



## **CALL FOR EXPRESSIONS OF INTEREST**

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### **BUILDING A FIBRE TO THE HOME NETWORK IN MALTA**

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## 1. INTRODUCTION

### 2.1 BACKGROUND

The Government of Malta's goal for broadband investment is to accelerate the roll-out of ultra-fast broadband to cover all areas of Malta and Gozo, concentrating, where possible, on priority broadband users such as businesses, schools and public services and reaching all residential areas in a phased approach through an FTTH network.

Where fibre is limited in reach, the Government will also consider alternative technologies. The project will seek to attract private-sector investment, and be directed to **OPEN-ACCESS** infrastructure.

In 2011, the Malta Communications Authority commissioned international telecommunications consultants Analysys Mason Limited to carry out a technical and economic feasibility study on the provision of a fibre-to-the-home (FTTH) infrastructure in Malta<sup>1</sup> in line with the Government's objective as stated above.

The FTTH Study has been completed and its recommendations have been approved by Government.

This document is one of the next steps in the process leading to the attainment of Government's objective. It sets out Government's proposals for a national open-access FTTH network and the proposed design of an intervention scheme. It requests expressions of interest from national and international companies who may be interested in delivering such a network in partnership with Government.

#### 2.1.1 EUROPEAN CONTEXT

The *Digital Agenda for Europe* is one of the flagship initiatives of the European Commission's *Europe 2020 Strategy* for a smart and sustainable economy<sup>2</sup>. The Agenda provides a framework for member states to achieve the 2020 objectives for broadband deployment, which are:

- broadband access for all by 2013;

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<sup>1</sup> 'Malta' includes the islands of Malta and Gozo

<sup>2</sup> [http://ec.europa.eu/information\\_society/digital-agenda/index\\_en.htm](http://ec.europa.eu/information_society/digital-agenda/index_en.htm)

- at least 30Mbit/s connections for all by 2020; and
- at least 50% of households to use services of at least 100Mbit/s by 2020.

In October 2011, the EU European Digital Agenda Commissioner, Neelie Kroes, pledged EUR 9.2 billion of EU funding to support this challenging initiative. She also announced that the Commission is consulting on costing methodologies for key wholesale access prices which includes important questions on how the future pricing of copper and copper switch-off, relates to the achievability of the Digital Agenda targets.

These objectives are likely to be reached through the use of a variety of technologies – both fixed and wireless – but it is expected that the key to accomplishing these goals across Europe lies in the widespread deployment of fibre-based technology.

FTTH is a fibre-based technology that connects homes (or businesses) directly to their local exchange or other point of presence (PoP) using fibre cables for the delivery of telephony, Internet, television and other services. The types of enhanced services that can be delivered via FTTH have led to such networks being referred to as ‘next-generation networks’ (NGNs). Other NGNs include some modern cable television networks and some high-speed wireless networks.

## 2.1.2 MALTESE MARKET CONTEXT

For some time, Government has recognised the potential and importance of high-speed broadband networks, which are an integral part of the Smart Island Strategy<sup>3</sup> and the FTTH Green Paper<sup>4</sup>. Cable operator Melita’s 100Mbit/s broadband is already available throughout Malta and Gozo; incumbent operator GO has announced that it will be investing EUR 100 million over the next six years to roll-out further infrastructure, including fibre-to-the-cabinet (FTTC), mobile network upgrades and investments in the infrastructure to cover new services and applications.

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<sup>3</sup> <https://mitc.gov.mt/page.aspx?pageid=263&printonly=true>

<sup>4</sup> [https://mitc.gov.mt/MediaCenter/PDFs/1\\_nextgeneration%20greenpaper.pdf](https://mitc.gov.mt/MediaCenter/PDFs/1_nextgeneration%20greenpaper.pdf)

## MALTESE GOVERNMENT SERVICES

The long term vision of the Maltese government is one of making Malta a centre of excellence in various sectors, resulting in a well-diversified and productive economy that uses all its available resources effectively and efficiently to generate economic growth and social well-being for all.

In its 'Vision for 2015' strategy, the Government of Malta has declared ICT as one of its aspiring six centres of excellence. Over the past twenty years, Malta has progressed in leaps and bounds, in terms of ICT adoption, across all strata of the community and the economy. Today it has become a recognised, fully fledged leader in all aspects of ICT,. A consistent, central pillar of this rapid adoption was public policy and investment in ICT.

## **EHEALTH**

Through the eHealth programme, the Government of Malta is making healthcare more accessible, transparent, efficient and patient-centric for citizens by widening the scope of health centres across Malta. Patients will have secure electronic patient records that will enable them, or their trusted practitioners, to access their personal clinical data anytime and anywhere. Moreover, healthcare professionals will be able to make more effective decisions as they will have highly reliable and more immediate access to their patients' medical records.

The e-Health programme includes the deployment of the following systems within public healthcare entities:

- interfacing of systems between public and private sectors – hospitals, clinics and GP levels;
- interactive knowledge-bases for use by both professionals and the general public; and
- continuing professional development, telemedicine applications and videoconferencing.

## **ELEARNING**

With the support of the educational authorities, Government is taking the lead in pursuing further the Smart Learning strategy with the aim of extending education beyond the boundaries of the classroom and making learning more engaging for students, parents and teachers.

Government will sustain its efforts to extend access to the latest technologies to students, through the deployment of new computing equipment and a nationwide Fibre-to-the-School network, enabling bandwidth intensive applications to be accessed by all students across Malta. On top of this infrastructure and leveraging on the advent of Web 2.0 and 3.0 technologies, Government will deploy an innovative eLearning platform which will enrich the teaching and learning experience, by providing content, tools and applications to complement the classroom-based educational framework.

