Models and Solutions for Financing Broadband in Public and Private Sectors

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Key messages

- The rollout of next generation communications infrastructure is critical to economic growth
- Governments and regional authorities in economies around the world are in the process of meeting this challenge head on
- With significant demand, an increasingly innovative society and a wealth of resources, European nations are ripe for investment in world-class 21st century technology
- Several procurement and funding options have been utilised by Governments to optimise use of public and private sector funds and skillsets
Benefits of World Class Broadband Infrastructure
Benefits are high-speed connectivity are real and abundant

“7 percent increase in broadband adoption would create 2.4 million jobs across the USA, would save $662 million in health-care costs and $6.4 billion in vehicle mileage, among other savings.”
Study by Connected Nation, 21 February 2008, USA

“Broadband will add 2-3 per cent to the country’s GDP – worth around NZ$2 billion annually”
“New Zealand – Broadband Economy”, Paul Budde Communications, NZ

“It is estimated that the BcN will boost the economy by some A$100 billion and create 370,000 jobs by 2010.”
Ministry of Information & Communication, South Korea

“The advancement of broadband has become a high national priority in the UK…. in 2015 broadband will boost productivity by 0.5-2.5 per cent and increase GDP by GBP22 billion whatever the economic climate.”

“Next generation broadband could produce economic benefits of AUD$12-30 billion per annum to Australia”
Federal Government-sponsored Broadband Advisory Group, Australia

“Broadband may add 1.2 per cent to GNP over 20 years”
Information Society on Broadband, Ireland
Private participation in infrastructure projects
Investment in infrastructure projects: Public or private?

Public sector is used to natural monopoly, whilst private sector is used to competition. They have thus both developed very different skillsets.

Public sector limitations:
- Focus on “natural monopoly” infrastructure has:
  - Limited quality of services provided (lack of emulation)
  - Created severe pressure on Public budgets
- Concerns on:
  - Capacity to improve services
  - Capacity to continue to fund projects independently

Private sector skills:
- Increased focus on end user satisfaction
- Increased investment efficiency (cost management)
- Increased service quality & efficiency, hence profits
- Access to infrastructure financing
- Increased investment capacity

Change in the role of Governments in providing infrastructure:
Shift from “Owning and Operating” to “Regulating infrastructure projects provided by the private sector”, where:
- Private sector participation can be optimised
- Structuring, funding, and contractual arrangements are complex
- Risks are allocated to the party that is best able to deal with them
- Efficiency in selection processes has become critical
Why promote private sector participation in infrastructure projects?

- Private participation in infrastructure brings
  - clear benefits to customers
  - creates valuable investment opportunities for the private sector and
  - frees public resources for other social uses
- Compensating for limitations or unavailability of public or local authority funding (and allowing governments not to resort to tax)
- Accelerating overall economic growth
- Improving performance and end-user satisfaction
- Sharing commercial risk with the private sector
Possible approaches & funding for broadband infrastructure and operations
Private sector participation in infrastructure takes different forms

<table>
<thead>
<tr>
<th>Contract Type</th>
<th>Asset Ownership</th>
<th>O &amp; M</th>
<th>Capital investment</th>
<th>Commercial risk</th>
<th>Contract duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Contract</td>
<td>Public or Private</td>
<td>Public or Private</td>
<td></td>
<td></td>
<td>1-2 years</td>
</tr>
<tr>
<td>Management contract</td>
<td>Public or Private</td>
<td>Public or Private</td>
<td></td>
<td></td>
<td>3-5 years</td>
</tr>
<tr>
<td>Lease</td>
<td>Public or Private</td>
<td>Public or Private</td>
<td></td>
<td></td>
<td>8-15 years</td>
</tr>
<tr>
<td>Concession</td>
<td>Public or Private</td>
<td>Public or Private</td>
<td></td>
<td></td>
<td>25-30 years</td>
</tr>
<tr>
<td>PPP – JV</td>
<td>Public or Private</td>
<td>Public or Private</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>BOT – BOOT</td>
<td>Public or Private</td>
<td>Public or Private</td>
<td></td>
<td></td>
<td>2-30 years</td>
</tr>
<tr>
<td>Divestment</td>
<td>Public or Private</td>
<td>Public or Private</td>
<td></td>
<td></td>
<td>No limit (unless license)</td>
</tr>
</tbody>
</table>

- **Public sector solely responsible**: Red
- **Shared responsibility**: Purple
- **Private sector solely responsible**: Blue

Less appropriate for telecoms investments

Suitable for telecoms investments
Suitable access to funding for private telecom infrastructure

The characteristics of Communications Infrastructure credit make it potentially well suited to an Infrastructure / Project Finance approach as they meet key financing criteria.

<table>
<thead>
<tr>
<th>Barriers to entry</th>
<th>Predictive and stable cashflows</th>
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<tbody>
<tr>
<td>• Fixed telecoms infrastructure investment generally provides quasi-monopoly position on part of the service offering (broadband, …) with high barriers to entry</td>
<td>• Predictable revenues / long-term contracts</td>
</tr>
<tr>
<td>• Strong customer relationship / competitive position</td>
<td>• Low customer volatility / low client solvency risk</td>
</tr>
<tr>
<td></td>
<td>• High cash generation (high EBITDA margins)</td>
</tr>
<tr>
<td></td>
<td>• High capital intensity business with predominantly fixed cost and foreseeable capital / maintenance costs</td>
</tr>
<tr>
<td></td>
<td>• Little to no execution risk (either during roll-out or in terms of maintenance)</td>
</tr>
</tbody>
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**Sustainability**

- Positive market fundamentals in telecoms/broadband + revenue growth prospects (including new products and diversification)
- Stable and diversified revenue base (end users/public)
- Long term / “Indefinite” operating rights – low technology risk in fibre networks
- Availability of experienced management and staff in Europe

**Strategic asset**

- “Public good” characteristics
- Predictable regulatory environment
Broadband Infrastructure case studies
- Glasvezelnet Amsterdam
- Singapore NGN Project
- Irish MANs
- Welsh FibreSpeed Project
Glasvezelnet Amsterdam BV (GNA)

Summary

- The Amsterdam City Council instigated the construction of a FTTH network. Various options were investigated, with a view to limiting public funding. This led to the creation of Glasvezelnet Amsterdam BV (GNA), now the legal owner of the FTTH network.

