



Consultation on Draft QoS Policy and Draft QoS Regulatory Framework

Annex 5:

**Consultation on the “Instruction on the Setting of QoS parameters
and the methodology for the assessment of coverage” (22 July to 15 September 2013)**

**Summary of the Comments Received and
the Response of the Communications Regulatory Authority**

6 March 2014

Communications Regulatory Authority (CRA)

Summary of the key comments received and the response of CRA

Responses to this public consultation have been received from the following parties (by alphabetical order):

1. Ooredoo
2. QNBN
3. Vodafone Qatar

Section	Subject	Respondent	Comments	Response of the CRA
	General comments	2 and 3	<ul style="list-style-type: none"> • 2 respondents consider this consultation as a basis for further work to properly define the framework and implementation of the QoS parameters as well as the processes and templates. 	<ul style="list-style-type: none"> • The aim of this consultation is indeed to provide CRA with a basis for further work to define the framework and implementation of the QoS parameters as it was explained during meetings of the week of the 9th of September 2013.
			<ul style="list-style-type: none"> • Vodafone strongly encourages CRA to work closely with the Service Providers to establish measures which are achievable, demonstrate clear benefits for consumers and are affordable. 	<ul style="list-style-type: none"> • CRA will work closely with the Service Providers to establish measures which are achievable, demonstrate clear benefits for consumers and are affordable. In particular, it is planned to organize further consultations and workshops in early 2014.
		1 and 2	<ul style="list-style-type: none"> • 2 respondents raised concerns regarding the assumptions and unsubstantiated claims on which this consultation is based, without any market analysis or consumer survey. There is no evidence of consumer demand for specific quality improvement and no sound rationale for the particular measures proposed, and the mobile market is subject to vigorous competition in a number of market segments. 	<ul style="list-style-type: none"> • CRA is of the view that current licenses need to be updated to take technological changes into account and to homogenize operators’ obligations. • Regarding competition, CRA considers that 2 mobile operators on the market is not necessarily sufficient for competition to be vigorous. • CRA maintains that customers’ queries have been steadily increasing recently.
			<ul style="list-style-type: none"> • 2 respondents mention the existing difficulties they face regarding infrastructure deployment (in particular mobile sites acquisition), which prevents any significant improvement in the QoS of existing services and explain low investment level. 	<ul style="list-style-type: none"> • CRA takes the point and will take this into account when reviewing coverage obligation. However, CRA believes that processes have improved recently and that mobile site acquisition does not appear to be a significant problem anymore.
		1	<ul style="list-style-type: none"> • Any quality of service measurements made should be important to customers, practical for operators and comparable between operators. In particular, they should concentrate on few, key aspects of service, and should be clearly defined. There is no evidence in the consultation 	<ul style="list-style-type: none"> • CRA agrees with the view that KPIs must be customer centric, practical to implement and comparable between operators. The review of KPIs as a result of this consultation has been

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			that the proposed regime would meet any of these goals.	conducted accordingly.
			<ul style="list-style-type: none"> In addition, the range and level of the proposed QoS parameters does not accord with international best practices. 	<ul style="list-style-type: none"> CRA has initiated a benchmark process with external consultants to review KPIs according to international best practices. The review of KPIs as a result of this consultation has been conducted taking this into consideration.
1	Introduction	1	<ul style="list-style-type: none"> The penultimate sentence of the introduction to the consultation which states “parameters may be extended to other Service Providers (e.g.: class licenses, satellites) and/or new QoS parameters may be defined, in future, as and when appropriate” creates an uncertainty which presents a negative factor in the attraction of new entrants to the market. 	<ul style="list-style-type: none"> CRA considers that such sentence is necessary as market and technology will evolve and QoS parameter will need to take this evolution into account. This consideration is an international best practice.
		2	<ul style="list-style-type: none"> CRA indicates that QoS may be improved by further market entry. The respondent suggests that CRA map out a clear roadmap for improving QoS that allows the Service Providers to invest with more certainty. This may include giving the existing Service Providers the opportunity to demonstrate that they can provide improved QoS before CRA considers whether further market entry might improve outcomes. 	<ul style="list-style-type: none"> CRA agrees with this point. This process aims at defining the framework that will provide the Service Providers with a clear roadmap for QoS improvement and with the adequate reporting process in order to demonstrate their ability to improve QoS.
		3	<ul style="list-style-type: none"> CRA indicates that “<i>Technology advancements and service evolution have resulted in a need to review and revise the current QoS and coverage parameters to ensure that they remain relevant to meeting the requirements and expectations of today’s customers</i> “. As no technology advancements have taken place since issuance of the Qbn License at the passive level this comment is not applicable to Qbn. 	<ul style="list-style-type: none"> CRA agrees that no technology advancement and service evolution has taken place since issuance of Qbn license. However, CRA aims also at making sure that QoS parameters are in line best practices and best levels and in this respect it can be necessary to amend QoS parameters of Qbn license.
2	Legal basis	1	<ul style="list-style-type: none"> The observation that license conditions are discriminatory between service providers is valid and the respondent agrees that this does not accord with best practices. 	<ul style="list-style-type: none"> CRA notes the comment.
3	QoS and coverage parameters	1 and 2	<ul style="list-style-type: none"> Two respondents consider that fewer parameters should be measured, raising concerns about the cost and effort required to meet the proposed regulation (with targets more stringent than those in most other countries and heavy reporting regime). They consider that such regime would damage existing operator’s ability to innovate as well as deter new operators from entering the market. The specification of many measures is too vague, making it difficult to comment on the proposed level of the associated targets. Furthermore, several of the proposed measures seem to be out of line with accepted best practices and, in some cases, with practical achievability. 	<ul style="list-style-type: none"> CRA notes these comments and has taken them into account in the KPI review. However, CRA is of the view that the license regime must be changed in order to maintain a high QoS in Qatar and to take into account technological and market evolutions. CRA believes that this would not deter new operators from entering the market as long as they can be sure all operators will have same requirements and as long as QoS requirements would apply only after a certain time and/or market

