

## **Satellites and space programmes if there's no Brexit deal**

### **Summary**

How the UK's space programmes would be affected if the UK leaves the EU with no deal

### **Detail**

If the UK leaves the EU in March 2019 with no deal, find out how this would affect the UK's space programmes, including:

- the European satellite navigation programmes, Galileo and European Geostationary Navigation Overlay Service (EGNOS)
- the Copernicus Earth Observation space programme
- the EU Space Surveillance and Tracking (EUSST) programme

A scenario in which the UK leaves the EU without agreement (a 'no deal' scenario) remains unlikely given the mutual interests of the UK and the EU in securing a negotiated outcome.

Negotiations are progressing well and both we and the EU continue to work hard to seek a positive deal. However, it's our duty as a responsible government to prepare for all eventualities, including 'no deal', until we can be certain of the outcome of those negotiations.

For two years, the government has been implementing a significant programme of work to ensure the UK will be ready from day 1 in all scenarios, including a potential 'no deal' outcome in March 2019.

It has always been the case that as we get nearer to March 2019, preparations for a no deal scenario would have to be accelerated. Such an acceleration does not reflect an increased likelihood of a 'no deal' outcome. Rather it is about ensuring our plans are in place in the unlikely scenario that they need to be relied upon.

This series of technical notices sets out information to allow businesses and citizens to understand what they would need to do in a 'no deal' scenario, so they can make informed plans and preparations.

This guidance is part of that series.

Also included is an overarching framing notice [overarching framing notice](<https://www.gov.uk/government/publications/uk-governments-preparations-for-a-no-deal-scenario/>) explaining the government's overarching approach to preparing the UK for this outcome in order to minimise disruption and ensure a smooth and orderly exit in all scenarios.

We are working with the devolved administrations on technical notices and we will continue to do so as plans develop.

## **Purpose**

This notice sets out how the UK's space programmes would be affected if the UK leaves the EU with no deal, including:

- the European satellite navigation programmes, Galileo and European Geostationary Navigation Overlay Service (EGNOS)
- the Copernicus Earth Observation space programme
- the EU Space Surveillance and Tracking (EUSST) programme

The UK's membership of the European Space Agency (ESA) is not affected by leaving the EU as it is not an EU organisation.

## ***GALILEO***

**Galileo** is the Global Navigation Satellite System (GNSS) that is being created by the European Union (EU) through the European Space Agency (ESA). One of the aims of Galileo is to provide EU autonomy in high-precision positioning, navigation and timing. European Geostationary Navigation Overlay Service is a satellite-based augmentation system which augments Global Navigation Satellite System signals such that they can be relied upon in safety critical situations.

## **Before March 2019**

The UK currently participates in the EU Global Navigation Satellite System (GNSS) programmes Galileo and European Geostationary Navigation Overlay Service by virtue of being a member state, and makes financial contributions and provides technical expertise to the programme. EU member states may access all services provided by both systems including the encrypted Galileo Public Regulated Service (PRS) which is expected to be available from the mid-2020s.

Companies based in the EU may also bid in open competition for contracts to build, operate and exploit both Galileo and European Geostationary Navigation Overlay Service. UK companies have been central to the deployment of Galileo and European Geostationary Navigation Overlay, delivering satellite payloads and security systems.

The Galileo system has begun to offer initial services worldwide but is not expected to be completed until the mid-2020s. European Geostationary Navigation Overlay is already fully operational and provides services across Europe. In addition, the UK hosts ground infrastructure for both Galileo and European Geostationary Navigation Overlay. Currently users in the UK may access all available Galileo and European Geostationary Navigation Overlay signals and services, however in the unlikely event that the UK leaves the EU with 'no deal' in place, the UK will no longer have access to Public Regulated Service.

### **After March 2019 if there's no deal**

In the unlikely event of the UK leaving the EU without a negotiated agreement, the majority of position, navigation and timing services provided by Galileo and European Geostationary Navigation Overlay will continue to be freely available to all UK based users. The Public Regulated Service will not be available to the UK; however, this is not expected to be completed until the mid-2020s and will not have immediate impact on users.

