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وزارة الاتصالات وتكنولوجيا المعلومات

INSTRUCTION

**Issued by The Ministry of Information and Communications
Technology (ictQATAR)**

to

Service Providers,

Developers and Building Owners

for the

**Installation, operations and access to telecommunications
facilities, services and physical infrastructure in the State of
Qatar**

August 25, 2013

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1 Introduction

1. This Instruction sets the principles and rules to be followed for the installation, operations and access by licensed telecommunications networks and service providers to any telecommunications facilities, services and physical infrastructure for telecommunications networks and services throughout the State of Qatar.
2. The Ministry of Information and Communications Technology (ictQATAR) takes this Instruction at a time when Qatar is in the early stages of developing housing and public infrastructure facilities (“Developments”). These Developments are being launched as Qatar prepares to host the FIFA Football World Cup in 2022 and continues to develop the objectives set out in the Qatar National Vision 2030. The Developments require setting clear, enforceable rules for all as Qatar strives to become a leading international ICT hub with a modern, diversified and sustainable economy. It is crucial for ictQATAR to set the right conditions for success now while the Developments are in their early stages. If the right conditions for open access are not set now, it may be too late when the Developments have been completed.
3. This Instruction is adopted to introduce a solution for the pressing issue of how to guarantee a competitive setup in retail markets. The proposed solutions respond to the rapidly changing industry and the need to act on an emergency basis to set principles and rules for a very fast growing market.
4. This Instruction is directed towards any authorized and/or licensed Service providers to the public (“Service provider”) intending to roll a network and/or provide services to the public in Qatar.
5. This Instruction shall apply also to all the developers of housing and public infrastructure and building owners in the State of Qatar.

2 Background

6. There currently are three Public Licensed Service providers in Qatar: Ooredoo (formerly QTel) QSC and Vodafone Qatar QSC (Vodafone) are licensed to provide public mobile and fixed telecommunications networks and services, while the Qatar National Broadband Network PSC (Qnbn) is licensed to provide passive fixed telecommunications networks and services to “Qualifying Persons” (e.g.: Ooredoo, Vodafone and “closed user groups”).
7. Telecommunications networks include public mobile and fixed networks operated by Ooredoo and Vodafone, a passive dark fiber fixed network operated by QNBN, and private Closed User Group telecommunications networks (e.g.: Hamad International Airport, Port Authority and Qatar Petroleum).
8. Telecommunications services include mandatory and authorized public mobile and fixed voice and data services, wholesale access and other services, telecoms services within private networks (closed user groups) such as internal communications and transport systems, smart city services, and other related telecommunications services.
9. Telecommunications facilities, services and physical infrastructure can include:
 - radio stations and telecoms towers;
 - telecoms cables in road corridors and utility galleries at the sides of any public or private roads;
 - optical fiber, coaxial and copper cables installed underground, in-building (in ducts, cable trays and equipment mounting, and riser shafts) and some overhead aerial;
 - plant and equipment in cabins, racks, rooms, cupboards, and any storage facilities;
 - telecom rooms,
 - central offices,
 - electrical power connection requirements for telecommunications; and
 - supplementary non-lettable space.

10. Much of the facilities, services and physical infrastructure above are regulated by ictQATAR under the Telecommunications Law and the various Network and Service Licenses. To the greatest extent possible, the same regulation will apply to Ooredoo, Vodafone and Qnbn – especially concerning equivalent access to passive infrastructure.
11. On April 19, 2011, ictQATAR released an “Instruction and Directions to Telecommunications Service providers of Fixed Networks, Infrastructure and related Services”. The Instruction concerned anti-competitive practices or abuse of market power or dominant position in relation to passive fixed telecommunications networks or network elements and related services and activities.
12. The Instruction made clear that no Service provider who provides fixed telecommunications networks, infrastructure and related services in the State of Qatar shall, directly or indirectly, by means of formal written vertical or horizontal agreements or by any other action enter into anti-competitive agreements, arrangement, or understandings, enter into exclusionary provisions, enter into anti-competitive exclusive dealing, or engage in refusals to deal.
13. The Instruction contained special instructions for dominant Service providers and indicated that any exclusive dealer arrangement for supply of fixed telecommunications networks, infrastructure and related services entered into by a dominant Service provider for the purpose of or having the effect of substantially lessening competition is anti-competitive. In cases of potential anti-competitive conduct involving dominant Service providers, the burden of proof is on the dominant Service provider and, in the absence of any objective justification, such agreements, arrangements or understandings or conduct or actions are prohibited.
14. On July 31, 2012, ictQATAR issued a “Decision and Instruction on the Infrastructure Purchase Agreement entered into between United Development Company P.S.C and Qatar Telecom (“Qtel”) Q.S.C.”. ictQATAR determined that a transfer of the passive telecommunications infrastructure of a development—including ducts, cables, and collocation facilities—from the developer to a vertically-integrated DSP would be tantamount to the monopolization of a scarce resource and would have the effect of substantially lessening competition in the relevant telecommunications market.
15. On September 5, 2012, ictQATAR issued also a consultation related to Guidelines for Technical Standards for Infrastructure Roll-out which apply to passive dark optical fiber and exchange cabinet collocation. These Guidelines set out minimum technical standards for future fiber rollout in Qatar. The Guidelines applied only prospectively from the date of issue; they did not impose obligations on network or infrastructure providers who have already installed optical fiber.
16. On October 24, 2012, ictQATAR issued a “Decision and Orders on the Infrastructure Purchase Agreement entered into between United Development Company P.S.C and Qatar Telecom (“Qtel”) Q.S.C.”. ictQATAR set the conditions under which it would authorize the Purchase, preventing any purchase of the in-Building infrastructure, of the ducts and of Building infrastructure rights.
17. On April 28, 2013, ictQATAR launched a public consultation related to Megaprojects “Regulatory Framework for Open Access to Megaprojects”. Interviews conducted during the process, the public hearing organized May 15, 2013 and responses to the consultation document revealed the need for immediate action in order to facilitate rolling out of network and clarify roles and responsibilities.
18. From June 12, 2013, to June 19, 2013, ictQATAR consulted on a “Draft Instruction and Rules for the Installation, operations and access to telecommunications facilities, services and physical infrastructure within housing and public infrastructure developments”.
19. After due consideration of the Responses, ictQATAR has decided to modify its draft and issue this Instruction.
20. For instance, ictQATAR has taken into account Service providers’ suggestion that this Instruction shall not be limited to developments and cover all of Qatar and shall include principles in relation to mobile services.