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				share after entry.
		1	<ul style="list-style-type: none"> The current QoS regime already covers key issues for end users and could be adapted to address the latest technology. It is suggested that the known issues in achieving existing performance targets are dealt with before embarking on a more expansive scheme. 	<ul style="list-style-type: none"> Customers’ advice is important and must be at the core of the KPIs review. However, CRA considers that there are still some invariable standards to be reached.
			<ul style="list-style-type: none"> Most developed countries require telecom operators to report on a few, critical aspects of service. There is no precedent for the number of service quality parameters proposed in the consultation. Such an extensive measurement and reporting regime would only serve to confuse, not inform. 	<ul style="list-style-type: none"> There are countries that have implemented much more KPIs than those proposed in the present consultation. CRA has conducted a benchmark which shows this. However, CRA agrees that KPI reporting must not create confusion for customers, and has taken the point into account in the KPI review following this consultation.
			<ul style="list-style-type: none"> The revision of coverage requirement is, in effect, a national network redesign. Clearly such an undertaking cannot readily be assessed without extensive study. At a more detailed level, some of the proposed measures in the consultation would require new network or monitoring equipment to be installed. This too would require detailed study. 	<ul style="list-style-type: none"> CRA takes the point and has taken this into consideration when reviewing coverage requirements following this consultation.
		3	<ul style="list-style-type: none"> The second paragraph of section 3, which states “<i>Service Providers shall seek RA approval for any scheduled outage</i>” contradicts with p 16 where the reference is to “prior notice”. Qnbn recommends simple notice to MoCIT as notices from the industry will be numerous and an approval process will require a dedicated team to handle all the requests. 	<ul style="list-style-type: none"> CRA notes the points, and should amend the second paragraph of section 3 as follows : “<i>Service Providers shall notify CRA at least 5 days in advance prior to any scheduled outage in their network</i> “
			<ul style="list-style-type: none"> Qnbn suggests to replace the schedules in the same section as follows : <ul style="list-style-type: none"> ○ Fulfill 85% of the total number of additional QoS requirements [...] within one year instead of 6 months ○ Fulfill 100% of the total number of QoS requirements [...] within two years instead of 18 months. 	<ul style="list-style-type: none"> CRA agrees.
3.1	Reporting	1	<ul style="list-style-type: none"> The proposals in the consultation are not in keeping with accepted best practice in many areas. The prevailing measures and targets regarding acceptable level of services in Singapore and UAE would set a suitably challenging benchmark for Qatar. 	<ul style="list-style-type: none"> In many cases the proposed targets are in line with international best practices. Indeed, the table provided by the respondent does not prove any excess for the parameters considered. CRA wishes to recall that challenging targets are necessary in order to compensate lack of competition in Qatar but also in order to meet

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				Qatar’s ambition with respect to ICT.
			<ul style="list-style-type: none"> The reporting and the report analysis process should not be too onerous for either the operator or the regulator 	<ul style="list-style-type: none"> CRA agrees and has taken this into account in the QoS Regulatory Framework document.
		3	<ul style="list-style-type: none"> The respondent asks whether MoCIT will issue a template to ensure reports are consistent amongst all Service Providers. 	<ul style="list-style-type: none"> It is expected that a template will be issued to ensure consistent reporting amongst all Service Providers.
			<ul style="list-style-type: none"> QoS indicators are quarterly so calculation should be per quarter and not per 30 day period. 	<ul style="list-style-type: none"> CRA agrees and has reviewed this accordingly.
3.2	Performance bonds	1 and 2	<ul style="list-style-type: none"> 2 respondents recommend the publication of comparable performance parameters instead of the proposed use of performance bond as a penalty regime. 	<ul style="list-style-type: none"> CRA believes that a penalty regime is essential in the context of low competition.
		2	<ul style="list-style-type: none"> The current proposal for a bond of QAR100,000 per parameter per month is punitive and will reduce the ability of SPs to invest. 	<ul style="list-style-type: none"> CRA is proposing to require a bond of QAR30,000 per parameter per month. However, CRA proposes to re-address this issue in the coming consultation of the QoS regulatory framework and will consider whether a customer compensation scheme would not be more relevant.
			<ul style="list-style-type: none"> The respondent agrees with the proposed approach to meet and give an opportunity to explain the non-compliance and the time to remedy. However, the timeline for remedy cannot be defined as 30 days as certain remedies may take longer than 30 days depending on the severity of the problem. 	<ul style="list-style-type: none"> CRA agrees with this general approach but believes that some of the issues could be remedies before 30 days because they require rapid changes and some issues are so important that they require significant improvements. CRA proposes that operators should also justify why more than 30 days would be needed to remedy the issue but that the remedy should never be implemented any longer than 3 months.
		3	<ul style="list-style-type: none"> QoS indicators are quarterly so calculations for the Performance Bond should be per quarter and not per month. 	<ul style="list-style-type: none"> CRA agrees.
			<ul style="list-style-type: none"> There is a number of requirements imposed for the Performance Bond. Will MoCIT provide a template to be utilized by Service Providers to ensure conformity of terms and conditions? 	<ul style="list-style-type: none"> It is expected that a template will be issued to ensure consistent reporting amongst all Service Providers.
		3.3	Enforcement	3
3.4	Effect of Instructions		No comment.	

