Your response

Question	Your response
Question 1: **a) Do you agree with our characterisation of the ways in which mobile calls enter the UK? Please give an explanation for your answer where appropriate.** **b) What do you think is the relative importance and / or significance of each of the different routes used for calls to enter the UK? Please provide evidence for your answer.** **c) If you provide mobile services to UK consumers, what international gateway provider(s) does your organisation use (including in-house services)? In addition, please explain the nature of the international gateway services you rely on.**	As a preliminary statement Twilio notes that it has not answered every question in this call for inputs, responding where we are best placed to do so. Confidential? – N 1a) Yes. 1b) It is important that different routes are maintained for calls to enter the UK — including international gateway functionality as well as multiple bilateral interconnect agreements to enable route diversity and thus resilience. Maintaining multiple routes is critical for competition and helps ensure an innovative market that provides low-cost, reliable connections. Relying on domestic gateways for specific legitimate use cases, for instance to support the activities of Communications Platform as a Service (CPaaS) providers such as Twilio, is a workable solution. We believe that it is useful for innovation and compliance purposes to have harmonisation between the UK and the EU on the solutions adopted.
Question 2: **What variables and factors should we take into account when considering whether – and, if so, how - to address the harms caused by spoofed UK mobile numbers?**	Confidential? – N While it is important to combat malicious calls, it is also important to highlight the benefits of using UK numbers for legitimate businesses and public administrations. Twilio has put in place measures to combat illegitimate spoofing. For example, once a phone number is verified for right to use, calls can be made using the verified caller ID for outbound calls through Twilio. Twilio also notes that there are legitimate reasons why UK mobile numbers are in demand for originating calls from abroad. For example, there are cases in which legitimate organisations operating 24/7 find it necessary to use UK numbers hosted abroad: to ensure availability to make and answer calls, and to be more efficient with costs and deliverability. Legitimate CPaaS use cases for

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	presenting UK CLIs with the caller or sender being located abroad include (company-internal and external) call centres providing support for UK customers, and cloud-based conferencing platforms dialling out to include additional participants, etc. There are also legitimate use cases for using temporary CLIs, for instance to ensure that subsequent calls are properly answered, to protect the identity of both the caller and called individual etc. Users wishing to make calls or to send messages with UK CLIs may also include government agencies, non-government organisations, charities, etc. Twilio therefore believes there should be opportunities for exemptions from any suggested blocking measures (including industry measures) in an effort to support legitimate use cases. Any measures, be they industry agreed, regulatory in nature, or even legislative in nature, should not result in hampering innovation, restricting competition or negatively affecting important end-users.
Question 3: **a) What is the scope and scale of consumer harm caused by spoofed UK mobile numbers?** **b) What are the consumer impacts of spoofed UK mobile numbers more broadly?** **Please provide evidence to support your responses.**	
Question 4: **a) How significant is the volume of spoofed mobile calls from abroad?** **b) Is there any evidence that scammers are moving from spoofing fixed to mobile UK CLI?** **Please provide evidence to support your responses.**	

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Question 5: **How will developments in deployment of mobile technologies in the UK and abroad affect the problem of spoofed UK mobile calls from abroad? Please provide evidence to support your response.**	Confidential? – N Twilio notes that, alongside the developments that Ofcom notes in its CFI, it should also consider the growing virtualisation of elements of mobile networks. In terms of "voice firewalls", Twilio notes that in Ireland ComReg has proposed that voice firewalls be introduced only for the largest providers. Any measures should take into account the need to have ongoing competition in the marketplace that allows for the continued participation of smaller providers.
Question 6: **a) What is your preferred option for addressing scam calls made from abroad using spoofed UK mobile numbers, and why (including the pros and cons of the different solutions)?** **b) Do you think it is possible to identify a solution that could be implemented relatively quickly now, and which would enable implementation of a more robust and effective solution in the future? If yes, what solution fits these criteria? Please give an explanation for your response.** **c) What would be the advantages and disadvantages of obtaining more information about, and oversight of, the international gateway providers which bring calls into UK networks, in the context of tackling use of telecommunications networks to facilitate fraud and scams? Please give an explanation for your response.** **d) What would be the advantages and disadvantages of industry-led solutions, and where might regulatory intervention be required? Please give an explanation for your response.**	Confidential? – Yes ✂

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Question 7: Are there any international experiences of tackling this issue that you think are particularly relevant for the UK? Please provide evidence and an explanation for your answer.	Confidential? – N Twilio wishes to highlight that it was deeply involved in the design and implementation of STIR/SHAKEN in the United States. While STIR/SHAKEN has produced material impacts in the United States, there is room for more improvements. More specifically, exemptions for calls not forwarded using IP-technologies has led to not all traffic being authenticated and more complicated tracebacks. However, given our work since 2020 on these efforts, Twilio supports the introduction of a form of global authentication framework or standard rather than arbitrarily allowing carriers to block spoofed legitimate calls with little recourse. Twilio's experience also shows that the ability to rapidly and reliably perform a traceback to the entity that is in reality originating a call/text is crucial in effectively combating harmful activity, regardless of whether the call/text originates from an entity that uses a spoofed number, or from an entity that has legitimately been given a number in use. This is the case because harmful activity, including automated calling, can and does occur not only by entities spoofing numbers, but also by entities that are given numbers to use on a bona fide basis. STIR/SHAKEN does not replace the need for a system enabling the reporting of misuse as well as rapid and reliable traceback regime to the call originator in which a call's source is revealed through a trace of underlying network data (IP addresses, trunk groups, and originating point codes rather than displayed (i.e. spoofed)) CLI. As mentioned before, STIR/SHAKEN is one mechanism, but other approaches can help contribute to achieving these goals. It is important to note that bona fide Communications Providers are themselves the victims of sophisticated entities intent on misusing telecommunications services – these entities may use paid-for services (rather than relying on spoofing third parties' numbers) and constantly adapt their practices in

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	ways that are not easy for Communications Providers to identify. Active government engagement with global law enforcement is another key component in combating illegal spoofing. While the UK has signalled that it will not adopt STIR/SHAKEN at this time, the process in France has advanced forward. This has initiated timelines to identify bad actors which will place accountability onto providers that are initiating illegal traffic. Twilio suggests that Ofcom be prepared, in time, to reconsider its assessment of STIR/SHAKEN. In the meantime, Twilio would encourage Ofcom to fully review the approaches being adopted in other European jurisdictions, such as Ireland, to ensure that measures are balanced and not overly blunt, i.e. that legitimate use cases continue to be permitted, with safeguards put in place.
Question 8: **Are the factors outlined in the section 'framework for evaluating options' the right things to think about when making a decision on options to address spoofed UK mobile numbers, and are there any additional factors which we should consider? Please explain your response where appropriate.**	Confidential? – N Particular attention should be paid to the potential costs incurred by legitimate businesses. Communications providers should be viewed as proactive partners in tackling illegal spoofing. Ofcom's framework for evaluating options should include: - an assessment of regulatory regimes across other jurisdictions, particularly the EU Member States, and opportunities for harmonisation. - an assessment of the effects on competition of intervening in networks to reduce spam calls. - an assessment of potential conflicts with data protection and privacy laws.

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