21. This Instruction specify also how to address the existing situation, where infrastructure has already been rolled out or if access to a given infrastructure is not available.
22. This Instruction aims to provide clarity to those licensees and developers on regulatory requirements regarding installation, operations and access by licensed telecommunications networks and Service providers to all and any telecommunications facilities, services and physical infrastructure.
23. ictQATAR previous work on the matter and related issues, and the various documents and consultations engaged over the last two years with its stakeholders allows ictQATAR to define principles which will be completed in its overarching regulatory Framework.
24. Some additional work, e.g. infrastructure sharing regulation, infrastructure overlay for the entire geography of Qatar for passive infrastructure, or enhanced in-house cabling specifications, remains necessary and will be developed with the overarching regulatory framework. ictQATAR will address these issues as a matter of priority, as per its regulatory strategy.
25. As per ictQATAR Board decision, ictQATAR does not intend in the near future to authorize developers as Service providers. Developers may only deploy civil work passive infrastructure, as defined paragraph 70, and maintain such infrastructure. As a consequence, and in accordance with Article 9-2 of the Telecommunications By-Law, developers and building owners shall grant access to the passive civil works infrastructure free of charge.

3 Legal basis for this Instruction

26. Numerous provisions of the Telecommunications Law and By-Law provide the General Secretariat of ictQATAR with legal authority to order Service providers and developers to guarantee “open access” in Developments for all licensed Service providers and to forbid exclusivity over (or variant terms and conditions for) ducts, conduits, and risers in new and existing Developments.

3.1 General considerations

27. ictQATAR is empowered to issue this Instruction and Rules pursuant to Articles 4, 5,6, 18, 19, 53, 54 and 62 of Telecommunications Law 34 of 2006, and pursuant to Articles 4, 5, 6, 46, 110, 112, 116 and 117 of Executive By-Law 1 of 2009 for the Telecommunications Law.
28. In addition, Article 53 of the Telecommunications Law empowers ictQATAR to set rules necessary for facilitating access to private and public property for the purposes of installing, operating and maintaining telecommunications facilities in accordance with the rules of the Telecommunications Law, and in coordination with the concerned authorities. ictQATAR has relied on Article 53 to develop and issue Guidelines on constructing radio stations and telecoms towers, to develop and issue Guidelines on accessing and sharing telecoms corridors in roadways, and to issue this Instruction.

3.2 General competition provisions

29. ictQATAR has broad responsibility under the applicable legal and regulatory framework (ARF) to prevent anti-competitive practices in the telecommunication sector and protect customers of telecommunications services.
30. Much of ictQATAR’s competition oversight responsibility derives from Chapter 9 of the Telecommunications Law. Article 40(4) and (5), in particular, empower ictQATAR to: (1) monitor and prohibit any abuse of market power or dominant position and anti-competitive practices; and (2) determine and apply appropriate procedures and arrangements to confront abuses of market power and anti-competitive practices in order to strengthen competition and safeguard the interests of customers and the public in Qatar.
31. Article 41 of the Telecommunications Law prohibits any anticompetitive practices by any network and Service provider. ictQATAR may determine whether the conduct of any of the

Service providers constitutes an abuse of market power or dominance or is anti-competitive; should ictQATAR decide certain conduct is, it shall take all measures it deems appropriate.

32. Article 43(5) states that monopolising the use of scarce facilities or resources or exclusive use with the effect of denying a competing Service provider from using such facilities or resources or from enjoying its right to access shall be considered abuse of dominance. Article 43(9) specifies that performing any actions that have the effect of substantially lessening competition in any telecommunications market also shall be considered abuse of dominance.
33. Article 45 of the Telecommunications Law prohibits any person from engaging or participating in any practices that prevent or substantially lessen competition in telecommunications markets. Article 4 of the Telecommunications Law gives also ictQATAR the power to set and enforce the appropriate remedies to prevent Service providers from engaging or continuing anti-competitive practices;
34. Article 46 of the Telecommunications Law sets out that if a Service provider engages in anti-competitive practices or a dominant Service provider abuses its dominance, ictQATAR may remedy such anti-competitive practices or abuse of dominance. This also is reflected in Article (75) of the Telecommunications By-Law, which states that the General Secretariat may prohibit any other action or activities engaged in by a Dominant Service provider that the General Secretariat determines to have the effect or to be likely to have the effect of substantially lessening competition in any telecommunications market.

3.3 Access to facilities and Standards for Equipment

3.3.1 Telecommunication Law and by-Laws

35. Telecommunications infrastructure is not specifically defined in the Telecommunications Law, Executive By Law or in the Licenses issued to Ooredoo, Vodafone or Qbnb, but access to such infrastructure is defined very widely in Executive By-Law 1 of 2009 to include access to 'physical infrastructure' including '...buildings, ducts, masts....' and any other related infrastructure or spaces set aside for telecommunications cables and other network and equipment to be installed.
36. Article 53 of the Telecommunications Law also provides for ictQATAR to set the rules necessary for facilitating access to private and public property for the purposes of installing, operating and maintaining telecommunications facilities in accordance with the rules of this Law and in coordination with the concerned authorities.
37. Article 54 of the Telecommunications Law requires ictQATAR to determine the technical standards and specifications for telecommunications equipment and the approval requirements and procedures for conformity to such standards.
38. Articles 106 to 109 of the Executive By-Law provide for ictQATAR to facilitate access to private and public property for Licensees.
39. By-Law Article 110 empowers ictQATAR to prescribe regulation that requires any Service provider to allow other Licensees to have access to conduit, ducts, cabling, wire and space for switching facilities inside multi-tenanted buildings where historic or contractual arrangements create anti-competitive conditions in respect of such access. Such regulation shall prohibit any Service provider from providing, installing or continuing to service inside wiring, duct, conduit and related facilities unless the property owner also permits other duly authorized Licensees to have the same rights of access, absent a proof showing an undue burden to the property owner based on unusual circumstances.
40. Article 112 of the By-Law sets out that Service providers with existing telecommunications network facilities shall allow other Service providers, whom the General Secretariat have decided are entitled to co-locate, to co-locate their telecommunications network facilities on those existing facilities.
41. Article 116 of the By-Law provides that ictQATAR may issue regulations, rules, decisions, orders or notices related to access to private or public property, in coordination with other concerned authorities.

