Chapter 23 Department of Communications, Energy and Natural Resources

Metropolitan Area Networks

Metropolitan Area Networks

23.1 Metropolitan Area Networks (MANs) are State owned, underground telecommunications infrastructure networks that are located in regional cities and towns. They are loops of fibre optic cable designed to link local access networks to national telecommunications networks. The networks are available to telecommunications wholesalers to enable them to offer high-speed broadband to their retail customers without having to build their own networks.

The MANs Concept

23.2 A Telecommunications Working Group was set up in September 2001 as a subgroup of the Cross-Departmental Team on Infrastructure and Public Private Partnerships. The Group, in a report issued in February 2002, highlighted the critical importance of broadband services and infrastructure to Ireland's competitiveness and to its attractiveness as a location for foreign direct investment. In addition, the working group report also stated that broadband was critical to the achievement of Government regional policy objectives.

23.3 The Working Group concluded that a strategic Government intervention was required to provide the appropriate infrastructure and that the involvement of local authorities as partners at local level was essential.

23.4 In March 2002, the Government decided that Phase I of a programme to address the broadband infrastructure deficit should commence immediately. This involved support for 19 local authority-led infrastructure projects and a national PPP-type process to create an operator-neutral entity to manage and operate these local networks. The Government also noted that Phase II and subsequent phases of the strategy would be contingent on successful implementation of Phase 1. Subsequently, a further eight towns were added to Phase I bringing the total to 27.

23.5 A further Government decision in November 2003 approved a phased investment programme (Phase II) in broadband enabling infrastructure in towns with a population greater than 1,500 which had not been targeted by the market for rollout of broadband services. The Department identified 88 such towns. The cost of constructing networks in those towns was estimated at €80 million. The number of towns was subsequently increased to 94 at an estimated revised total cost of €115 million.

23.6 Phase I networks were built in 27 towns at a cost of €78 million and were completed in 2005. As of 31 December 2008, 60 Phase II networks were under construction in 66 towns. 59 of these have now been completed with the remaining one due for completion in 2010.

23.7 The MANs provide a basic infrastructure platform to attract service providers who would, using their own technologies, offer high speed broadband to end-users. The capacity of the MANs to provide broadband to end-users, while not limitless, is regarded as sufficient to meet any foreseeable local demand.

Audit Focus

The audit examination focused on

- the extent of the take up of the infrastructure provided
- the barriers to full exploitation by service providers
- the extent of revenue being generated and the arrangements to market the service
- the prospects for a payback on the investment taking account of technological developments since the inception of MANs.

Provision of the Infrastructure

23.8 The procurement of the networks is carried out by local authorities. They design the networks, tender for network builders and place the subsequent contracts. However, the Department approves all stages. Design and supervision consultants are engaged by the local authorities to oversee the projects at local level. The relationship between the local authorities and the Department is governed by a Grant Agreement under which the Department funds 90% of the costs incurred by the local authorities.

23.9 The Department has engaged a professional services consultancy to act as Programme Manager to advise on and oversee the procurement phase of the programme during the design, survey and construction stages, as well as the financial aspects of local authority claims processing, certification and reporting.

23.10 Under MANs Phase I, networks of varying sizes were completed at a cost of €78 million in the selected 27 towns by 2005. The networks vary in length from 63 and 58.7 kilometres respectively in Limerick and Cork to 4.5 kilometres in both Kingscourt and Carrickmacross. By 31 December 2008, networks were in place in 64 of the 94 towns covered by Phase II of the programme at a cost of €98 million. Expenditure in 2008 amounted to €25 million.

Management of the Infrastructure

23.11 The networks constructed under Phase I are being independently managed, maintained and operated for the State by a Managed Services Entity (MSE), a private company, which was granted a 15-year services concession contract in July 2004. The Concession Agreement provides that the company will, using the networks, act as electronic communications infrastructure provider to the wholesale market. The Department has granted to the company a licence to have access to and to occupy the infrastructure to maintain, operate and manage each network and to carry out all other actions to allow it meet its obligations under the agreement.

23.12 In return for the concession, the company makes an annual lease payment (a concession fee) to the Department. This comprises a revenue share representing a progressive percentage of the company's gross infrastructure rental revenues subject to annual minimum payments together with a further percentage of the prior year rental revenues, subject to a cap, which will be re-invested in infrastructure on behalf of the Department as agreed annually between the company and the Department. The total fee payments (excluding the minimum amounts and the extent of reinvestment) are therefore contingent on the levels of infrastructure rental income earned by the company. The amounts remitted to the Department are in turn shared on a 50/50 basis with the local authorities which part-financed the MANs. The amount remitted in 2008 was €233,517.