## **TRANS-EUROPEAN PUBLIC SERVICES**

Under the proposed Connecting Europe Facility the European Commission is proposing to promote the completion of priority energy, transport and digital infrastructures with a single fund, out of which EUR 9.2 billion are dedicated to digital networks and services.

As a result of this initiative, a number of generic trans-European public services are expected to be rolled out including cross-border eGovernment services. This will unquestionably further drive demand for high speed broadband services. Further information may be found via the following link::

[http://www.europarl.europa.eu/RegData/docs\\_autres\\_institutions/commission\\_europeenne/com/2011/0657/COM\\_COM\(2011\)0657\\_EN.pdf](http://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2011/0657/COM_COM(2011)0657_EN.pdf)

## **THE ARCHITECTURE OF MALTESE TELECOMMUNICATIONS NETWORKS**

The existing copper telephony and cable networks in Malta make extensive use of overhead cable. The older copper network is, in many cases, attached to the façade of buildings or uses telegraph

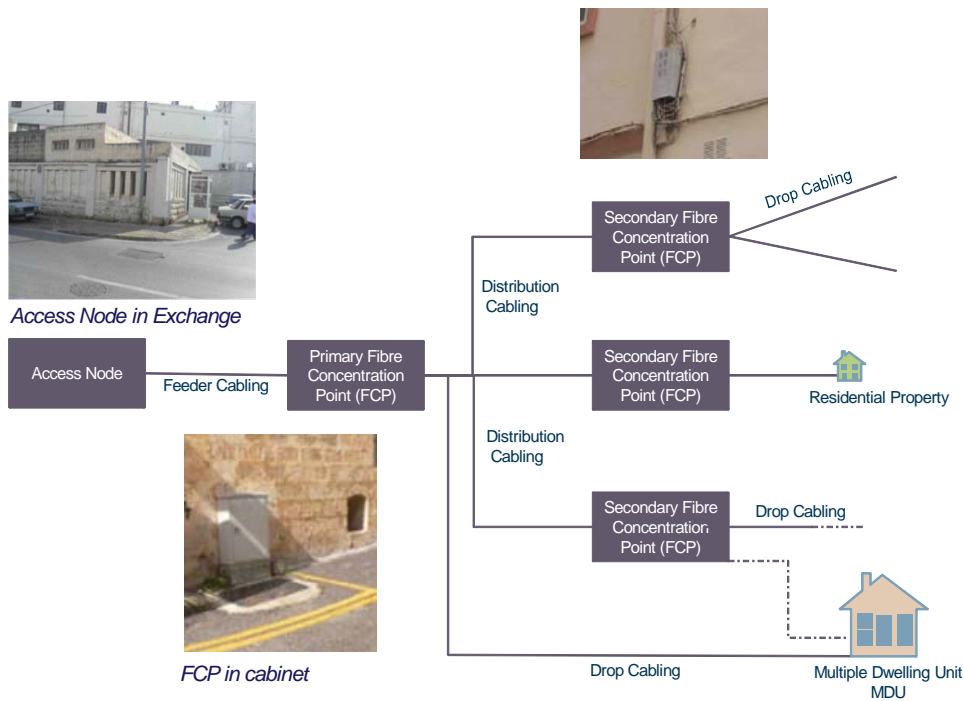
poles. The cable TV network is installed using the electrical cabling support systems. The electrical cabling is sometimes attached to the façade of buildings (using brackets) and sometimes attached to electricity poles.

At its simplest level, a FTTH network typically consists of the following elements:

- an access node (typically located in a telephone exchange);
- feeder cabling (normally in an underground duct) connecting the access node to a primary fibre connection point (typically a cabinet that serves 300 to 400 homes);
- distribution cabling that connects the primary fibre connection point to a home or secondary fibre connection point (the latter is typically a pit that serves 10 to 20 homes); and
- drop cabling connecting the secondary (or primary) fibre connection point to the home.

This topology is illustrated in Figure 2.1 below.

Figure 2.1: Typical FTTH network topology [Source: FTTH Council, Analysys Mason, 2011]





In Malta, the Government proposes that the feeder cabling will, in the main, be underground and that the distribution cabling will be overhead (and installed to an agreed standard). To this end, it is proposed to make the electrical infrastructure available for the distribution cabling. The Government also proposes to make the water infrastructure available as part of the infrastructure that will be used to install the feeder cabling. The electrical and the water infrastructure would be made available on a commercial basis and it is anticipated that the use of these assets may assist in the economic viability of the open-access FTTH network.

## FTTH TECHNOLOGIES

In the FTTH Study, models were developed which incorporated two FTTH technologies:

- gigabit passive optical network (GPON); and
- point-to-point (PTP).

Both GPON and PTP are being widely deployed internationally and both are capable of satisfying consumer and business requirements into the future. PTP does provide greater flexibility for local competition via loop unbundling but may require a higher level of initial investment. Taking account of these points Government has determined that both technology options should be explored. Government will remain technology neutral in this regard and does not propose to be prescriptive in mandating a particular FTTH technology. Instead, the decision as to the appropriate FTTH technology for Malta should be made by the entity which rolls out the technology.

### 2.1.3 PURPOSE OF THIS DOCUMENT

The roll-out of a FTTH network will have considerable economic and social benefits for Malta. In order to ensure that the potential benefits to the Maltese people are realised, there is the need for a proactive approach from Government.

Government recognises that deployment of FTTH is a major challenge in the current environment because of the long payback period and the market risk associated with the large up-front costs. Government will therefore aim to improve the private sector investment case by helping to lower barriers and reduce risk. If necessary, the Government will make available financial support.

Government realises that the provision of financial support will constitute state aid and is willing to work with the European Commission, leading and managing the state aid application process.

The purpose of this document is two-fold:

- to set out and seek feedback on Government proposals for a national FTTH network including objectives, provision of public funding, preferred investment model(s), reform of construction regulation, use of state assets, FTTH network architecture and scheme design; and
- to seek expressions of interest in the provision of a national open-access FTTH network for Malta and Gozo.