42. Article 117 of the By-Law provides the ictQATAR may issue regulations, rules, orders or notices regarding technical standards and specifications and any other aspect of practice or procedure relevant to equipment standards.

3.3.2 Service provider Licenses

43. The Fixed Licenses of each authorized Service provider (Ooredoo, Vodafone Qatar, Qnbn) require compliance with decisions of ictQATAR, especially those related to competition and access:
- 1) Clause 4 of the Fixed Licenses require each Licensee to comply with the terms and conditions of its License and with all other aspects of the ARF.
 - 2) Clause 14.1 of the Ooredoo and Vodafone Fixed Licenses and Clause 13.1 of the QNBN Fixed License require each Licensee to comply with all decisions and regulations issued by ictQATAR, including specifically decisions and regulations governing access and competition.
 - 3) Clause 14.2 of the Ooredoo and Vodafone Fixed Licenses and Clause 13.2 of the QNBN Fixed License require each Licensee to take all reasonable and practicable steps and measures necessary to adapt their business practices and processes, organizational structure, network configuration or other aspects of its business to facilitate the introduction and development of competition in accordance with the decisions, orders, rules, and instructions of ictQATAR.
 - 4) Similar anti-competitive provision shall apply to all licenses

3.3.3 ictQATAR regulation

44. In respect of access to and use of 'in-building' telecommunications infrastructure, ictQATAR issued a Determination on May 18, 2009 which set general and specific terms and conditions of access for new and existing buildings owned by landlords who had refused entry to a Service provider. This included an access seeker and an access provider having to obtain their own respective permissions and approvals from landlords to enter buildings to install infrastructure, but it also included sharing of some infrastructure by Ooredoo and Vodafone where it was not possible for a Service provider to install its own infrastructure in a building.
45. In April 2012, Ooredoo (formerly Qtel), Qnbn and Vodafone agreed upon "Internal Wiring Guidelines". With these Guidelines, Service providers intend to establish the minimum requirements to deploy state of the art and "future proof" networks and set out best practices. Their objective is that *"All design shall support a multi-operator environment of up to three operators"* (point 5.1), and *"the number of independent fibers shall be at least four"* (point 5.2). These Guidelines also noted that typically, in-building cabling costs about 10% of the total network infrastructure (point 5.1). However, as ictQATAR agrees to the basic principle (four fibers per household), it also acknowledges their limitations as industry guidelines and their need to be re-assessed and re-issued as ictQATAR regulation.
46. In furtherance of its responsibilities regarding telecommunications standards and specifications, on September 5, 2012, ictQATAR issued a Consultative Draft "Technical Standards for Fiber Infrastructure Roll-Out". The Standards concluded that the State of Qatar's national goals, embodied in (among other instruments) the Telecommunications Law, required that all fiber optic telecommunications network in the country be deployed in a manner that allows for open, equal, non-discriminatory and viable access for all Service providers. The goals of the Standards included avoidance of duplication of investment through multiple overlapping deployments and ensuring open network access. The Standards required, among other things, Service providers to ensure sufficient space in central offices, distribution points, and other network locations to support multiple operators, and that four fiber strands be provided to each household. After consultation, ictQATAR has decided to work on an overarching framework to that regards. This Instruction and Rules are part of the future overarching framework.

3.4 ictQATAR's legal authority

47. ictQATAR can exercise its legal authority in three ways: (1) direct authority over Licensed Service providers pursuant to the Telecommunications Law, Executive By-Law, and Licenses; (2) direct authority over property owners under the Telecommunications Law; and (3) as an exercise of authority necessary to execute its legal responsibilities.

3.4.1 Direct authority over Service providers

48. ictQATAR has plenary authority over licensed Service providers. Articles 18, 19, 41, 46, and 54 of the Telecommunications Law provide ictQATAR with direct authority to require licensed Service providers to guarantee open access to their facilities and to prohibit them from entering into exclusive arrangements, and to require them to provide sufficient capacity for 3 Service providers. These Articles authorize ictQATAR to mandate an open access regime and prohibit Service providers from acts that undermine competition. They also give ictQATAR authority to set technical standards for telecommunications networks. In addition, Service providers' individual Licenses reinforce ictQATAR's authority in this matter. In particular, the Licenses require Licensees to comply with decisions, instructions, and orders of ictQATAR related to access and competition, and to adapt their business practices and processes and their equipment and related network configurations to facilitate competition in accordance with the decisions, orders, rules, and instructions of ictQATAR.¹

49. ictQATAR considers that the exercise of its authority over Service providers in this Instruction is in the best interest of the Qatari people. In the absence of regulation, Service providers could restrict access to networks via exclusive arrangements that reduce consumers' choice of Service providers and raise prices. In this Instruction, ictQATAR intends to solve this concern by guaranteeing open access to networks in Developments and banning exclusive arrangements because they reduce competition for communications and information technologies in Developments. This Instruction is in line with ictQATAR's past efforts to ensure open access to telecommunications facilities in Qatar.²

50. ictQATAR decision to ban exclusive arrangements is consistent with international best practices. In the European Union, national regulatory authorities are specifically empowered to require operators to provide co-location or other forms of facility sharing.³ In the United States, the Federal Communications Commission was authorized to ban exclusive arrangements between cable television providers and owners of multi-dwelling units.⁴ ictQATAR considers that these arrangements should be prohibited because they have an anti-competitive effect on the telecommunications market in Qatar to the detriment of the Qatari customers.

51. Requiring four fiber optic strands in each development and connecting each building to the nearest central office is also consistent with ictQATAR's legal authority and will serve the best interest of the Qatari public. This action is necessary for ictQATAR to fulfill its duties under Article (19) of the Telecommunications Law to promote appropriate, effective and low cost interconnection between telecommunications networks, promote access to facilities, and promote the growth of competitive telecommunications services markets. This action also is necessary to ictQATAR's implementation of competition policy pursuant to Chapter Nine of the Telecommunications Law. ictQATAR's action here will ensure that residents of Developments have adequate choice in Service providers and the ability easily to switch Service providers.

¹ ictQATAR's authority to set mandatory terms for interconnection and access further is reinforced by the presence in each License of an Annexure F, setting procedures and substantive requirements for interconnection and access.

