Sultanate of Oman
Ministry of Transport & Communications

National Broadband Strategy

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From Speeches of his Majesty

We have always emphasized the importance of science and knowledge. And, our consistent and persistent approach is to remain open-minded and responsive to the latest developments appearing therein. Indeed, the Information Technology and Communication Sector has become the main driver of development and progress in the third millennium. Accordingly, we have been very much concerned with bringing about a National Strategy to enhance the potentials and skills of our citizens, in order to cope with the requirements of this domain and eventually promote the Electronic Government Services. Likewise, we closely follow the significant strides made in this front and call upon all Governmental Institutions to urgently upgrade their performances and make their services available through Digital Technology, aiming to raise the Sultanate to the horizons of up-to-date and progressive knowledge.
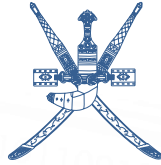
Decision of the Council of Ministers

During its Session No; 23/2013 on 13 October 2013, the Cabinet of the Ministers has agreed to ratify the National Strategy for the Broadband and mandated the Ministry of Transport and Communications to oversee its implementation, provide the Council of Ministers with periodic reports on the work progress and approve the recommendations proposed thereto.

Speech of His Excellency Dr. Minister of Transport and Communications

The Broadband National Strategy to allow high-speed- access to the Internet, which has recently been approved by the Cabinet of the Ministers, is considered both an ambitious and balanced strategy. Whilst developing this strategy it was envisaged that it should enable the Sultanate to cope with the global developments relating to the provision and utilization of the Broadband on one hand, and back up of the market forces and investments by the operators of the Broadband, on the other.

Definition of Key Terms

Item	Definition
Broadband	A Telecommunications service which provides download speeds to the end-user of more than 256 Kb/s and which is available on an always-on basis.
Basic Broadband	Any Broadband Service which provides a downstream speed of 10 Mb/s
High-speed Broadband	Any Broadband service which provides a downstream speed of between 10 Mb/s and 200 Mb/s.
Ultra-high-speed Broadband	Any Broadband service which provides a downstream speed of over 200 Mb/s.
Fixed Broadband	Any Broadband service using fixed links to the Customers' premises - whether provided by wireline or wireless.
Mobile broadband	Any Broadband service which allows customers to use it when on the move.
Fibre To The Home (FTTH)	Any Access Network consisting of an Optical Fibre Distribution Network from the Switching Centre to the Users' premises in which homes have individual Optical Fibres to their serving Distribution Point (DP).
Fibre To The Building (FTTB)	Any Access Network consisting of an Optical Distribution Network from the Switching Centre to the Users' premises in which each building has a unique fibre routes back to the serving Switching Centre.
Internet Service Provider (ISP)	These are the organizations that provide the end Users with access to the Internet as well as Online Services.

Item	Definition
Fibre To The Building (FTTB)	Any Access Network consisting of an Optical Distribution Network from the Switching Centre to the Users' premises in which each building has a unique fibre routes back to the serving Switching Centre.
Fibre To The Cabinet (FTTC)	Any Access Network consisting of an Optical Distribution Network from the Switching Centre to the Cabinets. Final distribution from the Cabinets to Users' premises is achieved through means other than Optical Fibre, such as (xDSL) or pair Copper Lines.
Fibre To The Premises (FTTP)	Like Fibre To The Building (FTTB), describes an Access Network consisting of an Optical Distribution Network from the Switching Centre to the Users' premises.
Internet Service Provider (ISP)	These are the organizations that provide the end Users with access to the Internet as well as Online Services.
Backhaul	Backhaul comprises the intermediate links between the core or backbone Network and the Access Networks. (Access Networks might provide the links from the Local Exchanges or Cabinets to the end Users' premises or from Radio Base Stations to the Customers' Terminals).
Urban Areas	Areas consisting of places with > 2000 people - as defined by the National Bureau of Statistics for 2010.
Rural Areas	Areas consisting of places with between 200 and 2000 people - as defined by the National Bureau of Statistics for 2010.
Remote Areas	Areas consisting of places with <200 people - as defined by the National Bureau of Statistics for 2010.

Oman National Broadband Strategy - summary

Introduction

During the past few years the demand for broadband Internet services has grown significantly in most countries of the world. Applications and services which depend on the broadband Internet have become a key part of economic life, and play a very critical role in stimulating economic growth, and increasing productivity across other sectors, to improve the standard of living for citizens.

Access to high-speed networks is increasingly seen as a basic right of citizens. As a result many countries in the world now included broadband in their definition of universal telecommunications service, and have developed national strategies to promote the spread of broadband and make it accessible to all segments of society

Accordingly, the Omani government has developed a national broadband strategy, in sync with other national strategies in order to promote the spread of broadband and foster the economic and social returns.