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I – 1.1	Fixed services- General requirements	1 and 2	<ul style="list-style-type: none"> Two respondent believe that some proposed targets are in excess of established benchmark (supply time for initial telephone line and/or Broadband connection, Availability of access networks, Fault repair time). In particular, one respondent mentions that the requirement for 100% achievement for supply time for initial telephone line and/or Broadband connection is impossible, and another considers the new targets, especially conforming to repair times such as Emergency repair in 1 hour, to be unrealistic. One respondent considers that the current KPI of 90% within 24 hours and 99% within 72 hours is more reasonable and achievable 	<ul style="list-style-type: none"> CRA agrees that 100% targets should be amended as they can be difficult to achieve. CRA has updated the targets accordingly.
		1	<ul style="list-style-type: none"> The definition of targets in terms of calendar days is problematic as installation staff cannot (under Labor Law) be expected to work on Friday or public holiday 	<ul style="list-style-type: none"> CRA takes the point into account. However, from a customer point of view, “calendar days” are more meaningful than “working days”. As a consequence, CRA proposes to keep when relevant the term “calendar days” (because KPI should focus on customers) but to increase target.
			<ul style="list-style-type: none"> Fault repair time target for Emergency and for Entreprises/SMEs is not clear. Regarding Entreprises/SMEs, This measure appears to set another percentage over the existing SLA percentage 	<ul style="list-style-type: none"> CRA proposes to remove Fault repair time target for Emergency CRA considers that setting another percentage over the existing SLA percentage can be relevant, especially in order to make sure that operators do not prefer paying penalties rather than achieving the SLA.
		2	<ul style="list-style-type: none"> Daily faults rate is not always within the service provider’s control (for example if a website is down and a customer cannot open it). 	<ul style="list-style-type: none"> CRA agrees with the point but believes the current definition is already taking this into account.
			<ul style="list-style-type: none"> CRA needs to clarify whether daily faults rate is calculated as an aggregate of all our services, or on a per customer service basis. The respondent proposes that this should be aggregated. All KPIs should be defined as aggregated amounts across all services. 	<ul style="list-style-type: none"> CRA clarifies that the calculation should be made as an aggregate of all services.
3	<ul style="list-style-type: none"> Supply time excludes the supply time for telephone lines/broadband connections dependent upon PON or P2P passive services (The passive service supply time is 10 days which contradicts a 5 day supply time for active unless the suggested exclusion is made). 	<ul style="list-style-type: none"> CRA agrees with the point and this has been taken into account in the definition of the KPI. 		
I – 1.2	Fixed Services – Voice	1 and 2	<ul style="list-style-type: none"> 2 respondents stated that all target measures should be based on test calls with a predefined sample rather than measuring all calls. 	<ul style="list-style-type: none"> CRA agrees with this point. Test calls procedure will be defined in next steps of the QoS regulatory framework review process.