² See *Decision and Instruction on the Infrastructure Purchase Agreement entered into between United Development Company P.S.C and Qatar Telecom ("Qtel") Q.S.C.*, ICTRA 2012/07/31, 58, 71 (July 31, 2012); *Regulatory Framework for Open Access to Developments*, Consultation Document, ICTRA 2013/04/28 (April 28, 2013).

³ See Directive 2002/19/EC of the European Parliament and of the Council of March 7, 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive), as amended by Directive 2009/140/EC of the European Parliament and of the Council of November 25, 2009.

⁴ Exclusive Service Contracts for Provision of Video Services in Multiple Dwelling Units and Other Real Estate Developments, 22 F.C.C.R. 20235 (2007); Nat'l Cable & Telecommunications Ass'n v. FCC, 567 F.3d 659 (D.C. Cir. 2009).

Moreover, this action is required for ictQATAR to ensure the continued development of full facilities-based competition in the fiber to the home market in Qatar.

52. Additionally, requiring four fiber strands at the time of the first network roll-out will promote efficiency by avoiding duplication in investment and minimize disruption due to multiple fiber deployments. This requirement also is made pursuant to ictQATAR's ability to set telecommunications standards, and the Licensees' obligation to adapt their business practices and network configurations to conform to ictQATAR's decisions and orders.

3.4.2 Direct authority over developers and building owners

53. ictQATAR's authority to regulate developers is equally robust and uncontestable. Articles 45 and 53 are not limited to Service providers. They allow ictQATAR to ensure developers comply with its open access regime and ban exclusive arrangements.
54. Article 45 prevents all "*person[s]*" from engaging in practices that would lessen competition in the telecommunications market", in contrast to other provisions on anti-competitive practices that are expressly limited to "Service providers."⁵ As such, Article 45 is intended to apply to a broad subset of the population, beyond Licensees.
55. Similarly, Article 53 empowers ictQATAR to set generally applicable rules governing access to property for installing telecommunications facilities. Article 116 of the By-Law amplifies ictQATAR's authority to issue notices related to access to private property pursuant to the Telecommunications Law. In both cases, ictQATAR's powers related to property access apply broadly, to property owners as well as others.
56. Exercising its authority over developers will serve the interests of the Qatari people. Not only are exclusive arrangements anti-competitive, they substantially lessen competition in telecommunications markets by raising prices and restricting consumers' choice of Service providers. ictQATAR Instruction to guarantee Service providers open access to Developments and buildings facilitates access to private property for the purposes of installing, operating, and maintaining telecommunications facilities. This action is consistent with the Telecommunications Law, supported by Articles 110 and 112 of the By-Law, and made in co-ordination with other concerned authorities in Qatar.

3.4.3 Authority over developers necessary to the fulfillment of ictQATAR's responsibilities

57. ictQATAR also possesses authority over developers because regulation of property owners is necessary to ensure the effective performance of ictQATAR's responsibilities to the people of Qatar.
58. ictQATAR is responsible for protecting the Qatari people from anti-competitive practices. Article 2 of the Telecommunications Law requires ictQATAR to, among others, encourage competition and the deployment of advanced and innovative technologies in Qatar, identify and address anti-competitive practices, and ensure access to networks. In addition, Articles 4(4), 4(8), and 40 require ictQATAR to protect the Qatari people from anti-competitive practices. Law No. 36 Article 5 mandates also, in its Articles 18 and 19, ictQATAR to ensure access to telecommunications networks.
59. ictQATAR's ability to perform these responsibilities would be substantially hindered without legal authority over developers. If developers were able to restrict access to telecommunications facilities or reduce competition, ictQATAR would not be able to fulfill its role in addressing anti-competitive practices, nor would ictQATAR be able to fulfill its responsibility of ensuring Service providers have the ability to access telecommunications networks in Qatar. Thus, ictQATAR can conclude that exercising authority over developers is imperative if ictQATAR is effectively to perform all of its responsibilities.

⁵ See, e.g., Telecommunications Law, Art. (46) ("If a service provider engages in anti-competitive practices . . .").

60. The Telecommunications Law provides ictQATAR with authority to take actions that are necessary to ensure the effective performance of ictQATAR's responsibilities to the Qatari people. Articles 4(11), 5, and 19(4) of the Telecommunications Law authorize ictQATAR to issue instructions and notices ensuring that the provisions of the Telecommunications Law and its Executive By-Law are complied with. Articles 4, 5, 6, and 116 of the By-Law amplify ictQATAR's authority to issue decisions that are necessary to carry out the provisions of the Telecommunications Law. These provisions provide ictQATAR with broad authority to take actions that are necessary to fulfill the objectives of the Telecommunications Law.
61. ictQATAR exercises its authority today because this Instruction to require developers to guarantee open access and comply with its ban on exclusive arrangements will establish a pro-competitive environment in Qatar that will further ictQATAR's objectives and protect the Qatari people. ictQATAR Instruction will ensure the availability of high quality telecommunications services to residents and businesses within the Developments at affordable and competitive prices. It will also encourage competition in the Developments by allowing the Qatari people to choose from two or more different Service providers. ictQATAR Instruction addresses anti-competitive practices by banning exclusive arrangements that tend to lessen competition and harm the Qatari people. ictQATAR also takes this action to guarantee Service providers access to telecommunications facilities in Qatar. ictQATAR therefore concludes that ictQATAR's regulation of developers is necessary to ensure the effective performance of ictQATAR's responsibilities to the Qatari people.⁶

4 Instructions to ensure Open Access

62. ictQATAR is mindful that Qatar's future landscape may become dominated by a small number of large developments. This Instruction will provide guidance for real estate developers and building owners to get a state of the art and future proof telecommunication infrastructure rolled out, to the benefit of the customers. Such infrastructure is necessary to provide the high speed services which will increase the attractiveness of the development for residential and business tenants.
63. If Open Access is not provided for in Qatar, large portion of the fixed market will be foreclosed.
64. To fulfill ICT 2015, Qatar National Broadband Plan and Qatar 2030 Vision, world class infrastructures shall be deployed in Qatar. These world class infrastructures call for the highest quality standards, multiple choices for the customers and high capacity for businesses and large corporations.

4.1 General provisions

65. ictQATAR has reviewed the responses to its public consultations on the "Regulatory Framework for Open Access to Megaprojects", the "Draft Instruction and Rules for the Installation, operations and access to telecommunications facilities, services and physical infrastructure within housing and public infrastructure developments" and analyzed the ARF.