#### 2.1.4 SEPARATE CONSULTATION ON BROADBAND INFRASTRUCTURE

In parallel to this expression of interest process, a separate consultation has been published which requests information on current broadband infrastructure and planned broadband investment in the next 3 years. The relevant document may be accessed from the following link: <https://mitc.gov.mt/tendersitem.aspx?tenderid=122>

## 2. GOVERNMENT PROPOSALS

This section sets out Government’s proposals to support the development of a national open-access FTTH network in Malta.

### 3.1 GOVERNMENT PARTICIPATION

Government has identified a number of methods by which it can support the achievement of the FTTH objectives:

- provision of public funding;
- provision of access to Government-owned duct, rights of way and state utility assets; and
- reform of road construction processes and building regulations.

The proposed Government actions under each of these headings are set out below.

### 3.2 GOVERNMENT FUNDING AND INVESTMENT MODEL

In circumstances such as those that pertain in Malta, some public funding is likely to be necessary to make FTTH attractive to the private sector. In principle, Government supports the provision of public funding through an appropriate investment model. The Government commissioned Analysys Mason, an independent consultancy, to carry out a techno-economic analysis of deploying an FTTH network in Malta and it was estimated that a government subsidy of **EUR 29 TO EUR 50 MILLION** would be required. In the base scenario, peak funding occurs in year 4 so ideally, any grant funding will need to be made available in the first four years of roll-out.

#### 3.2.1 INVESTMENT MODELS

Investment models that have been used by public bodies in Europe and elsewhere include<sup>5</sup>:

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<sup>5</sup>[http://ec.europa.eu/regional\\_policy/sources/docgener/presenta/broadband2011/broadband2011\\_en.pdf](http://ec.europa.eu/regional_policy/sources/docgener/presenta/broadband2011/broadband2011_en.pdf)

**BOTTOM-UP  
MODEL**

The bottom-up or local community model involves a group of end users organising themselves into a jointly owned and democratically controlled group (frequently a co-operative) capable of overseeing the contract to build and operate their own local network. *Maltese Government objectives envision a national network covering 100% of the population; the use of a bottom-up model is not the most suitable to achieve these objectives.*

**EXAMPLE:** used in Norway by some rural communities.

**PRIVATE DESIGN,  
BUILD AND  
OPERATE (DBO)  
MODEL**

The private DBO model involves the Managing Authority issuing funding (often in the form of a grant) to a private sector organisation to assist in its deployment of a new network. The public sector has no specific role in the ownership or running of the network, but may impose obligations in return for the funding. *If sufficient public funding and/or assets can be made available to attract private sector bidders this model would be suitable for Malta. Disadvantages could be mitigated through 7–15-year contractual conditions of funding such as the requirement for wholesale products, coverage obligations etc.*

**EXAMPLE:** Singapore and the UK (Cornwall, Wales and Northern Ireland)

**PUBLIC  
OUTSOURCING  
MODEL**

Under a public outsourcing model, a single contract is awarded for all aspects of the construction and operation of the network. The major characteristic of this model is that the network is run by the private sector, but the public sector retains ownership and some control of the network. *The level of investment involved means that this investment model is probably not suitable for Malta.*

**EXAMPLE:** Ireland MANs

**JOINT VENTURE  
MODEL**

A joint venture, in this instance, is an agreement under which ownership of the network is split between the public and private sector. Construction and operational functions are likely to be undertaken by the private sector. *This model may be suitable for Malta, particularly if the state utilities were involved. It is unlikely that state assets alone will be sufficiently attractive to the private sector and public funding may also be required*

**EXAMPLE:** Citynet, Amsterdam.

**PUBLIC DBO  
MODEL**

A public DBO model involves the public sector owning and operating a network without any private sector assistance. All aspects of network deployment are managed by the public sector. A public sector operating company may operate the entire network, or may operate the wholesale layer only. *The level of investment involved and the size of the market mean that this investment model is probably not suitable for Malta.*

**EXAMPLE:** NBNCo, Australia

The scale of the investment involved means that it is unlikely that the Government could consider a public outsourcing or public DBO model. After consideration of the models available, the **GOVERNMENT HAS DECIDED THAT THE PROJECT WOULD USE EITHER A PRIVATE DBO OR A JOINT VENTURE INVESTMENT MODEL.**

The Government is mindful of the requirement to engage with potential private partners at an early stage of the procurement planning process to gauge their appetite for different investment models.

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**QUESTIONS:**

3.2.1 Do you agree that either a private DBO or a joint venture investment model would be appropriate to Malta in pursuit of its FTTH Objectives? Please give reasons for your answer.

3.2.2 Which of these models is preferred by you/your organisation? Please provide reasons for your answer

3.2.3 Do you have a view on how the investment model should be structured and how it could operate practically?

3.2.4 Do you have a view on the level of grant aid intensity necessary to ensure that the investment model leads to a viable open-access FTTH network?

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Regardless of which investment model is used, it is the Government's intention that provision of public funding would be contingent on contractual conditions over a 7 to 15-year period. A four year roll-out has been modelled, with peak funding required in year four.

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**QUESTIONS:**

3.2.5 Do you agree that a contract period of 7-15 years is appropriate for Malta in pursuit of its FTTH Objectives? What contract period do you propose? Please give reasons for your answer.

3.2.6 Are there, in your organisation's view, measures which could be implemented in scheme design which could assist with cash flow management and/or reduce the level of peak funding required?

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**3.3 PROVISION OF ACCESS TO GOVERNMENT-OWNED DUCT, RIGHTS OF WAY AND STATE UTILITY ASSETS**

Government is aware from international evidence that provision of access to unused public duct and rights of way can significantly reduce the cost of building a FTTH network. With this in mind, Government will make available state infrastructure such as duct, water, sewer and electricity networks to all operators in the market for the purposes of efficiently deploying an NGA network.