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			<ul style="list-style-type: none"> 2 respondents stated that targets should be applicable on on-net calls only as service providers have control over only national part of the call. 	<ul style="list-style-type: none"> While CRA agrees with the fact this is more complex for a Service Provider to monitor QoS for non on-net calls, CRA believes that non on-net calls have importance for end-users and for the development of competition. As a consequence, CRA proposes to have targets but to apply different level of targets for the different types of calls depending on whether QoS can be fully controlled or not by Service Providers.
		1	<ul style="list-style-type: none"> Call drop rate is in excess of established regional benchmark (2% in Saudi Arabia), and not achievable 	<ul style="list-style-type: none"> CRA has removed this KPI and replaced it by more customer oriented KPI in the draft QoS Regulatory Framework.
			<ul style="list-style-type: none"> It is assumed that the MOS would be assessed from subjective rating of test calls. 	<ul style="list-style-type: none"> CRA agrees with the point. Test calls procedure will be defined in next steps of the QoS regulatory framework review process.
		2	<ul style="list-style-type: none"> The respondent proposes to define aggregate KPIs for national and international: 95% for successful call ratio and 7s for Call setup time. 	<ul style="list-style-type: none"> CRA proposes to apply different targets for different types of calls. This will be reviewed in the consultation on the draft QoS Regulatory Framework.
			<ul style="list-style-type: none"> Call drop rate and Voice Quality (MOS) should be applicable on fixed to fixed on-net calls only. 	<ul style="list-style-type: none"> While CRA agrees with the fact this is more complex for a Service Provider to monitor QoS for non on-net calls, CRA believes that non on-net calls have importance for end-users and for the development of competition. As a consequence, CRA proposes to have targets but to apply different level of targets for the different types of calls depending on whether QoS can be fully controlled or not by Service Providers.
			<ul style="list-style-type: none"> Regarding availability of telephone exchange, the respondent can only report this based on IMS core nodes. This should exclude planned maintenance and Node up-time used instead of in-service minutes. 	<ul style="list-style-type: none"> CRA proposes to withdraw this KPI from the list as it does not relate to users perspective, in order to take into account concerns related to customer orientation of KPIS. CRA notes however that KPI is already part of Service Providers’ license.
I – 1.3	Fixed Services – Broadband	1 and 2	<ul style="list-style-type: none"> Many KPIs cannot be monitored for each customer/web session (Speed/data rate, minimum speed offer, web browsing). A reasonable sample size should be defined that adequately reflects service quality as perceived by the end user. 	<ul style="list-style-type: none"> Regarding Speed/data rate, the approach to measure data rate will be defined more precisely in next steps of the QoS regulatory framework review process. CRA proposes to measure it through

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			<ul style="list-style-type: none"> Some KPIs (speed rate, web browsing successful connections, successful data transfer and successful downloaded pages) cannot be guaranteed where not under service providers’ total control, and should be monitored rather than subject to target. 	<p>dedicated measurement campaigns.</p> <ul style="list-style-type: none"> Regarding minimum speed offer, web browsing successful connections, successful data transfer and successful downloaded pages, CRA will consider the possibility of monitoring these KPIs without imposing specific targets as these KPIs are partly beyond Service Provider’s control (for example by conducting the test from a local server).
			<ul style="list-style-type: none"> In addition, some KPIs require clearer definition, such as data rate: where shall the speed be measured? Video streaming quality measurement should also be clarified, as it contains for both respondents a degree of subjectivity. 	<ul style="list-style-type: none"> The approach to measure data rate will be defined more precisely in next steps of the QoS regulatory framework review process. CRA proposes to measure it through measurement campaigns. Regarding video quality measure will also be defined precisely in next steps of the QoS regulatory framework review process too.
		1	<ul style="list-style-type: none"> Network Latency: The new target for terrestrial access to international NAP port does not apply in Qatar as all access is via submarine cable. Also the final definition is assumed to refer to the farthest (not nearest) international NAP port? If this is the case, the location of the farthest port will vary over time, so the setting of a target seems inappropriate. 	<ul style="list-style-type: none"> CRA will specify that access to international NAP is made via submarine cable and not terrestrial access. CRA should modify the 3rd KPI by changing “nearest” by “furthest” and agrees that setting a target could be too challenging. This KPI will be reviewed in the draft QoS Regulatory Framework
			<ul style="list-style-type: none"> Bandwidth utilization: the definition of this measure does not appear to be logical – surely the 85% target should be associated with a 3 month duration and the 90% target with a 2 month duration. In both cases, it does not make sense to measure individual links but rather to aggregate utilization of all network links. 	<ul style="list-style-type: none"> CRA proposes to withdraw this KPI from the list as it does not relate to users perspective, in order to take into account concerns related to customer orientation of KPIS.
			<ul style="list-style-type: none"> Speed / data rate: results will vary with net usage by the end user as this determines the required data rate. 	<ul style="list-style-type: none"> The approach to measure data rate will be defined more precisely in next steps of the QoS regulatory framework review process. CRA proposes to measure it through measurement campaigns..
			<ul style="list-style-type: none"> Minimum speed offered: this measure applies only to fibre connections, and also questions whether an obligation on Qnbn should necessarily be applied to operators 	<ul style="list-style-type: none"> It is proposed to remove this KPI since this is a National Broadband Policy requirement, not a QoS Policy requirement.
		2	<ul style="list-style-type: none"> End to End network availability: Vodafone can only provide calculations based network nodes availability, except the internet connection to the Internet backbone. Also force majeure and external 	<ul style="list-style-type: none"> CRA agrees to exclude force majeure and external ham caused by third parties from the target.