In order to ensure Open Access ictQATAR decides that:

- 1) End users must have the possibility to choose between the offers of all and any Service provider to the public licensed in Qatar.
- 2) Arrangements which have a negative impact on competition, i.e. exclusionary or exploitative effects, between Service providers and/or Developers and/or Building Owners are forbidden⁷.
- 3) Capacity for at least three Service providers' networks must be provided.

⁶ ictQATAR's recognition of its authority as necessary to fulfill its legal mandates is consistent with international best practices. For example, in the United States—under the doctrine of "ancillary authority"—the Federal Communications Commission exercised authority over cable television providers at a time when such authority was necessary to ensure the effective performance of the U.S. regulator's responsibilities over television broadcasting. *United States v. Southwestern Cable*, 392 U.S. 157 (1968).

⁷ Cf April 19, 2011 Notice

This includes that all infrastructure as e.g. Passive Infrastructure Civil Works, in-building wiring and fiber installed between buildings and the central office must have sufficient capacity for at least three Service providers' networks.

- 4) Each fiber deployment must include at least four (3+1) fiber strands⁸—one for each of the three Service providers and one spare. The first Service provider rolling out fiber must install this capacity from the Central office to the Telecom room. The developer/building owner will install this capacity from the telecom room to the end user.

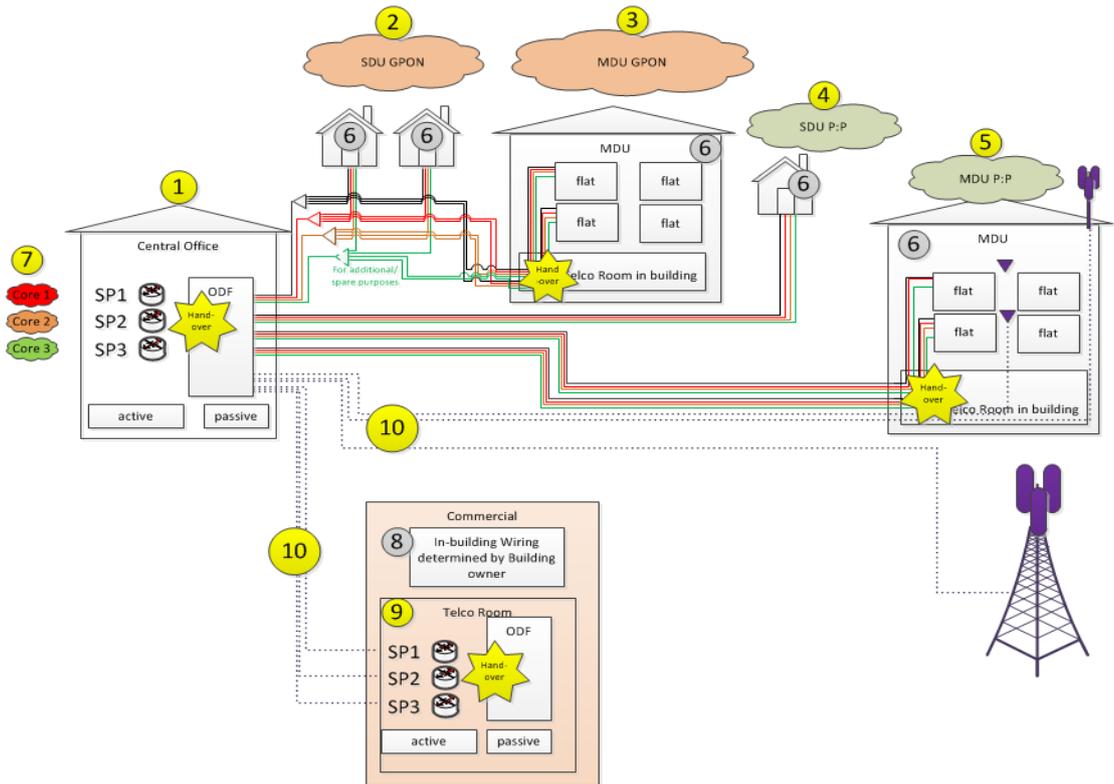
This will:

- i. prevent monopolization of scarce resources,
 - ii. provide equal and fair treatment of all operators,
 - iii. ensure a pro-competitive outcome,
 - iv. install future proof networks, with enough capacity to enable services requiring a large amount of bandwidth, as well as to convey smart city services and any other services necessary for the Megaproject themselves.
- 5) Fiber strands sufficient to support indoor and outdoor mobile platforms have to be rolled out in addition.
 - 6) The Internal Wiring Guidelines must be adhered to by Service providers and Developers / Building Owner. In-house-cabling must be based on at least four fiber strands for each dwelling⁹.
 - 7) Developers must make available, free of charge, sufficient duct and collocation space (telecom rooms in basements and on the floors, central office room) to accommodate at least three Service providers.
 - 8) Where possible separate sub-ducts for the three operators are to be installed by the Developers.
 - 9) Two Open Access points are foreseen, where Service providers can get access to the fiber infrastructure:
 - i. In the telecom room in the building (typically in the basement), if space permits;
 - ii. In the (central) office.
 - 10) Any disputes between either the Service providers and/or the Developers/Building Owners in relation to this Instruction will be directed to ictQATAR without any undue delay.

⁸ Strands depend on the underlying technology used. For GPON a strand is a physical fibre, for P2P it is a fibre pair

⁹ For the avoidance of doubt a dwelling refers to a single unit, e.g. an apartment or office.

66. A generic roll out can be depicted as follows:



(1) HOP in CO

The SP has to cater for collocation space

(2) (3) (4) (5) rollout can be in either in P2P or 3xGPON

(6) IWG apply in any case, except for office buildings

(7) Core network/backhaul to done by each SP

(9) Collocation can be inside the building

(10) SP rolling out the fibers, has to cater for a sufficient amount of additional P:P fibers for e.g. connection of office buildings, for micro, macro, picocells ...

FTT"B"	10
FTTP	2,3,4,5
FTT"B"	Fiber to the Building
FTTP	Fiber to the Premise
SP	Service provider

HOP	Handover Point
ODF	Optical Distribution Frame
SDU	Single Dwelling Unit
MDU	Multi Dwelling Unit
Core	Core network/backhaul

67. ictQATAR wishes to remain as technology neutral as possible. Nevertheless, ictQATAR recognizes the added flexibility and capability of P2P over GPON. Therefore ictQATAR recommends using a P2P architecture, where technically feasible.