Government considers that provided these actions are carried out in an open, non-discriminatory manner it is unlikely that state-aid concerns will be raised.

### 3.3.1 GOVERNMENT DUCT AND TUNNELS

Over the last number of years, Government has installed duct in the road system as it has been upgraded. It is proposed that these ducts will be made available to any company who wishes to build a national FTTH network. Figure 3.1 below provides an indication of the Maltese road network.



Figure 3.1: Maltese Road network [Source: MITC, 2012]

### 3.3.2 ELECTRICAL UTILITY INFRASTRUCTURE

Government is of the view that access to the Enemalta duct and pole network is critical to the roll-out of a national FTTH network. This infrastructure is already used extensively by Melita Cable for its cable

network and processes for its safe use by third parties are well established. It is proposed that standards for use of this infrastructure will be developed and the infrastructure made available for the distribution part of a national FTTH network.

Figure 3.2 and Figure 3.3 below provide an indication of the extent of the infrastructure and further information will be provided during any procurement process.

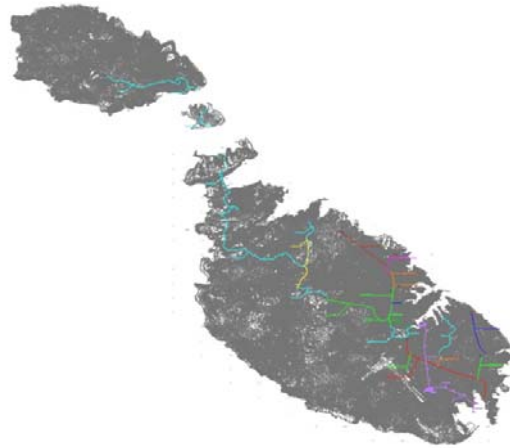


Figure 3.2: Enemalta duct, tunnel and culvert pathways [Source: MITC, 2012]

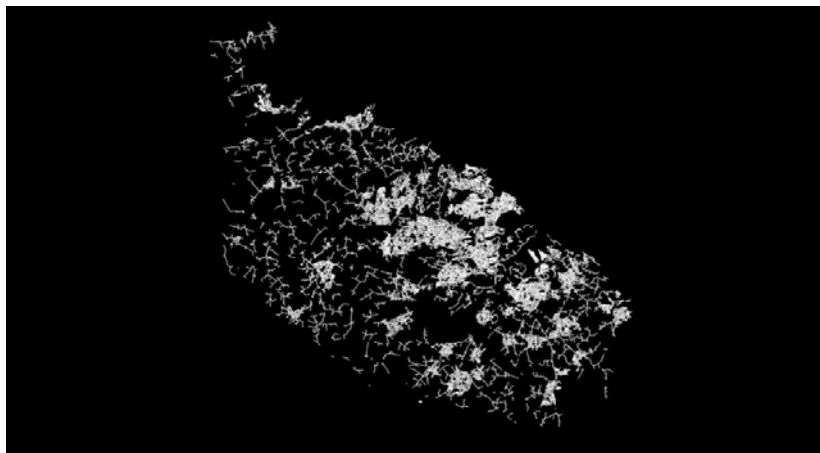


Figure 3.3: Enemalta overhead aerial powerline pathways [Source: MITC, 2012]

One possible solution in Malta is to use a mix of aerial and underground infrastructure to deploy the local fibre network. One possible strategy would be to deploy fibre infrastructure following the utility infrastructure and match aerial power/telephony/cable with



aerial fibre, and underground power/telephony/cable with underground fibre.

It is anticipated that if existing telecoms or other duct is full or has collapsed, it may be necessary to undertake some civil work or use alternative infrastructure such as sewerage infrastructure.

Use of existing Enemalta’s poles and brackets appears a well-favoured opportunity for cost-effective and low-impact deployment of FTTH. There is a precedent with the Melita Cable networks, where its cables are commonly seen co-existing with the electricity distribution network. Figure 3.4, Figure 3.5, Figure 3.6 and Figure 3.7 show examples of where the Melita Cable network is large black sheathed, sharing infrastructure with Enemalta’s electric power cables.

Figure 3.4: Part of the electricity infrastructure - Melita’s cable network can be seen on the inside of the bracket and GO’s copper cable can be seen attached to the façade above the bracket [Source: Analysys Mason, 2012]



Figure 3.5: Part of the electricity infrastructure [Source: Analysys Mason, 2012]



Figure 3.6: Part of the electricity infrastructure – Melita’s cable is the heavy black one [Source: Analysys Mason, 2012]



Figure 3.7: Part of the electricity infrastructure – on poles rather than on the facade [Source: Analysys Mason, 2012]



### 3.3.3 WATER SERVICES INFRASTRUCTURE

Use of the sewer network, although enabling modest savings in comparison to the electricity network, is viable and could form part of a national FTTH solution. Use of the sewer network may be most appropriate in the feeder part of the network connecting the exchanges to the cabinets. Access to the sewers will be made available as part of this process.

The following tables provide a summary of the water infrastructure in Malta.