- GNA’s equity is equally shared between 3 shareholder groups:
  - The Amsterdam Municipality
  - 5 Housing corporations
  - Private investors

- Public entities act as private investors, with no state aid (no subsidies and no guarantees), as shareholders invest under the same conditions with an acceptable risk/reward-relationship.

- Housing corporations create real estate value, as the investment to connect their property to the local loop becomes cheaper, easier and profitable.
The GNA network is structured in three separate layers

- **Infrastructure**: GNA commissions the construction of the passive network and own the fiber infrastructure in the local loop. "Smart digging", like laying cables together with utilities will be used as much as possible. Selection process based on the economically most favorable offer.

- **Exploitation**: a wholesale provider who rents the infrastructure from GNA activates the local loop. Selection process based on the economically most favorable offer.

- **Services**: The network is as open as possible (within practical and economical limitations) for service providers: commercial, non-profit, public services, large or small, traditional or very innovative. The service providers are able to purchase transport capacity at non-discriminatory conditions to deliver services to their customers.

The fiber network delivers an innovative and freely accessible infrastructure, suitable to support growth in demand for the next 30 years or more.
Summary

- Combination of ultra high-speed Next Generation Network (NBN) and the Wireless Broadband Network (WBN).
- Intended to entrench Singapore's Infocomm hub status and open doors to new economic opportunities, business growth and social vibrancy for the country.
- Capable of ultra high speeds of symmetric 1 Gbps or more, with initial provisioning of 100 Mbps to over 95% of the country.
- It also opens the door for players from the entire telecommunications value chain to participate in Singapore's enlarged broadband market:
  - hardware providers
  - systems solution integrators
  - vendors; and
  - content players
Procurement & Funding

• The Government adopted a public-private partnership ("PPP") approach. This means:
  – the private sector is expected to build, own and operate the network for a period of 15 years
  – the Government will provide minimal funding to kick-start the project
  – the Government will ensure viability, affordability and long-term sustainability

• The PPP concession for the Network Infrastructure ("NetCo") for was awarded to the OpenNet Consortium, led by Singtel, in September 2008

• The PPP concession for deploying the active network elements (routers, switches) and providing wholesale broadband services to retail service providers ("OpCo") was awarded to Nucleus Connect, a wholly owned subsidiary of Starhub Pte Ltd in April 2009

Irish “MANs” Project

Summary

• The Irish Government is building and funding
  – open, carrier-neutral, fibre-optic networks ("Metropolitan Area Networks")
  – in over 120 towns (27 built out to date)
  – where such infrastructure is not supplied by market players.

• The key elements of the project include:
  – Fibre optic ring(s) encircling town
  – Connects business and public sector
  – Provides high-speed internet connectivity to customer premises
  – Linked to national/international backbone

• MANs are publicly owned, while allowing all telecommunication operators open access to the networks.

• Procured by Government/Local Authorities, but managed by private sector service company through a “Concession”
Managed Service Contract

- Networks managed by e-Net, a neutral management services from the private sector, who has a 15 year services concession contract
  - Concession applies strict performance criteria to payments
  - Contract is a balance between Government economic development objectives and e-Net commercial objectives
  - e-Net offers its cost-effective interconnection services to telecommunications companies, who will provide high-speed electronic communications services to end users.
  - Open networks will enable all operators to offer high-speed broadband services to businesses and citizens in the towns concerned.
  - The project will boost competition and promote broadband in areas which would otherwise miss out

LINK: http://www.enet.ie/
Welsh FibreSpeed Project

Summary
- The Welsh Development Agency is procuring a Next Generation Network in line with its strategic objectives.
- The network will be open access and technology neutral.
- Will act as a catalyst for economic development across Wales.
- The network will meet the developing bandwidth requirements of users at retail prices on a par with the most competitive parts of the UK.
- The network will offer a range of wholesale products to service providers on an equitable, non-discriminatory and fully transparent basis.
- Through conventional procurement the Welsh Assembly will purchase assets and services from bidders, in a similar way to the Irish MAN model.
Welsh Fibrespeed

Contractual Structure

The Welsh Assembly Government will contract with an Infrastructure provider for the rollout of the network backbone and electronics.

Welsh Assembly Treasury

Services would be marketed by a Wholesaler & will likely be contracted on a concession basis to market the services provided by the network on an open access basis.

http://www.fibrespeed.co.uk/en/
Conclusion

• There is clear recognition of the need and benefits of deploying a world class communications infrastructure as a means of supporting economic growth

• There are several procurement and funding options to consider

• There is plenty of precedent to select the optimal solution for individual countries and regions based on key objectives of public and private sector stakeholders

• Future proofing will be critical to driving value from a sizeable investment in the infrastructure

• The highly experienced professionals at Portland Advisers have a strong track record of providing tailored, incisive advice to public and private sector entities seeking to select, procure and/or supply optimal next generation broadband solutions

Thank You
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