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			<p>harm done to the fibre by digging etc. should be excluded.</p> <ul style="list-style-type: none"> Network Latency: this target is impossible to monitor from the customer's premises, and should be monitored from broadband Network Gateway towards Internet Gateway. Bandwidth utilization: Vodafone considers PoP as the Optical Line Terminator / ISAM uplink to the core aggregated capacity. 	<ul style="list-style-type: none"> CRA agrees with the point. During the review of the QoS regulatory framework, this point will be further considered. CRA proposes to withdraw this KPI from the list as it does not relate to users perspective, in order to take into account concerns related to customer orientation of KPIS.
I – 1.4	Fixed Services – Leased lines	1	<ul style="list-style-type: none"> Supply time: the target definition should take into account the fact that supply time can be affected by factors outside of Service Provider control (such as site not ready, power, termination and other customer or supplier related issues). In addition, a 100% target is not realistic. 	<ul style="list-style-type: none"> CRA proposes to replace 100% by 99% and that supply times which are affected by factors outside of Service Provider control are excluded.
			<ul style="list-style-type: none"> Fault repair time: the target definition should take into account the fact that international fault repair is not necessarily under Service Provider's control. 	<ul style="list-style-type: none"> CRA proposes to remove targets for international.
			<ul style="list-style-type: none"> Service availability: In line with best practice 	<ul style="list-style-type: none"> Comment is noted.
			<ul style="list-style-type: none"> Availability of Access Network: it is already achieved through the measure of service availability, and that this KPI is not measured or reported in comparable administrations such as Singapore or European Union. 	<ul style="list-style-type: none"> CRA agrees with the point.
			<ul style="list-style-type: none"> Agreed bandwidth: the validity of this measure is questionable as the bandwidth used by the consumer is set by their applications and does not relate to committed speed. In addition, this target implies intrusive monitoring of customer. 	<ul style="list-style-type: none"> CRA agrees with the point and proposes to remove the KPI as not customer oriented.
		2	<ul style="list-style-type: none"> Supply time: Clarification is required on the network footprint within which this is measured. 	<ul style="list-style-type: none"> CRA specifies that this is measured on national Service Provider's network footprint.
			<ul style="list-style-type: none"> Daily Faults rate: Clarification is required on which services this relates to as they have different Enterprise products such as DIA, P2P, MPLS etc. Vodafone also states that this has to be defined as aggregated across all services. 	<ul style="list-style-type: none"> CRA specifies that this relates to all services on an aggregated basis.
			<ul style="list-style-type: none"> Fault repair time: this target should be an aggregate and this needs to be explicitly stated. 	<ul style="list-style-type: none"> CRA proposes to remove targets for international but the KPI will be monitored.
			<ul style="list-style-type: none"> Service availability: The most likely current scenario is that Qnbn provides this to Vodafone therefore it is subject Q.nbn's SLA. Clarity is required on which service this KPI relates to – MPLS, DIA or P2P? A 	<ul style="list-style-type: none"> CRA proposes to specify that this measure applies only to the part of the network on which operators have full control. For example, if one operator relies on Qnbn, the KPI will not cover the access

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			<p>blanket SLA to cover every product cannot be provided. Further, are these measurements for protected or unprotected KPI? It is suggested that this should be an aggregate and this needs to be explicitly stated.</p> <ul style="list-style-type: none"> • Availability of Access Network: It is proposed to move this KPI to other section (Network related). Vodafone suggests that this should be an aggregate and this needs to be explicitly stated. • Agreed bandwidth: further details are required on this KPI calculation. Vodafone suggest that this should be an aggregate and this needs to be explicitly stated. 	<p>part of the access network for this operator</p> <ul style="list-style-type: none"> • This KPI relates to all leased lines on an aggregate basis (as in operators’ licenses today). • CRA agrees with the point. • CRA agrees with the point and proposes to remove the KPI as not customer oriented.
I – 1.5	Fixed services – Specific passive services	1	<ul style="list-style-type: none"> • Mean Time to Restore (MTTR): this KPI is redundant with availability target mentioned previously, as longer repair times correlate directly with lower availability). 	<ul style="list-style-type: none"> • The fact that it is redundant with another KPI does not mean it should be removed as it is another way to observe QoS.
		2	<ul style="list-style-type: none"> • Service Supply Time (SST): Qnbn is the key provider of such services and therefore the respondent encourages a workshop to ensure that the requirements can be realistically met by Q.nbn and that those requirements then flow through to the end customer. Also, clarification is required on whether CRA means only dark fibres as passive services or includes all other elements as well. 	<ul style="list-style-type: none"> • CRA agrees with the points, and adds that this is one purpose of the process. • Only dark fiber is considered as passive service
			<ul style="list-style-type: none"> • Mean Time to Restore (MTTR): clarification is required on whether this calculation is an aggregated MTTR for all services combined. 	<ul style="list-style-type: none"> • The calculation is for all services on an aggregated basis.
		3	<ul style="list-style-type: none"> • Service Availability (SA): regarding dark fibre, the respondent explains that it takes these services from Qnbn which is currently offering 99.3%, 99.5% and 99.7% depending on the SLA. Clarification is required on when the KPI requirement commences. Typically, for dark fibre, the respondent would require customer notification of fault as proactive monitoring is not possible. 	<ul style="list-style-type: none"> • This applies only to operators’ providing passive services. Thus, this does not apply to the respondent.
I – 2.1	Mobile services – General requirements	1	<ul style="list-style-type: none"> • Network Quality: the proposed target is not achievable under the given definition (at the cell level rather than at the network level). Even when associated with a network level definition the target is at the upper limit of best practice and beyond normal achievement. As defined, performance is measured through CSSR and DCR indicators and these indicators have limitations: (1) a list of cells that should be included in the evaluation, according to operator layering strategy between carriers as some cells will be prioritized for voice traffic and 	<ul style="list-style-type: none"> • CRA takes the points into account and will review the KPI in the consultation on the draft QoS Regulatory Framework.

