Meadowcroft, Chief Executive of Muscular Dystrophy UK, said:

This is a victory for all people with disabilities who experience daily struggles with accessible transport.

Being able to get from A to B is usually very easy for most people, however we know that this can be a challenge that affects a disabled person's entire life, including their ability to have a job and play an active part in society. This is a positive and very welcome step in the right direction which we hope will not affect the number of accessible taxis being made available by companies because of the duties now being placed on to drivers.

[Muscular Dystrophy UK](#) and our Trailblazers have been campaigning on this issue for many years, and we commend the government for listening to the views of disabled people.

The new requirements, which will come into force from 6 April, complement those already in place to prevent discrimination against users of assistance dogs and underline the government's wide-ranging commitment to supporting transport networks which work for everyone. The government will be consulting on a draft 'Accessibility action plan' later this year, which will seek to

address the barriers faced by disabled people in accessing all modes of public transport.