Figure 3.8: Components of Wastewater Network By Catchment Area [Source: MITC, 2012]

	<b>GOZO</b>	<b>MALTA NORTH</b>	<b>MALTA SOUTH</b>	<b>TOTALS</b>
Gravity Mains (surface sewers)	180Km	150Km	1,048.17Km	1,378.2Km
Galleries (Deep Sewers)	9.18Km	4.4Km	96.2Km	109.78
Rising Mains	12.5Km	17Km	22.189Km	61.55
Manholes	6,300	4,124	36,856	47,280
Pumping Station (in Operation)	22	20	58	100
Pumping Station (under construction)	2	-	1	3
Pumping Station (proposed)	3	5	6	14
Sewage Treatment Plans (STP's – Operational)	1	1	1	3
STP's (under construction)	-	-	1	1

Figure 3.9: Sewer Network – Pipe Materials by Catchment Area [Source: MITC, 2012]

	<b>GOZO (KM)</b>	<b>MALTA NORTH (KM)</b>	<b>MALTA SOUTH (KM)</b>	<b>TOTALS (KM)</b>
<b>GRAVITY MAINS</b>				
Glazed Stone Ware (GSW)	72	12	344.04	428.04
Asbestos Cement (AC)	90	123	690.23	903.23
U-PVC	18	15	13.90	46.9
<b>TOTAL</b>	<b>180</b>	<b>150</b>	<b>1,048.17</b>	<b>1,378.17</b>
<b>PRESSURE MAINS (RISING MAINS)</b>				
Cast Iron	8.725	10	0.889	19.614

Asbestos Cement (AC)	3.475	7	12.008	22.483
PVC	0.3	-	-	0.3

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**QUESTIONS:**

3.3.1 Do you agree that the availability of state infrastructure on an open-access basis would accelerate the achievement of the FTTH Objectives? Which assets would be most attractive in ensuring that the FTTH Objectives are met? Please give reasons for your answers.

3.3.2 Do you have suggestions for processes and/or procedures which need to be in place in order to enable the state assets to be used effectively for the FTTH network?

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**3.4 REFORM OF ROAD CONSTRUCTION AND BUILDING REGULATIONS**

In order to encourage the roll-out of NGA services Government will accelerate and improve cost efficiencies by taking the following actions:

- reforming procedures and processes for opening roads; and
- reforming building regulations.

Government considers that provided these actions are carried out in an open, non-discriminatory manner, it is unlikely that they will raise state-aid concerns.

**3.4.1 ROAD OPENING PROCEDURES AND PROCESSES**

The construction of a national FTTH network is a major project involving the installation of infrastructure to every home in Malta. The infrastructure will pass many of Malta’s roads requiring underground or aerial construction works along the majority of ‘local’ roads, in addition to some work on other roads (in particular link roads).

Responsibility for local and link roads is divided between 68 local councils and Transport Malta (TM). For the FTTH project, it will be

important that the entity constructing the network deals with as small a number of responsible bodies as possible (ideally just one), to ensure that the network is rolled-out in a reasonable timeframe to the same standard of construction nationally. The national nature of the proposed roll-out supports streamlining of the permit and road opening processes.

A Quality Assurance Unit (QAU) has been set up within the Road Network Infrastructure Directorate (RID) of TM with a view to ensuring:

- that road openings are carried out safely, efficiently and to high quality standards whilst causing as little disturbance as possible;
- better coordination, cooperation and communication between the RID and utility providers or others; and
- cost effectiveness and the minimisation of future openings on the road where works are to be carried out.

The Government proposes that the QAU will take a key role in co-ordinating road opening for the project. Its role would be to ensure that the roll-out is standardised and does not incur delays or additional costs.

The rollout of a national FTTH network will involve a large number of road openings and therefore it will be important that the FTTH company/entity is treated as a major stakeholder and attends the relevant co-ordinating meetings envisaged within the QAU Policy Framework.

Having reviewed the QAU Policy Framework the following amendments will be introduced:

The increase in costs and time caused by deploying all of the distribution network underground, instead of overhead, is substantial and clearly not viable, so the QAU policy will be amended to allow overhead cable (utilising the Enemalta poles and bracket infrastructure) to be installed. Any installation will be of a high technical and aesthetic standard and these standards will be encompassed in TM/QAU policy.

In addition, with regard to the resurfacing of local roads, whilst the roll-out will be mandated to adhere to international quality standards

and practice, TM and local authorities will reconsider the existing requirement for full-width reinstatement of roads after 10 years of construction, provided that the contractor submits a method of statement endorsed by a road engineer for approval of the QAU.

The FTTH network rollout will be co-ordinated with scheduled maintenance of local roads and this will be controlled by a central planning/programme office which maintains a geographical information system (GIS), which will be updated with regular inputs from TM and Local Councils.

It is proposed that the design master plan will be developed in coordination with all utilities and telecommunications operators to ensure that existing infrastructure is captured, in so far as is possible, in the GIS system referred to above. This intensive work should take place 'up front' and will have the effect of reducing the individual permit timeframes as the network is rolled-out. The GIS should be regularly updated based on input from utilities and telecommunications providers.

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#### QUESTION:

3.4.1 Do you agree that the proposed reforms of the building and construction regulations are necessary to facilitate the achievement of the FTTH Objectives? Please state which specific alternative or additional reforms would accelerate the planning and roll-out of an FTTH network in Malta and how they would achieve this.

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#### 3.4.2 NEW BUILDING REGULATIONS REQUIRING FIBRE CONNECTIONS

The wiring of buildings is an expensive task which in the cases of some homes and businesses can be unsightly<sup>6</sup>. For these reasons, re-wiring and/or running additional wiring is a barrier to take-up of new fibre

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<sup>6</sup>

The regulatory scenario for in-house wiring varies between countries. For example in the UK, there is no specific legal requirement to allow access for networking infrastructure in buildings. No regulations on in-house wiring exist in Denmark, Finland and Switzerland. In Germany, a competitor has a right to wiring in accordance with the civil law provisions on rights of property, while the first operator is obliged to grant access but compensated with the cost that covers the granting of access. In Canada, the Public Utility Co-ordinating Committee (PUCC) developed regulatory principles governing access to multi-dwelling buildings. The guidelines cover contractual agreements between the operators and the building owners and sets rules on the use of equipment rooms, ducts and in-house wiring.

based services by customers. In addition, little or no innovation takes place in the wiring of the final drop of an FTTH network.