The strategy is aimed at overcoming a number of obstacles in the current situation, such as:

• Low percentage of fixed broadband take-up with slower growth

• Various constraints for expansion of mobile broadband coverage including spectrum limitations, provision of backhaul connectivity and securing rights of way for new towers.

• High cost of broadband compared to GDP per head benchmarked across the region and globally.

• Limited competition among broadband providers.

• High cost to reach rural areas which represent 23% of the total population.
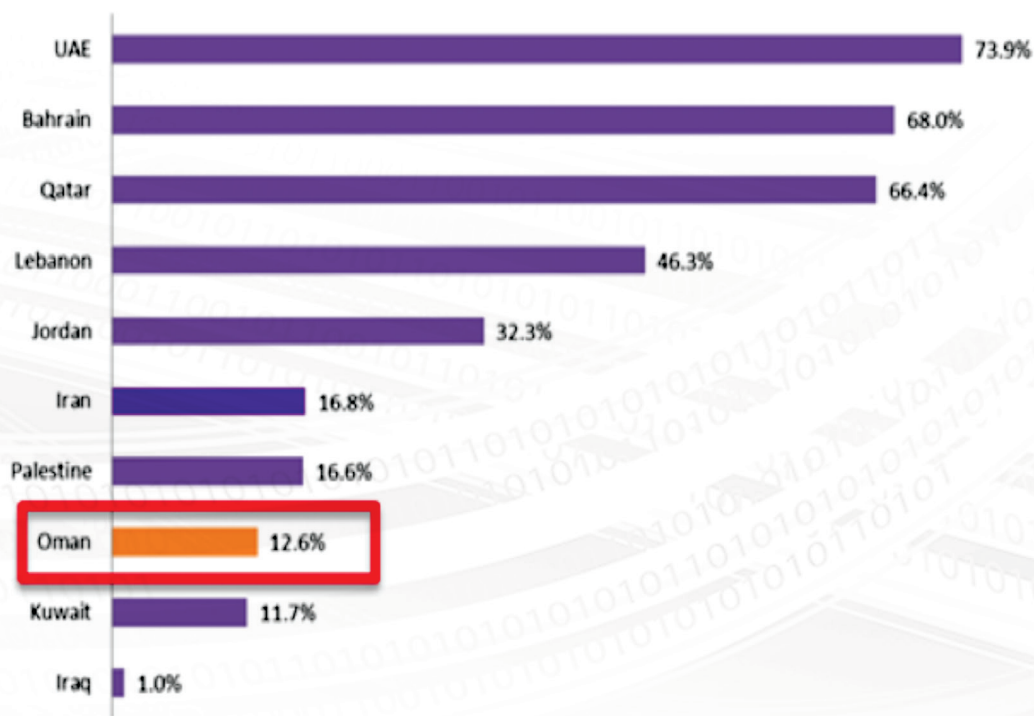
Broadband Houselhold Penetration

Figure 1: Oman's fixed penetration is below the regional average, Source: Telegeography 2013

Vision:

To drive national social and economic benefits through the provision of broadband to all people and businesses in Oman.

Strategic Objectives:

The below three objectives are defined as the key outcomes from the realisation of the strategy:

1. Every resident in Oman has access to high-speed broadband at affordable prices

2. All businesses in Oman have access to world-class broadband services which make them globally competitive

3. Rural and remote communities have access to broadband connectivity that closes the digital
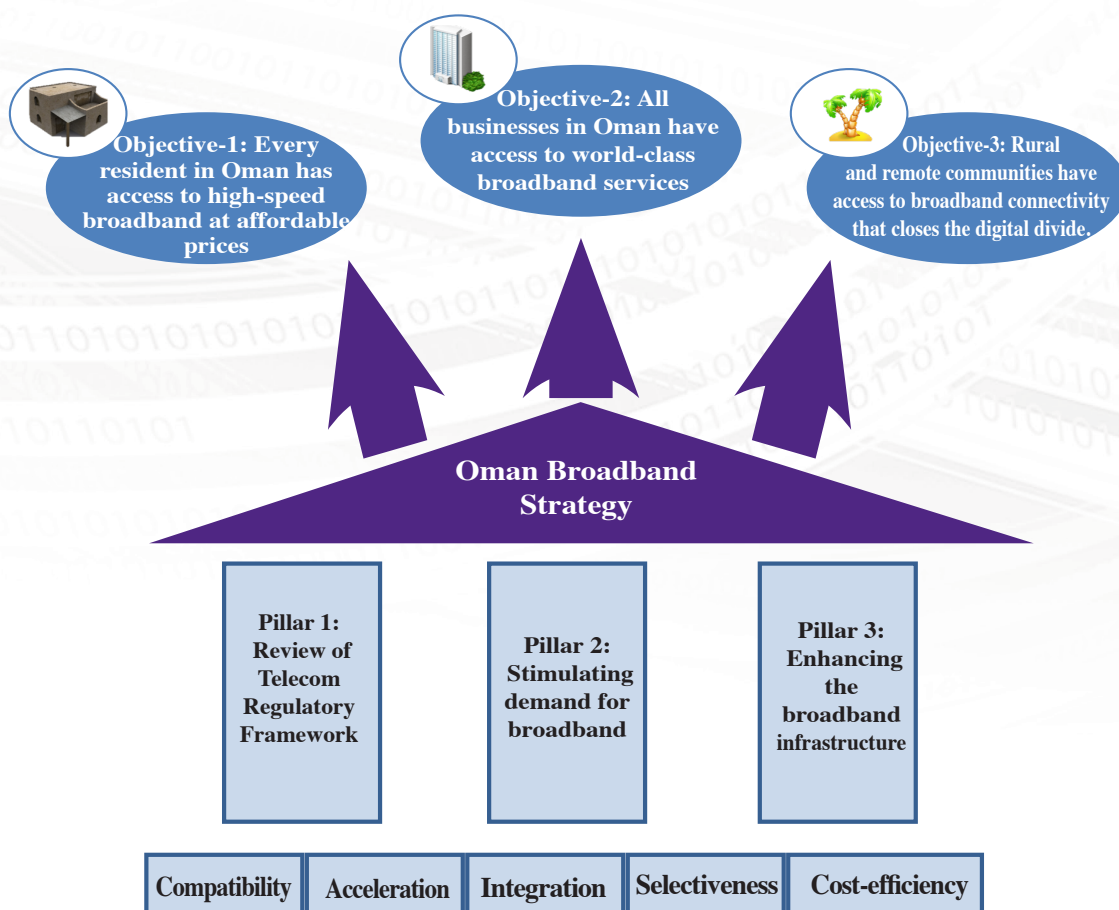
Guiding Principles:

The strategy is based on the below stated principles which need to be considered during implementation of all initiatives and projects under this strategy:

- **Compatibility:** To be aligned with the objectives of the national vision 2020 and its updates.

- **Acceleration:** To speed-up broadband take-up beyond that which market players would provide commercially with minimum distortion of the competitive market.

- **Integration:** To supplement government investment with operators and other private investments in broadband.

- **Selectiveness:** To invest only when the generated social and economic benefits will exceed the cost of supply.

- **Cost-efficiency:** To reduce the capital cost of broadband rollout and to offer the service at affordable price for all customers.

Strategy Components:

The three pillars that define the National broadband strategy are shown in the Figure 2:

Objective-1: Every resident in Oman has access to high-speed broadband at affordable prices

Objective-2: All businesses in Oman have access to world-class broadband services

Objective-3: Rural and remote communities have access to broadband connectivity that closes the digital divide.

Oman Broadband Strategy

| Pillar 1: Review of Telecom Regulatory Framework | Pillar 2: Stimulating demand for broadband | Pillar 3: Enhancing the broadband infrastructure |

| Compatibility | Acceleration | Integration | Selectiveness | Cost-efficiency |

First: Review of the telecom regulatory framework:

This component aims to review policies and regulatory procedures associated to the provision of broadband services. This includes a range of initiatives, such as:

- Reform licensing arrangements to adjust to new market structure, ease the market entry and increase competition.
- Review restrictions on the use of Voice over Internet Protocol.
- Regulate introduction and provision of wholesale fixed broadband services.
- Regulate the fiber deployment and other services in infrastructure projects.
- Regulate the specifications for wiring provision in new buildings to support broadband.

Second: Stimulating the demand for broadband:

This component aims to create programs and initiatives to increase the demand for broadband through integration with other sectors' plans under the umbrella of the national vision 2020, such as the Oman Digital Society and E-Government strategy.

This includes a range of initiatives, such as:

- Increase digital literacy to make use of broadband internet.
- Making broadband Internet more relevant to the lives of many Omanis through initiatives related to content, social media and e-services.
- Enhance the security awareness of broadband internet.
- Supporting secure online payment system for Oman

Third: Enhancing the Broadband Infrastructure:

This component aims to upgrade and expand current infrastructure networks, enhance the technology used, and increase the integration among them.