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			<p>other for data services. The inclusion of all cells will make measurement invalid. Same for some cells that are covering open areas where operators are targeting max coverage as these cells have low traffic profile.(2) If Call drop rate target at network level is 0.5 % then cell level it cannot be same for 99% of cells .Similarly Call setup success rate at network level and cell level cannot be same. A more realistic target for network quality would be based on a Call setup success rate of 98 % and Call drop rate of 1.5 % including 2G & 3G and target 95 % cells (cells with at least 200 calls during busy hours).</p>	
			<ul style="list-style-type: none"> • Network Availability: The respondent questions the value of this target given that dropped and blocked call rates are also measured. This measure has no direct impact on customer experience as there may well be enough capacity to meet demand even if capacity drops. Hence it seems to be a measure without purpose. If the target is to be mandated it is suggested to put base station availability without any capacity with 98 % target which is global benchmark. 	<ul style="list-style-type: none"> • CRA agrees with the comment and proposes to withdraw the KPI.
		2	<ul style="list-style-type: none"> • Network Quality: this target should exclude sea facing border cells. Cell exclusion should be based on minimum call volume. External interference and jammers and not based on any benchmarking. The KPIs being requested are too high. 	<ul style="list-style-type: none"> • CRA proposes to remove this KPI as it is not sufficiently oriented towards customers.
			<ul style="list-style-type: none"> • Network Availability: the respondent would appreciate more discussion with all stakeholders on whether this approach best meets the objectives of CRA or whether there may be a more effective approach. 	<ul style="list-style-type: none"> • CRA proposes to withdraw the KPI.
I – 2.2	Mobile services – Voice	1 and 2	<ul style="list-style-type: none"> • Call Setup Success Rate (CSSR): proposed target is practically unachievable and the respondent proposes to remain at earlier level of 98% 	<ul style="list-style-type: none"> • CRA propose to review the target in the consultation on the QoS Regulatory Framework.
			<ul style="list-style-type: none"> • Dropped Call Rate (DCR): the KPI needs to be clarified in terms of time, location and scope. 	<ul style="list-style-type: none"> • CRA proposes the following updated definition: “Number of established calls during the Busy Hour that are dropped due to technical problems for which the Service Provider is responsible (e.g., network failure), divided by the total number of established calls during the Busy Hour (%)” Operators will have to provide their own definition of the busy hour.
			<ul style="list-style-type: none"> • Blocked Call Rate (BCR): 2 respondents point out the irrelevancy of this KPI since network quality target and CSSR target are defined. They also state that it would be preferable to measure blocking at network level (or, for one respondent, over a percentage of high traffic 	<ul style="list-style-type: none"> • CRA agrees with the point and proposes to remove the KPI as not customer oriented.

Consultation on Draft QoS Instruction – Key Comments Received and CRA’s Response

Section	Subject	Respondent	Comments	Response of the CRA
			cells).	
			<ul style="list-style-type: none"> Voice Quality Parameter: the target is too high. One proposes 3.5 as a best practice and the other proposes 2.8. 	<ul style="list-style-type: none"> CRA proposes that 3.75 be achieved on 90% of the case. The review of the QoS regulatory framework will enable to precise the measurement process.
			<ul style="list-style-type: none"> Call set-up time: this should be measured for on-net traffic only 	<ul style="list-style-type: none"> While CRA agrees with the fact this is more complex for a Service Provider to monitor QoS for non on-net calls, CRA believes that non on-net calls have importance for end-users and for the development of competition. As a consequence, CRA proposes to have targets but to apply different level of targets for the different types of calls depending on whether QoS can be fully controlled or not by Service Providers
		1	<ul style="list-style-type: none"> Dropped Call Rate(DCR): the proposed target is in excess of established benchmark and unachievable, and that the measure fails to differentiate between alternative technologies despite the fact that 2G is likely to perform better with respect to dropped calls than either 3G or 4G. 	<ul style="list-style-type: none"> International benchmark shows that in countries like Saudi, Oman or the UAE, Service Providers achieve these types of targets.
			<ul style="list-style-type: none"> Voice Quality Parameter: One respondent points out that the MOS would be assessed from subjective rating of test calls (annual) and should be carried out on on-net calls only. 	<ul style="list-style-type: none"> This will be measured through test calls and the measurement process will be defined in the next steps of the QoS regulatory framework review.
			<ul style="list-style-type: none"> Call set-up time: it is not feasible to measure all calls so annual drive testing should be used to verify result. In addition, the target set against this measure seems to be inconsistent with the target of 98% call success rate. Besides, technology limits call set up time to at least 6 sec for 2G and 3G calls, at least 8 sec for 4G calls. 	<ul style="list-style-type: none"> CRA agrees with the point and the measure will be achieved through test campaigns.. CRA believes that it should be specified that this is measured only for successful calls. As a 100% target is not possible, a 95% target is proposed. This target is proposed at 7 seconds as 5 seconds appears indeed challenging.
		2	<ul style="list-style-type: none"> Blocked Call Rate (BCR): force majeure should be explicitly excluded. 	<ul style="list-style-type: none"> CRA agrees.
			<ul style="list-style-type: none"> Voice Quality Parameter: 100% is not realistic and the respondent proposes 95% as new target. 	<ul style="list-style-type: none"> CRA agrees and proposes that 3.75 be achieved on 90%.