The Malta Communications Authority is currently working on the development of guidelines in respect of the deployment of next generation infrastructure within buildings, specifically between the building entry point (i.e. the demarcation point between public and private land) and the customer premises equipment, including any service points, if any, between such points. These guidelines will seek to facilitate roll-out by establishing minimum installation requirements that lower barriers for service provision and support a competitive environment for consumers.

Regulations are expected to be established which will:

- mandate that all new buildings are pre-wired with internal fibre (and possibly co-axial) cables installed to an international standard<sup>7</sup>;
- mandate that more fibres per cable are installed during the first installation of existing buildings; and
- mandate open-access to the fibre cabling within buildings<sup>8</sup>.

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## QUESTION:

3.4.2 Do you agree that the proposed reforms of the building and construction regulations are necessary to facilitate the achievement of the FTTH Objectives? Please state which specific alternative or additional reforms would accelerate the planning and roll-out of an FTTH network in Malta and how they would achieve this.

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<sup>7</sup> For example, in March 2011, the Spanish government changed Spanish building regulations to force more fibre connections to be installed. The new regulation include, as additional infrastructure in buildings fibre optic and coaxial cable to enable users to engage the services of telephony, broadband and television, and favours the introduction of “digital home” features in residences. The Spanish government states that the objectives of this regulation change are to facilitate the introduction of ultra-fast access infrastructure in new buildings, and thus boost its deployment by the operators.

<sup>8</sup> For example, the French LME (Law on Modernisation of the Economy) sets rules for in-building fibre. Under this law, one single operator is to deploy in-building fibre infrastructure (using multiple-fibres in the densest areas) that will be shared by all other players at the level of what is called a “mutualisation point” located either in the basement of the building (in the densest areas) or in an outdoors location (otherwise). This covers the vertical in-building wiring. The “floor wiring” (i.e. from staircase to flat) can be done either by the operator who has deployed the building or by the operator who wants to provide service to the end-user.

### 3.5 OPEN-ACCESS INFRASTRUCTURE

Access for third party retail service providers to the subsidised FTTH broadband infrastructure will be a condition of Government funding. Therefore, a critical decision in the development of the FTTH network will be the layer at which services should be provided to retail service providers.

In general, there are four different options available to provide a wholesale service, depending on the open systems interconnection (OSI) layer at which the network is to be unbundled to provide wholesale services. This is illustrated in Figure 3.10 below.

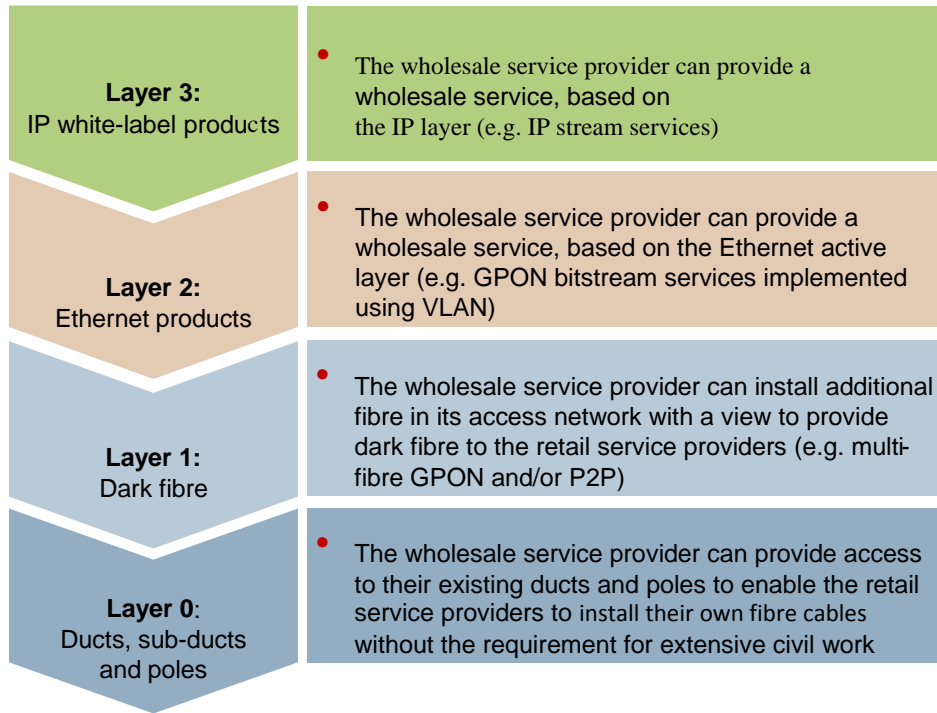


Figure 3.10: Wholesale and unbundling strategies in ultra-fast broadband network [Source: Analysys Mason]

Government recognises that the most appropriate strategy for Malta would be the provision of an open-access FTTH network unbundled at Layer 1 or at Layer 2. The decision on the layer at which the network should be unbundled will lead to a different product-set required by retail service providers.

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**QUESTION:**

3.5.1 Which of the proposed products are you or your company/organisation interested in - Layer 1 products, Layer 2 products, or both?