Take-up of Facilities

23.13 Departmental papers reviewed on audit indicate that at the end of October 2008 there were a total of 143 wholesale customers (representing 34 service providers) on the 27 Phase I MANs. 23 of these networks were generating income and 48% of this was accounted for by the three networks in Cork, Limerick and Galway.

23.14 In December 2007, construction of any further MANs was suspended pending a review report and completion of a policy paper on next generation broadband which was being prepared at that time.

23.15 The review which reported in June 2008[76] noted that five of the 27 networks built in Phase I at a cost of €5.2 million had no wholesale customers. A further five networks built at a cost of €9.1 million had only one wholesale customer. It reported that the lack of appropriate baseline data and the nature of the town selection procedures for Phase I meant that a number of inappropriate locations were selected. The review recommended that the Department should fulfil its contractual obligations with respect to construction in Phase II towns but not proceed with any towns for which there was yet no contract in place until such time as a full evaluation had been carried out.

23.16 It was concluded that further investment aimed solely at making use of existing MANs would not be wise. In fact, the review recommended that the cost incurred in constructing Phase I should be considered sunk in the context of future policy decisions in the sector. It also recommended that any future programme should have an open and transparent mechanism by which it can be closed with a minimum of legal and financial implications for the State.

Audit Concerns

The audit examination gave rise to concerns in the following areas

- the low level of take up of the infrastructure and the factors that are impacting on take up
- how Phase II projects will be handled following suspension of that phase
- the prospects of a payback for the State’s investment.

Take-up of the Infrastructure

23.17 The Accounting Officer informed me that the Value for Money Study and Policy Review of the MANs Phase I Programme, commissioned and undertaken by the Department indicated that customer demand was slow in the initial stages, and was also skewed towards centres of higher population. The reasons he cited were

- The cost to end users of utilisation of the MANs was undoubtedly a factor
- Some end users may also not have required the speeds which the MANs provide and were satisfied to stay with existing service providers.
- There was also evidence that Eircom, the dominant service provider, upgraded the quality of its networks in MANs towns. Whilst this was welcome, it would have had an adverse impact on demand for their services.

[76] Value for Money and Policy Review on Metropolitan Area Networks Programme.

23.18 He added that the demand for MANs was stronger in areas of higher population but that in a number of Phase I MANs there had been little or no demand to date. Nonetheless, over the past five years the Phase I MANs had become an important feature of Ireland’s telecommunications network. Thirty-five of Ireland’s telecommunications providers, (with the exception of Eircom), utilised the networks to provide services to their customers. Analysis by the MSE showed that services were being provided by them to an estimated 570,000 end users. These service providers would be less active and in some cases inactive, had the networks not been constructed.

Barriers to Exploitation

23.19 As regards the barriers preventing full exploitation by wholesalers, the Accounting Officer stated that the most significant barriers were the lack of an alternative nationwide network for onward transmission of voice and data and the cost of connecting customers to the networks. Additionally, the service providers’ lack of success in accessing unbundled local loops[77] had been a significant barrier although the situation had improved in this regard.

Handling of the Suspended Phase II Projects

23.20 Following a protracted competitive process the Department, in July 2009, signed a contract for their management by the Phase I MSE. Six MANs had been handed over to the MSE on that date and the remaining 54 (including the one not yet completed) would be handed over within the next 15 months. The Accounting Officer stated that four Phase II MANs currently had customers but stressed that the Phase II MANs had not been marketed pending agreement on the MSE contract.

Future Development

23.21 The Department had carried out an initial evaluation on a further 81 towns with a population in excess of 1,500 persons which had not yet received a network – this included 28 towns originally planned for inclusion in Phase II and 29 towns planned for inclusion in Phase III of the Programme. The main criteria used to evaluate these towns were population, propensity for foreign and indigenous investment and their importance in terms of local and national spatial planning. Account would also be taken of the availability of other broadband services in the appraisal.

23.22 Arising from this initial appraisal, the Government approved a more detailed appraisal of eleven towns using the Department of Finance’s Capital Appraisal Guidelines to guide any decisions on the roll out of a network in each. The appraisal methodology was consistent with the conclusions of the Department’s Value for Money and Policy Review of Phase I.