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Section	Subject	Respondent	Comments	Response of the CRA
I – 2.3	Mobile services – Broadband	1	<ul style="list-style-type: none"> • Speed / data rate: The definition of this measure is problematic as the respondent does not offer a speed guarantee with their mobile broadband service and data rate varies with the applications being used by the customer. Even then, a target of 95% is not realistic in a mobile network where the level of contention is out of the operators’ control. Finally, it does not seem logical to set a data rate target for mobile that is 5% higher than that for fixed. The respondent suggests that average throughput per session as a better indicator of customer experience. 	<ul style="list-style-type: none"> • CRA will review this KPI in the consultation on the draft QoS Regulatory Framework.
			<ul style="list-style-type: none"> • Web browsing successful connection: It is not clear how this would be measured, so premature to comment on the target. 	<ul style="list-style-type: none"> • The approach to measure this will be defined in the next steps of the QoS regulatory framework review process. CRA proposes to measure it through measurement campaigns. Local servers (i.e. located in Qatar) should be used to make sure that the QoS is under Service Provider’s control.
			<ul style="list-style-type: none"> • Successful data transfer (uplink and downlink): It is not clear how this measure differs from the speed/data rate measure. 	<ul style="list-style-type: none"> • CRA proposes to remove the KPI.
			<ul style="list-style-type: none"> • Successful downloaded pages at the advertised speed: As above. In addition, tariff are not based on speed 	<ul style="list-style-type: none"> • CRA proposes to remove this KPI.
			<ul style="list-style-type: none"> • Video Streaming (End to End Quality rate): It would not be feasible to monitor all streaming sessions. It is suggested that a reasonable sample size is included in the definition. Also, Service Provider does not have end to end control over this service so cannot guarantee a prescribed service level. It is more realistic to require this service to be monitored only. 	<ul style="list-style-type: none"> • CRA agrees with the point and the measure will be achieved through measurement campaigns.
		2	<ul style="list-style-type: none"> • Web browsing successful connection: A successful connection between mobile and network (within Service Provider control) has no bearing on whether the user can successfully connect to a web site. 	<ul style="list-style-type: none"> • As this KPI is partly beyond operators’ control, no target will be imposed. However, it will be monitored and followed carefully to find ways to improve it if necessary.
			<ul style="list-style-type: none"> • Other KPIS: tariffs are based on volume, not speed. In addition, parameter measures are also dependent on handset capability. 	<ul style="list-style-type: none"> • See comments above.

Consultation on Draft QoS Instruction – Key Comments Received and CRA’s Response

Section	Subject	Respondent	Comments	Response of the CRA
I – 2.4	Mobile services – Number portability	1	<ul style="list-style-type: none"> • MNP – Successful port completion: As defined in the Number Portability Policy document, a successful port should be completed within 24hours across business days (Sunday to Thursday), from the time at which the porting request had been registered (time stamp generated by the NPAS). The requested KPIs are measurable and achievable. This specific service request for business customers is disabled as NPAS & Vodafone are not ready for it. 	<ul style="list-style-type: none"> • These KPIs will be amended in the consultation on the draft QoS Regulatory Framework.
			<ul style="list-style-type: none"> • MNP – Access and/or use of Critical Services and other services: This applies only in cases where successful port should be completed within 24hrs across business days (Sunday to Thursday). Need clarification on definition time should start after declaration of successful port. It is suggested that these measures are not applicable and should be discarded since all services are available for ported IN exactly the same was as for Ooredoo subscribers. 	
		2	<ul style="list-style-type: none"> • MNP – Successful port completion: RA’s Number Portability Policy states that MNP windows are only on official working days, so to have a measurement that is based on 24 clock hours is not in accordance to the MNP requirements. Also the measurement is end to end as far as the user is concerned. As one operator will be a donor and the other Service Provider will be a recipient – a successful port is dependent on both, therefore the submitted data should be the same for both parties. 	
			<ul style="list-style-type: none"> • MNP – Access and/or use of Critical Services and other services: These parameters should be governed by the Code of Practice (CoP) and should remain there or at least be aligned to the CoP. Regarding not critical services, the intent of this measure is unclear. Further discussion is required to understand the proposed requirement. 	
I - 3	Customer relation (all services)	1	<ul style="list-style-type: none"> • Time to resolve billing complaints: Any 100% target is unlikely to be achievable. 	<ul style="list-style-type: none"> • CRA agrees.
			<ul style="list-style-type: none"> • Advance Notice prior to planned services disruptions/outages: The definition of outages needs to be more clearly defined before informed comments can be made on the proposed target. 	<ul style="list-style-type: none"> • As proposed by one respondent, CRA proposes to split outage between “normal scheduled outage” which can be planned and the other “emergency planned maintenance” which occurs as a result of an unexpected damage. The KPI will only happen to the “normal scheduled outages”

