Your response

Question	Your response
Question 3.1: Do you have further views about the implementation of STIR?	Use of signature based attestation is a good idea provided that it is properly supported by regulation and enforcement, international regulatory co-operation as well as co-ordination with ICO and UK Direct Marketing Industry.
Question 3.2: Are there any other approaches we should consider for addressing CLI authentication?	Rather than CLI authentication, more basic approaches can be taken for CLI validation with impacting post-dial delay. For example, an all calls CLI validation could validate that numbers below to a valid number range, is of the correct length, is of the expected number type, does not belong to known 'hot-lists' and the range is assigned to an operator. There is strong evidence to suggest that fraudsters exploit lack of number range validation and that a regulator requirement, working in much the same way as TPS, could help to improve trust in CLIs.
Question 3.3: Do you agree a common database would be required to support the implementation of STIR?	Ultimately a central database would enable a shift to a full attestation model that enables end-user signature validation, but this end-goal may never be necessary. Nevertheless progress towards a central database to support multiple business requirements should be undertaken as soon as possible.
Question 3.4: What are your views on using blockchain technology as the basis for a common numbering database to support CLI authentication? What other solutions do you think should be considered and why?	XConnect welcomes the pilot with a view to improve number portability administration, remove the need for intermediaries and bring about the wider benefits of DLT technology to number management. However, it is unclear why operators cannot be trusted to attest own in service numbers with the need to prove ownership via the ledger.
Question 3.5: What are your views on timeframes?	Timescales are reasonable yet challenging. Phasing of central database features is important in order to support desired timing of policy outcomes. For example, different database technology maybe necessary in order to support Direct Routing, Number Management, STIR. Different technologies can run in parallel and the planning should determine when or if technologies should be integrated or functions consolidated. Services and technology exists today to support all calls queries for direct routing and fraud management without impact post-dial-delay. These technologies are adaptable to support attestation and validation services.

Question 4.1: What are your views on the current implementation of number portability in the fixed and mobile sectors?	Access to reliable number portability information needs to be much more widely available. NP data is a key enabler for non telco service e.g payments (DCB), APIs (ATP/KYC), and direct routing for non operator telecoms services such as SMS. Currently NP information is garnered through HLR Lookups, which creates privacy and security vulnerabilities and is entirely unsatisfactory from a performance perspective. Services and technology exists today to securely and efficiently publish real-time NP information (in any format) so that normalised data can be easily and securely consumed by approved parties with response SLA's < 10m.
Question 4.2: What are your views on sharing the functionality of a common numbering database for CLI authentication to also support improvements in UK porting processes?	The central database is a common function. It is more important to prioritise policy benefits and that CDB functionality can be integrated or consolidated to suit. Key consideration for CLI authentication will be the post-dial delay and this may require alternative technology to that which supports the porting process. Services and technology exists today to securely and efficiently publish real-time NP information (in any format) so that normalised data can be easily and securely consumed by approved parties with response SLA's < 10m.
Question 4.3: We are currently supporting a blockchain pilot. Do you have any views on using this technology for port transactions and a routing database? Are there other alternatives that should be considered?	The central database is a common function. It is more important to prioritise policy benefits and that CDB functionality can be integrated or consolidated to suit. Key consideration for CLI authentication will be the post-dial delay and this may require alternative technology to that which supports the porting process. Services and technology exists today to securely and efficiently publish real-time NP information (in any format) so that normalised data can be easily and securely consumed by approved parties with response SLA's < 10m.
Question 4.4: What are your views on implementation timeframes and the importance of a common database solution being available to support the migration of telephony services to IP?	The migration to all IP networks enables an ability to introduce all calls query capabilities that will result in many benefits as articulated in the consultation paper. A central database would empower these queries but is not a pre-requisite for IP migration. There are number portability data quality challenges that need to be addressed in parallel whilst making the best available data accessible to operators to assist them in realising the benefits of the IP transition at their own speed. Services and technology exists today to securely and efficiently clean and

	publish real-time NP information (in any normalised format) so that normalised data can be easily and securely consumed by approved parties with response SLA's < 10m.
Question 5.1: What are your views on the potential for a common database solution to also provide shared functionality to support number management?	XConnect welcomes the blockchain pilot with a view to improve number portability administration, remove the need for intermediaries and bring about the wider benefits of DLT technology to number management. This technology may not be suitable to support shared functionality to support real-time queries.
Question 5.2: What do you see as the benefits or disbenefits of changes to number management post PSTN retirement?	No comment.
Question 6.1: Do you agree, in principle, with the need to develop and adopt a common numbering database? If not, why not?	Yes. Current private effort to implement a UK NP database are significantly limited. In many cases those efforts rely on HLR Lookup, which is not sufficiently accurate and wholly inadequate due to post dial delay average of over 500ms.
Question 6.2: If you do not agree with the need to develop and adopt a common numbering database, do you have any suggestions on how the issues we have set out in this consultation could be addressed?	
Question 6.3: Do you agree that in the first instance industry should lead the implementation of a common numbering database, with Ofcom providing support to convene and coordinate key	No. To date, the industry has failed to establish a workable model. There many moving parts as well as a large number of organisations which makes an industry led approach extremely difficult. It is not enough for Ofcom to just convene and co-ordinate. Unless Ofcom is going to impose regulation, Ofcom needs to set objectives and provide guidance, tools and PoCs which could be in the form of adaptable, low cost technology solutions that enable progression towards industry implementing a solution.

| **activities? If not, what are your views on how implementation should be taken forward?** | |