The UK will no longer play any part in the development of Galileo or European Geostationary Navigation Overlay programmes. This means that UK-based businesses, academics and researchers will be unable to bid for future EU Global Navigation Satellite System contracts and may face difficulty carrying out and completing existing contracts. For example, it may not be possible for businesses or organisations which currently host Galileo and European Geostationary Navigation Overlay ground infrastructure to continue to do so.

To prepare for this scenario the UK is exploring alternatives to fulfil its needs for secure and resilient position, navigation and timing information. These contingency options are made possible by the expertise of the UK space sector and will be assessed on their own merits. The government will invest £92 million from the Brexit readiness fund on an 18-month programme to design a UK Global Navigation Satellite System. This will inform the decision to create an independent system as an alternative to Galileo.

## **Implications**

For the public and most UK, EU and other commercial satellite navigation users, there should be no noticeable impact if the UK were to leave the EU with no agreement in place. All devices that currently use Galileo and European Geostationary Navigation Overlay, such as smartphones, will continue to be able to do so.

## **Actions for businesses and other stakeholders**

UK-based businesses, academics and researchers will not be eligible to bid for any future work on the EU Global Navigation Satellite System programmes.

Any UK businesses, academics and researchers currently contracted or expecting to carry out contracts on these programmes should contact the relevant contracting authority to make sure that arrangements are in place to comply with the conditions of the contract and to avoid possible penalties.

Businesses, academics and researchers in the UK and in UK overseas territories which currently hold ground infrastructure hosting contracts may wish to contact their contracting authority such as the European Space Agency or the EU Global Navigation Satellite System Agency to verify the future position.

UK businesses and organisations will continue to be able to use the freely available 'open' signal to develop products and services for consumers.

EU-based businesses, academics and researchers remain eligible to bid for future work on the EU Global Navigation Satellite System programmes.

## ***COPERNICUS***

### **Before March 2019**

Copernicus is the most ambitious Earth Observation programme to date. It is intended to provide accurate, timely and easily accessible information to improve the management of the environment, understand and mitigate the effects of climate change and ensure civil security.

The UK currently participates in the Copernicus Earth Observation space programme as an EU member state, as well as through our membership of the European Space

Agency (ESA) and the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT). The UK contributes to Copernicus financially and UK industry and academia are involved in the delivery and operation of the programme.

UK companies, researchers and public sector organisations use Copernicus data for a wide range of applications. Companies and researchers based in the EU currently also bid in open competition for contracts to design, build and operate both the physical infrastructure of the programme and its services.

The UK is fully involved in the decision-making of the programme, for example as a member of the main governance Committee. The Department for Environment, Food and Rural Affairs (Defra) leads for the UK government on the overall Copernicus policy. The UK Space Agency leads on the satellites and physical infrastructure.

### **After March 2019 if there's 'no deal'**

The UK will no longer be able to participate in the Copernicus programme as an EU member state and will have no role in how it is run.

### **Implications**

Copernicus has a free and open data policy which means that the data produced by its satellites (Sentinels) and the Land, Marine Environment, Climate Change and Atmosphere services will continue to be freely available to UK users.

The UK's memberships of European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), European Centre for Medium-Range Weather Forecasts (ECMWF) and Mercator Ocean are unaffected, therefore those organisations will retain access to high-bandwidth data that supports the Land, Marine Environment, Climate Change and Atmosphere services.

Other UK users could lose the right to high-bandwidth access to the standard data from Copernicus Sentinels. The UK is clarifying the situation with the European Commission. The UK will lose access to data sourced by Copernicus from Contributing Missions. The UK is clarifying this with the ESA and the European Commission.

UK-based businesses, academics and researchers will be unable to bid for future Copernicus contracts tendered through the EU, or through any other process using EU procurement rules. The government is seeking to clarify with the European Commission

what this will mean for those UK-based businesses, academics and researchers holding Copernicus contracts with delivery dates that run past the date of the UK's exit from the EU.