23.23 He added that Key Performance Indicators based on those used for the ongoing monitoring of the Phase I MANs would be developed for towns recommended for the construction of a network. A mechanism to halt the programme, if deemed necessary, would also be included.

Payback on State’s Investment

23.24 In regard to the prospects of a realistic payback for the State’s investment in the networks, taking account of technological developments since the inception of the programme, the

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77 Connection to local Eircom owned exchanges.

Accounting Officer stated that the primary rationale behind them was to provide rollout of high speed broadband and thereby promote economic and regional development. The IDA was of the view that the MANs had provided their client customers with greater choice, service and better prices when it came to broadband and telephone connectivity and had indicated that a number of its clients, currently located in towns with MANs, would not have located there in the absence of the networks. He noted the need for networks with resilience and spare capacity in order to attract foreign and indigenous investment and pointed to IDA figures which illustrated that MAN enabled towns had increased their share of Foreign Direct Investment from 24% before MANs became available to over 89% in 2007, thereby helping to fulfil the Government policy goal of more balanced regional development. These factors needed to be considered in the context of deciding whether or not a MAN is appropriate in any particular town.

23.25 With regard to payback on the State's investment in MANs he informed me that in accordance with the revenue sharing provisions of the agreements with the MSE for Phase I MANs, the minimum annual payment for 2008 was €245,000, €325,000 for 2009 and from 2010 onwards €845,000. He added that, in addition, the MSE must fund enhancements to the existing MANs from its own revenue, even though the infrastructure would remain in State ownership and that in 2008, the MSE had invested €560,000 in network enhancement. Taken together, during 2008, the State's investment in Phase I of the MANs resulted in a return of €805,000 through revenue sharing and network enhancement.

General Observations of Accounting Officer

23.26 The Accounting Officer summarised the current and future role of MANs as follows

- the networks have played an important role in incentivising the roll-out of broadband, both directly and indirectly, in Ireland since 2002
- the MANs facilitate competition in the MANs towns. Eircom, the dominant entity in the telecommunications market, had reacted to competitive threats but such competition has had positive impacts
- the MANs have had a positive impact in terms of driving foreign direct investment into regional cities and towns
- the rolling out of future proofed networks would always, in the early years of such networks, feature excess capacity, which could be viewed as under utilisation but was consistent with an approach of putting infrastructure investment in ahead of demand
- developments at international and EU level highlighted Ireland's vision with the early deployment of fibre under the programme. A variety of recently published documents were evidence that the MANs were a solid investment in the right technology whose time has come.

23.27 He stated that Government's policy objectives in the electronic communications market were not just broadband availability but also its quality and speed. Future interventions by the State in broadband would be governed by the consultation paper "Next Generation Broadband - Gateway to a Knowledge Ireland" which was published in June 2009. This paper underlined the importance of investment in high speed next generation broadband networks. There was a very clear trend in the demand for bandwidth which underpinned the need for optical fibre deeper in the service providers' networks. The MANs were well placed to meet that emerging demand.

23.28 The consultation paper indicated that this investment would primarily be undertaken by the private sector but that there were important roles for the State both in relation to appropriate regulation and for targeted investment.

23.29 The conclusions of the June 2008 review report had been brought to the attention of Government and the recommendation and evaluation criteria set out in it would be taken into account in any decision by Government to construct new networks.

23.30 The Department was satisfied that in relation to networks already constructed the two MSE agreements into which it had entered would promote the viability of the existing network.

Conclusions

The total State investment in Phases I and II of the MANs programme amount to almost €180 million.

The €78 million expended on the construction of Phase I MANs and the expenditure of approximately €98 million on Phase II prior to its suspension are considered to be sunk costs and further investment aimed solely at increasing the usage of existing MANs is considered unjustified. The Department has confirmed that the June 2008 review recommendations are being implemented for current and future projects.

Customer demand has been weaker than anticipated. While it is stronger in areas of higher population, in the case of approximately one third of Phase I networks, there has been little or no demand to date.

The lack of an alternative network infrastructure connecting MANs to wider networks prevents full exploitation of the MANs by the MSE and the contracting service providers.

The slow growth in customers and revenue sharing agreements in place with the MSE, suggest that there is little prospect of a significant monetary payback for the State’s investment in the short to medium-term.