Your response

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Question 1: Are there other trends in the space sector (or the broader spectrum environment) that we should monitor and/or take account of in our strategy?	Access Partnership acknowledges and lauds the efforts of Ofcom in proactively designing a robust strategy for the use of space spectrum. As the space sector grows at an increasingly rapid pace, we expect that this initiative will help foster both an efficient use of scarce spectrum resources and an equitable allocation that will provide greater benefit to society. However, we would like to note other emerging trends in the space sector that should be duly considered and assessed in order to have a holistic and balanced approach to this issue. As we elaborate on below, these issues touch upon certain areas of innovation in satellite connectivity that will have tremendous impact in emergency and disaster relief services. By addressing these concerns in Ofcom's space strategy, we are confident that we are helping achieve the Government's aim to creating a transparent and predictable regulatory framework that would further support investment in the UK space sector.
Question 2: Do you agree with the broad areas we have prioritised for our work?	We support in principle the Ofcom's strategy to prioritise its work areas in the space sector. Through this, sufficient focus can be given on potential growth areas that could bring maximise benefits. Given its fast-changing landscape, we agree with designating "communications" as a priority area, as this will avert the demands and challenges brought about by the recent boom in satellite-driven connectivity. However, we note that communications, in itself, cannot be detached from other work areas comprising the space sector. This is most certainly the case in the area of "emergency and disaster relief", which the Ofcom has proposed "not to focus on" for spectrum management changes. While these two areas may be distinct in some way, we want to highlight the increasing convergence between "communications" and "emergency and disaster relief" in coming up with a more robust space sector strategy.

	Satellite communications have been playing a larger role in providing relief services in times of emergencies and disaster. This will be more apparent in the coming years, as the world faces a larger threat of climate-related emergencies. Indeed, the industry has realised the value that satellites bring in enhancing relief services—which save lives and reduce costs during emergencies—particularly in areas where traditional terrestrial networks cannot reach. It must be noted that this is not merely confined anymore to traditional ways of satellite connectivity; in the next few years, we expect to see the roll out of more agile, non-traditional tools that leverage satellite communications for purposes of providing emergency and disaster relief. As such, the Ofcom should also consider this possibility in devising its spectrum management strategy for the space industry. It might not necessarily be the case that satellite systems providing emergency and disaster relief services "have the spectrum needed for their operation" as stated in paragraph 4.8 of the Consultation Paper. Should these relief services leverage the use of more common devices (e.g., smartphones), then they might also need to utilise spectrum used for communication purposes. Conversely, should communication tools may also have to utilise the spectrum traditionally used in the area of emergency and disaster relief. As such, while Ofcom's prioritisation framework is indeed responsive to high-growth areas needing focus, it should also be more adaptable to take into account possible convergence in these areas as we noted above.
Question 3: Are there other issues and actions that are likely to be important over the next 2 – 4 years?	In Section 3 of the Consultation Paper, the Ofcom has recognised the possibility of standard mobile phones or other terrestrial devices (e.g. Internet of Things terminals) being able to connect to satellite services when out of range of terrestrial base stations. The Ofcom also considered this in its recent Mobile Networks Discussion Paper, wherein the existing development work being undertaken to determine whether satellites could connect directly to non-modified mobile handsets, thus

	providing emergency connectivity and/or extending the coverage of mobile networks has been recognised.[1] We note the current approach of Ofcom in being "supportive in principle of innovations which extend the coverage of terrestrial services" but at the same time being cognizant that "some of these satellite services would seek to transmit from space in bands currently used by mobile operators or by licence exempt equipment in the UK – and using frequencies where there is no internationally agreed satellite allocation."[2] It must be noted that at this point, such technologies are still in varying phases of development, and further study might have to be undertaken by regulators on the possibility of these satellite services using bands currently used by mobile operators. Should these innovations eventually materialise, then regulatory frameworks—both domestic and international—may have to adapt to these potentially ground-breaking developments which could avert damage to lives and properties. We bring the Ofcom's attention to a study conducted by Access Partnership and has been published under umbrella of its Fair Tech Institute regarding the "Role of Satellite Communications in Disaster Management."[3] The study highlights that satellite services and next-generation satellite-enabled connectivity can help address the limitations faced by our present terrestrial telecommunication network. As satellite-based technologies are not as susceptible to disruption during natural disasters, satellite applications have been long recognized as an essential component of any country's disaster communications management strategy. **The adoption of new strategies and technological solutions – as a crucial component of disaster preparedness – would allow the less connected to**

[1] Ofcom "Mobile networks and spectrum" Discussion Paper (February 2022), para. 3.33.
[2] Ofcom "Space spectrum strategy", Consultation (March 2022), para. 5.18.
[3] Access Partnership & Fair Tech Institute, The Role of Satellite Communications in Disaster Management, https://www.accesspartnership.com/access-partnership-releases-the-role-of-satellite-communications-in-disaster-management-whitepaper-under-the-fair-techinstitute/

	communicate during emergency situations, ensuring that emergency communications are more accessible for better rescue responses. Hence, this leads us back to our earlier point on the convergence of different areas of space technology. In response to the threat of climate emergencies, traditional communication tools are being empowered with satellite connectivity to bring about new life-saving potential for emergency and disaster relief. As the world faces a satellite connectivity revolution, an overlap between these areas will help define future developments in these sector, and regulatory systems should be able to adapt to these changes as well.
Question 4: Do you have any evidence on whether specific actions should be a high priority?	From the preceding points we made, it is apparent that there are areas of convergence in the space sector that regulatory systems should be responsive to. To reiterate, satellite technology is instrumental not just in providing traditional communications tools, but also in life-saving connectivity. As such, spectrum resources must be allocated equitably for this specific type of communication, lest the development of critical satellite-enabled emergency communication tools be adversely affected. Spectrum usage and allocation should also take into account the needs of satellite communications, as this will impact how communications technology respond to the threat of climate emergencies and natural disasters. Regulatory frameworks should be flexible to the needs of these innovations. More in-depth studies should be conducted on the possibility of spectrum sharing among these various uses. While we recognize the need to reduce harmful interference that could affect the quality of services, it is also important to have an optimal and equitable allocation between various communication needs, lest one segment be foreclosed from pursuing the development of critical life-saving technologies. Integrated and expedited authorization and spectrum allocation is especially needed when it comes to installation of earth stations in disaster areas. Thus, while satellite connectivity is the

	best solution in most of the disasters, the attendant processes needed in the licensing of earth stations—which may include a service offering license, a radio frequency license, or construction permits, among others—tend to be generally complex and time-consuming procedures. As such, the installation of temporary facilities such as small satellite earth stations could help in emergency situations or disaster recovery operations.
Question 5: Do you have any other issues you wish to comment on?	N/A
Question 6: Are there other issues and actions specifically relating to NGSO communication systems that are likely to be important over the next 2 – 4 years?	N/A
Question 7: Do you have any evidence on whether specific actions relating to NGSO communication systems should be a high priority?	N/A
Question 8: Do you have any other comments relating to NGSO systems?	N/A