68. Agreements or arrangements which have or might have a negative impact on competition are forbidden

69. With control over scarce resource, Service providers would have incentives and ability to restrict competition. Scarce resources includes amongst others, but not limited to, Passive Infrastructure Civil Works and Building Rights.

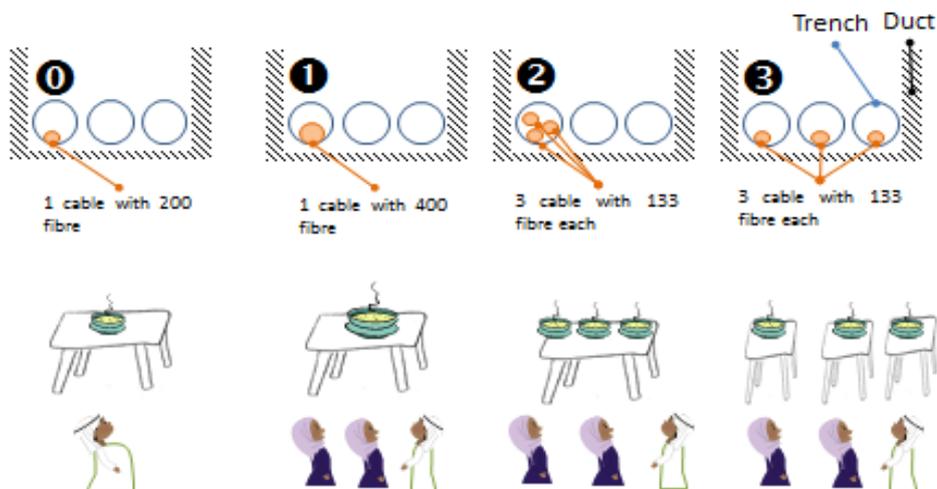
70. Passive Infrastructure Civil Works means civil works inside and outside buildings. This includes amongst others but are not limited to: ducts/conduits, risers, cable trays, manholes, cabinets, collocation spaces as telecommunication rooms and central offices. Passive Infrastructure Civil Works is a finite resource and cannot easily be replicated or substituted. For example, replicating duct infrastructure would require disruptive and expensive civil works likely to not receive consent by the developer. In a development, the most common alternative to ducts (risers) – that of additional exterior cable canals - would not be acceptable to discerning residents. The

provision of alternative collocation space is time and cost intensive. By obtaining control over the ducts or other scarce infrastructure, Service providers are in the position to restrict commercially viable access for other operators by providing access to such infrastructure at artificially high costs. This is because Service providers compete in the same retail (and wholesale) markets with the providers to whom they would be providing such access. Therefore Service providers would have the incentive to charge unreasonably high prices for retail costs and drive out competition in the retail market segment.

71. Building Rights are finite since they are only initially available at the time of the Development, and therefore are scarce. The owner of these Building Rights has the ability to control the type of telecommunication infrastructure rollout. Such building rights need to remain with the Developer / Building Owner to ensure equal access to private properties for all Service providers to “construct, maintain or operate telecommunications network facilities...”, Telecommunications By-Law, Chapter 10. The risks of anticompetitive conduct are far greater would such rights be transferred to a Service provider.
72. The wholesale offer for passive services must be all-encompassing and non-discriminatory to ensure functional open access. This means that the wholesale offer includes all relevant service descriptions, stipulations and SLA, etc.
73. Non-discrimination means that the Service provider is offering the same services at the same conditions to other Service providers, the Service provider is offering itself. Pricing and costing is according to the ARF.
74. If exclusive agreement or arrangements with an exclusionary effect were to be concluded, Service providers would be able to appreciably impede competition if it could acquire the Passive Infrastructure Civil Works. As such, completion of such agreements would constitute an abuse of dominance in violation of Article (43)5 ("*monopolizing the use of scarce facilities or resources or exclusive use*") and Article (43)9 (actions "*that have the effect of substantially lessening competition in any telecommunications market*") of the Telecommunications Law.
75. The restriction of competition through acquisition of scarce infrastructure from Developers/Building Owner would adversely impact the people of Qatar. Specifically, foreclosing access to wholesale products will reduce the ability of other Service providers to compete and to innovate thereby having downstream effects in the retail markets. The restriction of competition would have an adverse effect on the residents of Qatar by limiting consumer choice and exposing them to potentially lower quality and a limited range of service offerings.
76. Therefore, Service providers and Developers/Building Owners are prohibited from entering into any arrangements or agreements which have or might have a negative impact on competition. This refers specifically to agreements or arrangements with exclusionary or exploitative effects for the purposes of this Instruction. This means specifically
77. Developers/Building Owners are therefore not allowed to sell Passive Infrastructure Civil Works to Service providers.
78. Developers/ Building Owners are not allowed to transfer any form of Building Rights to Service providers.
79. Developers/Building Owners must grant Rights of Way to the Service providers.
80. This is consistent with the policies and decisions expressed in the April 19, 2011 Notice and Directions to Telecommunications Service providers of Fixed Networks, Infrastructure and related Services on Anti-Competitive Conduct, the July 31, 2012 Decision and Instruction on the Infrastructure Purchase Agreement entered into between United Development Company P.S.C and Qatar Telecom (“Qtel”) Q.S.C., and the October 24, 2012 Decision and Orders on the Infrastructure Purchase Agreement entered into between United Development Company P.S.C and Qatar Telecom (“Qtel”) Q.S.C.

4.1.1 The first Service provider rolling out shall install capacity for at least 3 Service providers

81. At least three Service providers must be able to offer their services to the end users (retail level).



Nota Bene: It is ictQATAR understanding that Ooredoo rolls its network according to option 0, whereas Qnbh has selected option 1.

82. The public consultations on the “Regulatory Framework for Open Access to Megaprojects” and the “Draft Instruction and Rules for the Installation, operations and access to telecommunications facilities, services and physical infrastructure within housing and public infrastructure developments” provided opportunity for stakeholders to express their views on the possible architecture and the cost implications.