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**3.6 DESIGN OF SCHEME TO PROVIDE PUBLIC SUBSIDY**

The Government scheme to invest public funds will be designed in accordance with the following principles:

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<b>PRINCIPLE</b>	<b>COMMENT</b>
<b>MARKET ANALYSIS</b>	<p>In parallel with this consultation, Government is consulting with the Maltese telecoms industry to establish the extent of its existing and planned next generation infrastructure. Once the consultation is complete, a detailed mapping and coverage analysis will be carried out. Areas of Malta where competitive next generation infrastructure will not be available in the next three years will then be identified and the scheme will aim to address these areas.</p> <p>See separate consultation<sup>9</sup>.</p>
<b>OPEN TENDER PROCESS</b>	<p>An open tender approach will be used to ensure transparency and fairness for all bidders.</p> <p>Equal and non-discriminatory treatment of all bidders will be considered an indispensable condition for the open tender.</p>
<b>BEST ECONOMIC OFFER</b>	<p>At similar, if not identical quality conditions, the bidder with the lowest amount of aid requested will, in principle, receive more marks within the overall assessment of its bid.</p>
<b>TECHNOLOGICAL</b>	<p>The tender will be technology neutral and will be based</p>

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<sup>9</sup> <https://mitc.gov.mt/tendersitem.aspx?tenderid=122>



<b>NEUTRALITY</b>	on the ability to deliver specific services. See Section 2.1.2.
<b>USE OF EXISTING INFRASTRUCTURE</b>	<p>To avoid unnecessary duplication of resources, the tender will require re-use of existing infrastructure, where possible. However, this condition will not be used to favour existing incumbent operators.</p> <p>In areas where a single operator provides (or plans to provide) an equivalent service to that expected to be awarded under the tender, if it is shown that dependence on that operator is part of the problem, it will be necessary to allow for more facilities-based competition.</p>
<b>WHOLESALE ACCESS</b>	<p>Mandating third party wholesale access to a subsidised broadband infrastructure will be a necessary requirement of the tender. The winning bidder will be required to offer wholesale access to the subsidised infrastructure for at least seven years. It is likely that access will be mandated to dark fibre and Ethernet services.</p> <p>See Section 3.5</p>
<b>PRICE BENCHMARKING</b>	To ensure effective wholesale access the prices of wholesale access will be set to avoid any ‘margin squeeze’ <sup>10</sup> .
<b>CLAW-BACK MECHANISM</b>	To ensure that the selected bidder is not over-compensated, there will be a claw-back mechanism that reduces the overall level of subsidy if the project is more successful than originally anticipated.

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Figure 3.11: Scheme Design [Source: Analysys Mason, EC]

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<sup>10</sup> Margin Squeeze occurs when a vertically integrated firm holding a dominant position in the upstream market prevents its (non-vertically integrated) downstream competitors from achieving an economically viable price-cost margin.

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**QUESTION:**

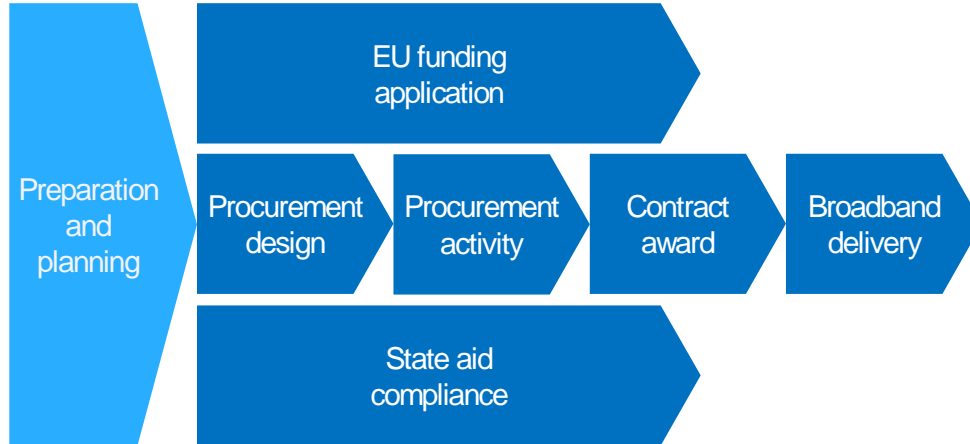
3.6.1 Are there any other principles which should be taken into account in the design of the scheme to provide public subsidy? Please provide reasons for your answer.

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### 3.7 PROPOSED PROCESS AND NEXT STEPS

The Maltese Government has commenced preparation and planning for the roll-out of a national FTTH network for Malta. This consultation/Expression of Interest process and the separate but related market review are some of the activities which constitute the preparation and planning phase. Figure 3.12 below summarises the activities which need to take place once preparation and planning is complete.

Figure 3.12: Next step activities [Source: Analysys Mason, 2012]



There are three key activity flows that follow preparation and planning: the EU funding application, complying with state aid regulations, and the four separate activities that contribute to procurement and delivery. These three activity flows are carried out broadly in parallel, and a summary description of each activity is provided below.

### 3.7.1 EU FUNDING APPLICATION

To complete an EU funding application, or any other relevant funding application, the Maltese government propose to assess the funding application guidelines and application form(s), and check that its understanding is consistent with that of the funding body, through the use of meetings and dialogue.

The Government is aware that there are a variety of sources of EU funding, and these can be combined with national or local sources of public sector funding, before being leveraged with private sector financing where appropriate.

### 3.7.2 COMPLYING WITH STATE AID REGULATIONS

The EC monitors the investment of public funds to ensure that state aid is not used to unduly favour one or more private entities in a way that would distort a market. For projects such as proposed, an individual state aid notification must be submitted to the EC. The Maltese Government will prepare a state aid pre-notification paper.

In addition to describing the project objectives and approach in the state aid pre-notification paper, the Government will gather and prepare evidence about the broadband demand and supply situation in Malta. This includes a requirement for detailed mapping and coverage analysis, to determine whether infrastructure has already been (or is about to be) deployed on the supply side, as well as a mapping of the expected service requirement on the demand side.

Other inputs to the state aid process are derived from the project design, the procurement requirements, specifications and the responses from bidders during the procurement process. In particular, the requirements specifications and questions posed by bidders during the procurement will be designed to help satisfy the EC's guidelines on state aid for broadband.

### 3.7.3 PROCUREMENT DESIGN, PROCUREMENT ACTIVITY, CONTRACT AWARD AND BROADBAND DELIVERY

The procurement design is shaped by a number of factors and options that are being assessed methodically by the Maltese Government and it is proposed to develop these into a coherent, agreed procurement strategy.