Consultation on Draft QoS Instruction – Key Comments Received and CRA’s Response

Section	Subject	Respondent	Comments	Response of the CRA
			<ul style="list-style-type: none"> • Unplanned Notifications of service disruptions or outages: The definition of this measure needs to be more explicit in the definition of outages: whether these are major works with customer impact only or more all outages, even those with negligible impact. It would be premature to comment on the proposed target until this clarification is available. In meantime it should be noted that the requirement for extensive media dissemination adds time and complexity into this measure which is likely to make the stated target impractical 	<ul style="list-style-type: none"> • CRA is of the view that all outages which impact customer services should be covered. • CRA is of the view that publishing on social networks would not add time and complexity as it is relatively easy to do so.
		2	<ul style="list-style-type: none"> • Response time by customer support center: These response times do not allow for possible market segmentation where different types of customer profiles receive different levels of service. 	<ul style="list-style-type: none"> • CRA is of the view that this is up to the Service Providers to improve this to certain categories of customers as long as the average value remains below the target.
			<ul style="list-style-type: none"> • Advance Notice prior to planned services disruptions/outages: The respondent cannot accept this KPI as it affects its ability to manage out network in a timely manner. The respondent will not be able to report every outage within a 5 day window and it is not clear why CRA would require such notice. Planned service outages should be reclassified. 	<ul style="list-style-type: none"> • As proposed by one respondent, CRA proposes to split outage between “normal scheduled outage” which can be planned and the other “emergency planned maintenance” which occurs as a result of an unexpected damage. This will be reviewed by CRA in the consultation on the draft QoS Regulatory Framework. • CRA proposes to reduce the advance notice period to 48 hours.
			<ul style="list-style-type: none"> • Unplanned Notifications of service disruptions or outages: The Service Provider does not generally provide SMS as the network is already down and the SMS will also not reach customers. Also, in case only segments of customers are affected then it is very difficult to segregate and send SMS. 	<ul style="list-style-type: none"> • CRA reminds that it is only written “where possible”.
		3	<ul style="list-style-type: none"> • Advance Notice prior to planned services disruptions/outages The respondent proposes to reclassify planned service outages into two categories: one is “normal scheduled outage” which can be planned and the other “emergency planned maintenance” which occurs as a result of an unexpected damage. With such proposal, the first category would require a 5 days notification in advance while in the second category the Service Provider would notify without advance notification. 	<ul style="list-style-type: none"> • CRA agrees with this proposal.
			<ul style="list-style-type: none"> • Unplanned Notifications of service disruptions or outages: The respondent proposes that MoICT get access to Service Providers’ electronic remedy system to avoid time consuming processes between Service Providers and MoICT. 	<ul style="list-style-type: none"> • CRA believes its proposal is more reasonable as it does not require dealing with different IT systems used by the different Service Providers.

Consultation on Draft QoS Instruction – Key Comments Received and CRA’s Response

Section	Subject	Respondent	Comments	Response of the CRA
II - 1	Requirements for Mobile Services	2	<ul style="list-style-type: none"> The respondent notes that it will require deploying up to 240 new sites to meet CRA coverage requirements. 	<ul style="list-style-type: none"> CRA notes the respondent comments but considers that deploying new sites can be necessary to improve QoS.
			<ul style="list-style-type: none"> Deployment on government owned land or land leased from the government should be made easier. 	<ul style="list-style-type: none"> CRA proposes to discuss this point further and to delay the adoption KPI.
			<ul style="list-style-type: none"> Constructions on existing sites should be promoted to allow site sharing. 	<ul style="list-style-type: none"> CRA agrees with this and believes this should be improved to facilitate development of new sites and increase in QoS.
			<ul style="list-style-type: none"> Application and enforcement of the Instructions for Installation, Operation and access to Physical Infrastructure should be clarified. 	<ul style="list-style-type: none"> CRA agrees with this and believes this should be improved to facilitate development of new sites and increase in QoS.
			<ul style="list-style-type: none"> Additional 900MHz spectrum should be made available to decrease new sites requirements. 	<ul style="list-style-type: none"> This is outside the scope of this consultation.
II - 2	Requirements for Fixed Services	3	<ul style="list-style-type: none"> The respondent states that QoS requirements should apply to building owners too 	<ul style="list-style-type: none"> CRA reminds that the QoS regulations relate to Service Providers.
			<ul style="list-style-type: none"> According to the respondent, it should be 125m (and not 50) as 125m is the average drop length. 	<ul style="list-style-type: none"> CRA thanks the respondent for this information.
II - 3	Evolution of the population of Qatar		No comment	
-	Other comments		No comment	