83. Responses to these consultations have reflected divergent views. For instance, one Service provider suggested following the French regulatory framework for fiber roll out. However, this model cannot be reproduced as such for Qatar, due to the size and nature of the territory, to the nature of competition (4 Service providers, authorized for both fixed and mobile networks and services, and several local and/or regional public infrastructures). Typically, under the French Framework, each Service provider willing to roll its local loop network in a given area shall:

- 1) Inform its competitors several months in advance, to allow them to share the investment and to prepare their own transport network
- 2) Accept to either rent or sell the fiber rolled,
- 3) Accept co-investments in the network already rolled without “premium” if the decision to co-invest is taken 2 years after,
- 4) Built a GPON and/or a P2P architecture, depending on the requests from its competitors (In practice, one Service provider rolls a P2P architecture)

Furthermore, under the French regulatory framework, Service providers do not have coverage obligation for fixed services, apart from Orange, under its universal service obligation. Orange grants access to the relevant elements of its network on a non-discriminatory basis and according to regulated cost-oriented access charges to the others Service providers.

Therefore, a transposition of this framework to Qatar would imply, inter alia (1) a much more stringent regulation imposed on Ooredoo, including setting the wholesale services it shall provide and the related cost-oriented charges, (2) adopt a regulation imposing both P2P and GPON infrastructures, (3) allow Service provider to request extra fibers on their own volition, even several years after the network has been rolled.

84. The same Service provider claims that ictQATAR rules are imposing an excessive burden on Service providers.

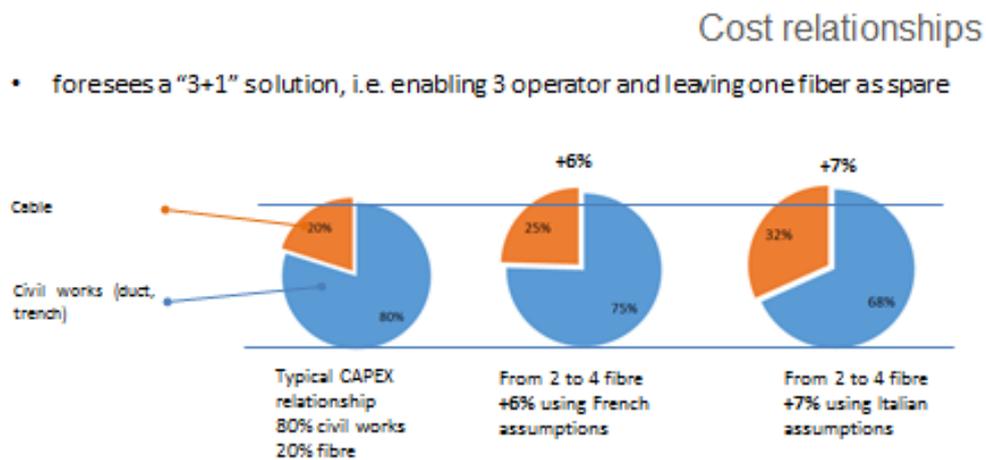
85. This statement is not sustained by any evidence, such as figures flowing from its own accounting system, and/or comparable cost analysis. The said Service provider does not submit actual, Qatari cost. The Service provider refers only to a general study conducted in England, stating that increasing the number of fiber from 1 (+1 spare) to 3 (+1 spare) would increase costs for Service providers by 30 to 40%.

The Service provider’s statement voluntarily omits that:

- The number of fibers in a cable has little influence on the cost of deployment. In reality it is the method of deployment, which has the main cost influence.
- Fiber cables have a huge economy of scale - a cable with 20 pairs of fiber costs much less than two cables of 10 pairs. Therefore, laying a larger cable which includes two additional strands, when installing the network can be done at a very low incremental cost, as the Service provider will have to pay only for the fiber itself and not for the civil work.
- Cable sizes are largely standardized

86. This allegation is not consistent with the Internal Wiring Guidelines agreed to by the Service providers where they observe that on-property cabling typically costs about 10% of the total network infrastructure.

87. Studies conducted by ictQATAR concur. ictQATAR finds that increase in cost is around 6 to 7%, when rolling out 3 (+1 spare), instead 1 (+1 one spare).



- The assumptions are based on scenario ①
- These are “typical” cost, taking into account CAPEX only
- Due to a lack of ooredoo’s Regulatory Accounting System and the lack of any relevant information from ooredoo, ictQATAR is not in a position to compare its figures to ooredoo’s costs
- These costs are very sensitive to a high WACC (the higher the WACC, the higher the alleged costs)

3

88. The lack of relevant information on Service providers’ costs in Qatar does not allow ictQATAR to confront its data to direct information received from Services Providers. However, ictQATAR’s analysis is corroborated by the Council of Europe FTTH Business Guide¹⁰.

¹⁰ Council of Europe FTTH Handbook, Edition 3, 2013, http://www.ftthcouncil.eu/documents/Publications/FTTH_Business_Guide_2013_V4.0.pdf

89. Furthermore, the Service provider's statement neglects some major features of the Qatari market:

- 1) Developers build the passive civil work infrastructure and bear the associated costs. The duct network, which is typically around 70 to 80% of the total costs must not be paid for by the Service provider.
- 2) In-house cabling is typically done by the building owners and hence again not paid for by the Service provider.

Therefore, in Qatar, Service providers bear only 20% to 30% of total costs in developments.

90. In addition to the pro-competitive effects and a future proof network (cf. 65.3) installing such capacity in the first instance would also limit the disturbance for residents that would be caused by subsequent repetitive fiber deployments.

91. ictQATAR can conclude that building enough capacity for at least three Service providers is proportionate and the most efficient way to meet these needs and concerns.

92. Therefore, ictQATAR hereby requires the first Service provider deploying fiber optic cabling to deploy at least four fiber optic strands—one for each of the three Service providers and one spare, from the central offices to the telecom rooms (In building Wiring is typically done by the developer/building owner). To support the competitive availability of these fiber strands to Service providers other than the "first mover," four fiber optic strands must also be provided between all buildings and the nearest central office.

93. Such capacity requirements are in line with the Service providers' practice. The Internal Wiring Guidelines issued in April 2012 by the three Qatari Service providers call for the wiring of each dwelling with 4 fiber strands. ictQATAR is only enforcing and expanding this industry best practice to the fiber laid between a building and the closest central office in order to maintain a range of options as Developments are built, cabled, wired and connected to existing broadband facilities.