EU-based users of Copernicus data and services will be unaffected in a 'no deal' scenario. EU-based businesses, academics and researchers will remain eligible to participate in all aspects of the design, build and operation of the Copernicus programme. The government is seeking to clarify with the European Commission whether EU businesses, academics and researchers involved in partnering arrangements with UK will be affected in any way.

### **Actions for businesses and other stakeholders**

UK-based Copernicus data users may wish to consider the impact that losing access to any Copernicus data or information not sourced under the free and open data policy will have on their operations.

## ***SPACE SURVEILLANCE AND TRACKING***

### **Before March 2019**

The EUSST programme was set up in 2014 to provide the EU with an autonomous Space Surveillance and Tracking (SST) capability to protect EU Space Infrastructure (for example, satellites) from risks of collision with other orbital objects (other satellites and debris), and to provide civil contingency services with accurate data regarding debris re-entering the atmosphere.

The programme currently provides three services to Member States and EU businesses and organisations:

- Conjunction Analysis (i.e. Collision Avoidance);
- Fragmentation Analysis (i.e. the analysis of in-orbit fragmentations from space vehicles, as well as the information about the fragmentation); and
- Re-Entry warnings (i.e. satellites or debris coming back to earth on a scheduled or unscheduled basis).

In the UK, the UK Space Agency distributes EU funding to UK organisations to carry out the necessary tasks to fulfil the EU Space Surveillance and Tracking programme. The UK National Operational Centre provides the Fragmentation service and provides a back-up service for Re-Entry services. EU Space Surveillance and Tracking has been

partially operational and providing some data since July 2016, but it will take time until it is a fully functioning Space Surveillance and Tracking system.

### **After March 2019 if there's 'No Deal'**

If the UK leaves the EU in March 2019 with no agreement in place, the UK will not be eligible to participate in the EU Space Surveillance and Tracking programme. UK organisations will not therefore be able to contribute to providing services to the EU Space Surveillance and Tracking, to participate in the scientific and technical groups to develop the programme further or be able to receive grant funding to pay for UK involvement.

The UK will continue to receive space, surveillance and tracking data from the United States of America.

### **Implications**

A limited number of UK satellite owners and operators currently have arrangements to receive services from the EU Space Surveillance and Tracking programme. These are not linked to the government's role in the EU Space Surveillance and Tracking programme, and we are seeking clarification from the European Commission as to the potential impacts on access to services in the unlikely event of 'no deal'.

### **Actions for businesses and other stakeholders**

A small number of UK providers may still have programme delivery contracts in place in March 2019. These would be anticipated to expire before the end of September 2020. Any companies currently involved in the programme may wish to contact their relevant contracting authority if they have concerns about their contractual status.

EU businesses, academics and researchers are currently eligible to bid for contracts related to the EU Space Surveillance and Tracking programme. Any EU organisations currently or expecting to carry out contracts which involve partnership arrangements with UK businesses, academics and researchers may wish to contact the relevant contracting authority to make sure that arrangements are in place to ensure continued partnership complies with the conditions of the contract post exit and to avoid possible penalties.

### **Further information**

The information in this technical notice is a summary of the current situation. Businesses, academics and researchers with existing contracts relating to these programmes or who use data and services may contact the UK Space Agency ([info@ukspaceagency.gov.uk](mailto:info@ukspaceagency.gov.uk)) with any questions or concerns.

Updates to the information in this notice will be provided on the [UK Space Agency website](<https://www.gov.uk/government/organisations/uk-space-agency>).

Organisations who are in receipt of Horizon 2020 research programme funding or who are bidding for such funding can find more information in this notice [insert link to Horizon 2020](<https://www.gov.uk/government/publications/horizon-2020-funding-if-theres-no-br-exit-deal>).

This notice is meant for guidance only. You should consider whether you need separate professional advice before making specific preparations.

It is part of the government's ongoing programme of planning for all possible outcomes. We expect to negotiate a successful deal with the EU.