Figure 3 presents the proposed steps for a cost-effective rollout of improved broadband infrastructure in Oman. These steps are designed to build on the capability of existing networks; to bring broadband connectivity to all Omanis as soon as possible (2020); and to deliver fibre broadband to as many Omanis as possible before the end of the next decade (2030).
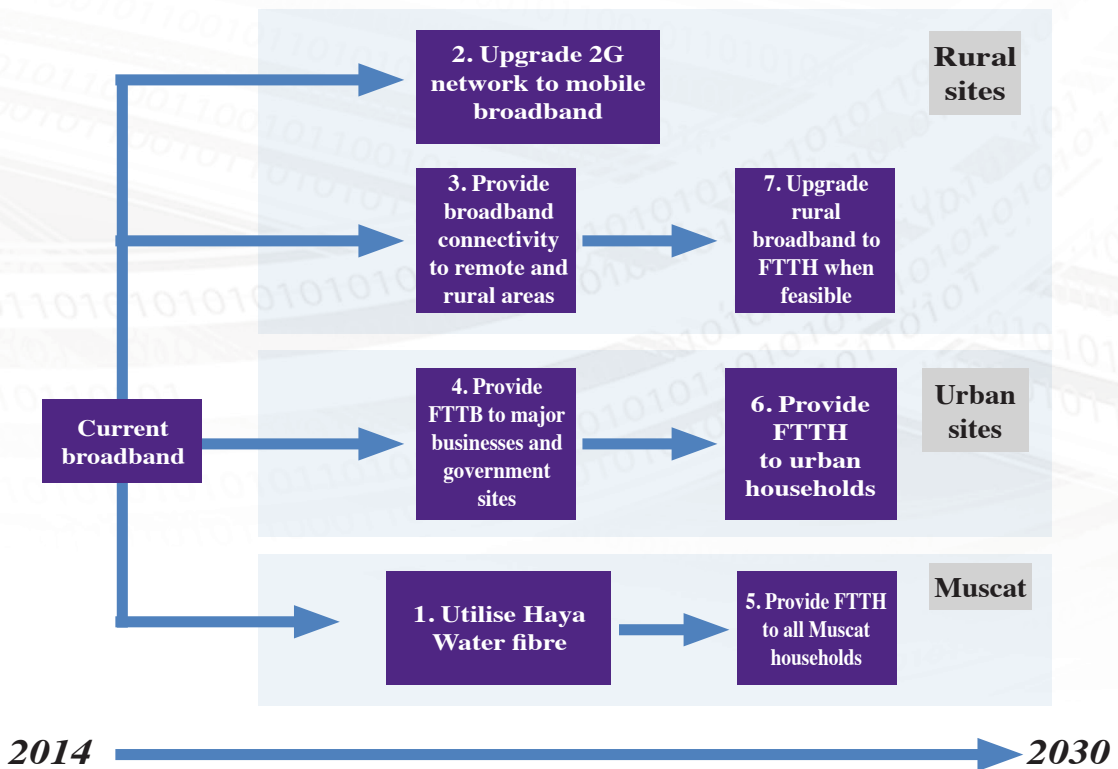

Figure 3: A cost effective way to roll out high speed broadband in Oman

- Step 1: Utilise government investment in Haya Water fibre in Muscat
- Step 2: Upgrade and expand existing mobile networks to provide mobile broadband.

- **Step 3:** Provide broadband connectivity to remote and rural households via cost effective technology means.
- **Step 4:** Provide FTTB to all governmental and business sites
- **Step 5:** Provide FTTH to all households in Muscat
- **Step 6:** Provide FTTH to other urban areas outside Muscat on opportunistic basis.
- **Step 7:** Expand FTTH to households in rural areas when it becomes feasible.

Initial initiatives

This strategy seeks to maximize the intended benefits of providing broadband service in Muscat and other urban and rural areas, through the following initial initiatives:

- **First initiative:** Revision and optimization of telecommunication regulatory framework through a revision of current policies related to the telecom sector and information technology, the Telecommunications Regulatory Act, and codes of practice in order to support broadband provision to be integrated with the rest of telecom services or other services in other sectors.

- **Second initiative:** Creation of new commercial entity to manage and operate national broadband infrastructure. This entity will be responsible for the process of implementation and expansion of broadband networks in the Sultanate, according to the government's vision, operators' needs, and technology updates in telecommunications industry. This entity will be a key member in any shared infrastructure projects.

- **Third initiative:** Making use of underutilized national assets such as existing fiber networks, in order to unify efforts of key players, integrate governmental investment with private sector investment in broadband services, and avoid duplication and conflict of interest.

- **Fourth initiative:** Enhancing the collaboration and coordination in utility infrastructure projects, such as water, electricity, sanitation, optical fiber, etc, in order to accelerate the spread of broadband service, reduce the financial cost of its deployment, ease the maintenance and expansion processes, improve the efficiency of network deployment projects in total, and finally to perceive this cooperation among stakeholders as customary general rule.