It is likely that the **OJEU COMPETITIVE DIALOGUE** procedure will be used to procure a suitable supplier and this procedure includes the following steps:

- **MARKET AWARENESS**
- **PRE-QUALIFICATION QUESTIONNAIRE (PQQ)**
- **INVITATION TO PARTICIPATE IN DIALOGUE (ITPD)**
- **DIALOGUE PROCESS**
- **INVITATION TO TENDER (ITT)**
- **CONTRACT AWARD.**

The Government may award the contract to the winning bidder, once the key dependencies of state aid approval and funding confirmation have been achieved.

### 3.7.4 BROADBAND DELIVERY

The broadband delivery stage is a complex undertaking and presents Government with a variety of challenges. Many of the issues presented during delivery should be typical of those routinely faced by a supplier when rolling-out broadband services, whose financial motivators (such as cashflow and profit targets) will themselves act as a self-controlling / motivational function.

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**QUESTION:**

3.7.1 Are there any other principles which should be taken into account in implementing the Government’s objectives? Please provide reasons for your answer.

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**3.8 FURTHER FEEDBACK**

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**QUESTION:**

3.8.1 Do you have any further feedback in relation to the Government’s proposals?

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### 3. EXPRESSION OF INTEREST IN PROVISION OF A NATIONAL WHOLESALE FTTH BROADBAND NETWORK

The Government of Malta requests expressions of interest from companies and consortia in the provision of all or part of the proposed national wholesale FTTH broadband network as set out in Sections 2 and 2 above.

The Government welcomes expressions of interest from national and international parties (including telecoms operators, construction companies, equipment vendors, investors and others).

In your response, please include the following:

- the aspects of the proposed national FTTH network you/your organisation are interested in;
- the sort of role your organisation would see in the business of a national open network; and
- the barriers to your involvement that you see.

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#### EOI REQUEST:

4.1 Please provide an expression of interest in the provision of a national wholesale FTTH broadband network.

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## 4. SUBMISSION OF COMMENTS AND EXPRESSION OF INTEREST

The Maltese Government welcomes written comments and expressions of interest in response to this consultation during the consultation period, which shall run from 14<sup>th</sup> February 2012 to the 16<sup>th</sup> of April 2012.

The Government appreciates that respondents may provide confidential information in their responses. This information is to be included in a separate annex to their response and should be clearly marked as being confidential.

After due consideration of the comments and representations received, the Government will review this analysis and publish a report summarising the responses to the consultation.

For the sake of openness and transparency, the Government will publish the names of all respondents to this consultation. To this end, all representations will be published, except where respondents indicate that a response, or part of it, is confidential. The Government will take steps to protect the confidentiality of all such material from the moment that it is received at the Government's offices. Respondents should however avoid applying confidential markings wherever possible.

All responses must be submitted to the Government by no later than noon of the 16<sup>th</sup> April 2012.

Extensions to the consultation deadline will only be permitted in exceptional circumstances and where the Government deems fit. The Government reserves the right to grant or refuse any such request at its discretion. Requests for extensions are to be made in writing within the first ten (10) working days of the consultation period.

All submissions should be made in writing and sent by email to [Fibretothehome.mitc@gov.mt](mailto:Fibretothehome.mitc@gov.mt)

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## 5. ANNEX A SUMMARY OF CONSULTATION QUESTIONS

Figure A.1: Summary of consultation questions

Section	Questions
3.2	<p><b>3.2.1</b> Do you agree that either a private DBO or a joint venture investment model would be appropriate to Malta in pursuit of its FTTH Objectives? Please give reasons for your answer.</p> <p><b>3.2.2</b> Which of these models is preferred by you/your organisation? Please provide reasons for your answer</p> <p><b>3.2.3</b> Do you have a view on how the investment model should be structured and how it could operate practically?</p> <p><b>3.3.4</b> Do you have a view on the level of grant aid intensity necessary to ensure that the investment model leads to a viable open access FTTH network?</p> <p><b>3.2.5</b> Do you agree that a contract period of 7-15 years is appropriate to Malta in pursuit of its FTTH Objectives? What contract period so you propose? Please give reasons for your answer.</p> <p><b>3.2.6</b> Are there, in your organisation’s view, measures which could be implemented in scheme design which could assist with cash flow management and/or reduce the level of peak funding required?</p>
3.3	<p><b>3.3.1</b> Do you agree that the availability of state infrastructure on an open access basis would accelerate the achievement of the FTTH Objectives? Which assets would be most attractive in ensuring the FTTH Objectives are met? Please give reasons for your answer.</p> <p><b>3.3.2</b> Do you have suggestions for processes and/or procedures which need to be in place in order to enable the state assets to be used effectively for the FTTH network?</p>
3.4	<p><b>3.4.1</b> Do you agree that the proposed reforms of the building and construction regulations are necessary to facilitate the achievement of the FTTH Objectives? Please state which</p>

specific alternative or additional reforms would accelerate the planning and rollout of an FTTH network in Malta and how they would achieve this.

**3.4.2** Do you agree that the proposed reforms of the building and construction regulations are necessary to facilitate the achievement of the FTTH Objectives? Please state which specific alternative or additional reforms would accelerate the planning and rollout of an FTTH network in Malta and how they would achieve this.

3.5 **3.5.1** Which of the proposed products are you or your company/organisation interested - Layer 1 products, Layer 2 products or both?

3.6 **3.6.1** Are there any other principles which should be taken into account in the design of the scheme to provide public subsidy? Please provide reasons for your answer.

3.7 **3.7.1** Are there any other principles which should be taken into account in implementing the government's objectives? Please provide reasons for your answer.

3.8 **3.8.1** Do you have any further feedback in relation to the Government proposals?

4 **4.1** Please provide an expression of interest in provision of a national wholesale FTTH broadband network

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