94. These steps are also consistent with the September 5, 2012 Consultation on the Guidelines for Technical Standards for Infrastructure Roll-out.

4.1.2 Joint provisions for Service providers and Developers / Building Owners

95. Service providers, Developers and/or Building Owners must fully cooperate with each other and any other competent authority;

96. Service providers, Developers and/or Building Owners must ensure that standards are being adhered to ensure Open Access.

97. In house wiring shall be installed according to the "Internal Wiring Guidelines".

98. Residential dwellings: 4 optical fiber strands shall be rolled to each dwelling:

- a. SOHO dwellings: 4 optical fiber strands shall be rolled to each dwelling.
- b. Business dwellings: the owner of the building shall ensure that a Peer to Peer connection is rolled up to the relevant premises or that at least 4 optical fiber strands are rolled to each unit.

99. Sharing rules are to be developed by ictQATAR and introduced in collaboration with the Service providers, developers and/or Building owners as well as all the relevant authorities for:

- a. Collocation in the buildings
- b. Ducts in the buildings: (e.g. future demand, Smart city services, mobile ...)
- c. Ducts between the buildings: (e.g. future demand, Smart city services, mobile ...)
- d. Central Office and telecom rooms in towers/residential: (e.g. future demand, Smart city services, mobile ...) – at least, Central offices shall offer room for three Service providers.

100. ictQATAR has no objection to Service providers acting on behalf of Developers / Building Owners to coordinate and oversee the utilization of the shared infrastructure, and provide some management services to the developers.

101. In case, the existing civil works passive infrastructure does not fulfill the requirements of this Instruction:

102. If the civil work passive infrastructure was installed before the issuance of this Instruction: allow any Service provider to lay the necessary extra civil work infrastructure. The costs shall be shared equally by the Service provider and the developer/building owner;
103. If the civil work infrastructure was installed after the issuance of this Instruction, the Developer / Building Owner shall build the necessary extra infrastructure. In this case the costs shall be borne by the Developer / Building Owner.
104. Service providers and Developers/Building Owners are to adopt and comply with any principles or work practice requirements of the developers, and with all laws, regulations and standards generally applicable to construction works concerning installing, operating or accessing property.

4.2 Specific provisions for Service providers

105. Service providers must fully cooperate with the other Service providers in order to share infrastructure,
106. Service providers must fully cooperate with other utilities providers in adjacent ducts or corridors (including providing information about existing or proposed utility infrastructure installations on request);
107. Service providers must respond promptly, and in accordance with all legal obligations, to requests for relocation or modification of existing installations, and requests for sharing trenches, corridors, ducts or other underground facilities;
108. Service providers must ensure that telecommunications infrastructure installed in any shared corridor, duct, conduit or other underground facility does not interfere with other telecommunications or utility installations;
109. Service providers must recognize the need to optimize all parties' time and resources on negotiating access arrangements each time a customer requires telecoms facilities and/or infrastructure to be changed or upgraded;
110. Service providers must recognize the finite space in buildings (risers, MDF rooms) and around and of its allocation, when installing or accessing those facilities and that space in buildings;
111. Service providers must agree on principle open access points (odf, Telecom room for MDU, adjacent manhole for SDU);
112. Service providers must maintain accurate and complete records of installed telecommunications facilities by keeping detailed designs and route maps on an appropriate scale for the Megaproject density in the area concerned (to be made available to ictQATAR on request);
113. Service providers must maintain adequate insurance coverage, including public liability and all risks policies in amounts commensurate to the scale of their roadway works (to be made available to ictQATAR on request).
114. Service providers are required to share passive infrastructure with each other. They must ensure sufficient spare capacity to accommodate three Service providers.
115. Mobile Service providers shall also share the capacity made available by and the space let to them by the developers/building owners. They shall share also a minima the masts and in-building infrastructures.
116. Telecommunications network or equipment sharing arrangements between Service providers shall be made on a non-discriminatory basis.
117. The Service provider installing, operating and maintaining infrastructure must not adversely affect any other infrastructure or utility service installations (Executive By-Law Article 114), and compensate any person for the reasonable costs of relocating, modifying or protecting existing facilities or installations which result from the installation of the new facilities (Executive By-Law Article 115).

4.3 Specific provisions for Developers / Building Owners

118. When installing, operating or accessing any infrastructure Developers / Building Owners must provide:
- 1) enough outdoor space to accommodate mobile platforms shared by Service providers. Such spaces shall be equipped with ducts allowing connection of the mobile platforms to the network of the respective Service providers (backhaul), as well as with electricity and AC connections. To the avoidance of doubt, as the space occupied by such platform is not a telecommunication infrastructure, developers/building owners are free to define the relevant rent to be paid by Service providers to that regards.
 - 2) dedicated rooms and shared rooms in telecoms interface buildings for Service providers.

5 Compliance with this Instruction

119. To assess compliance with this Instruction all Service providers and developers and/or building owners are required to communicate to ictQATAR any and all agreements, whatever their form and qualification, including all their appendixes and technical specifications, concluded for the installation, operation and access to telecommunications facilities and physical infrastructure. This communication shall occur, for the existing agreements, within 10 days of the publication of this Instruction and rules, and for future agreements, within 10 days of their conclusion.
120. Ooredoo and Vodafone are required to comply with this Instruction and Rules pursuant to Articles 4 and 14 of their Licenses. Qnbn is required to comply with this Instruction and Rules pursuant to Articles 4 and 13 of its License. Any future Licensee will be required also to comply with the articles that relate to the scope of their License.
121. Developers and building owners are required to comply with this Instruction and Rules.
122. Article (67) of the Telecommunications Law states that any person who violates any terms of a License shall be punished by imprisonment for a period not exceeding one year and with a fine not exceeding one million Riyals.
123. Failure to comply with this Instruction and Rules is a contravention of Articles 67 and 70 of the Telecommunications Law and may be referred to the State Public Prosecutor to impose the fine on Service providers stipulated under (67) of the Telecommunications Law of QAR 1,000,000 per/ day during which a violation takes place or continues to occur.
124. In addition to the penalties above, if Ooredoo, Vodafone or Qnbn fail to comply with this Instruction and Orders, the contravening Licensee may be subject to the penalties and sanctions permissible under the complete Applicable Regulatory Framework outlined in the licenses of Ooredoo and Vodafone at Clause 17, and at Clause 16 in Qnbn's License.

August 25, 2013