STUDY

April 2005

PUBLIC INTERVENTION in BROADBAND MARKETS

IRLANDE
Irish MANs

Study conducted by the research firm Cabinet Analysys
on behalf of l'Autorité de régulation des télécommunications
and Caisse des Dépôts et Consignations

Caisse desDépôts

ART Autorité de Régulation des Télécommunications
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NOTICE

Autorité de régulation des télécommunications (ART) and *Caisse des Dépôts et Consignations* (CDC) have called on the firm Cabinet Analysys to conduct a study on the Irish MANs programme.

The study will be made public in a concern for transparency and information.

The study's conclusions are the sole responsibility of the firm and do reflect in any way the opinions of ART or of CDC.

Irish MANs

Under the MAN programme, the Irish government has deployed metropolitan fibre network infrastructure in 19 cities and towns in Ireland. A second phase of this project has been approved and a further 91 towns with more than 1500 inhabitants have been identified for the construction of a fibre MAN during 2005 and 2006.

Background information

► *Strategic rationale*

The Irish government believes that eircom was not active enough in the broadband market in Ireland to reach the target it had set for the country in 1998 to be in the top 10% of broadband in Europe. It perceived the market had failed to deliver on a very important public service, which it considers equally important to other infrastructure projects like roads or bridges.

► *Strategic objectives*

The main strategic objective of the project was to address regional imbalances in the provision of broadband. Impacts are expected on a range of fronts, such as education, business and social benefits.

One objective of this project is that the cost of telecoms infrastructure is similar across all regions of Ireland. Prices for backhaul services are expected to be the same

all over the country. Under this project, the government does not regulate the wholesale prices but it expects that market forces will establish some of the best prices for these services in Europe.

► *Project framework*

Construction of the network infrastructure was carried out by the government and the network assets remain under public ownership. However, management of the networks has been contracted to the private sector for 15 years through a management services entity (MSE) which was appointed in July 2004.

Description of selected solution

► *Private sector role*

Private contractors have played a role in this project at two different stages:

- as the contractors appointed to build the network infrastructure
- as the contractor appointed to manage the network infrastructure.

The private sector contractors appointed to build the infrastructure were local companies that were selected by the local authorities.

The private contractor selected for the management of the network infrastructure, e-net, was chosen by the DCMNR following standard public sector procurement processes and a long contract negotiation lasting for a year. In the initial six months, e-Net above was retained on a preferred bidder status and the remaining six months were required to complete the negotiations of the contract.

The DCMNR claims that when it was drawing up the plan for the project, there were extensive consultations with the industry. However, there was a lack of enthusiasm about broadband at the time. Only when it announced that funding was available for this project and started the process, did eircom request the funding to build the infrastructure itself. However, it was decided that eircom would not be able to achieve the objectives of this project as it would not be able to provide operator neutral services on an open access basis.

► *Business model*

The MAN programme involved an investment of EUR64 million, of which 90% was provided by the DCMNR (part funded by the EC under the National Development Plan) and the remaining 10% was provided by the local authorities.

Local authorities provided detailed proposals for network construction along their preferred routes. The required budgets were approved by central government. In Limerick for example, Shannon Broadband costed the construction of the network at EUR6.5 million. It carried out a detailed return on investment analysis regarding the EUR650 000 it needed to provide itself for the network construction and estimated it would get a return on this investment in 20 years based on the proposed revenue- agreements which the DCMNR would put in place with the MSE. There is an agreement with the government to share the revenue on the sale of dark fibre through both fixed and variable fees. The fixed fee entitles local authorities to get a return on their 10% investment in the networks. Central government will only get a return once the threshold identified for local authorities has been exceeded, but the return for central government will be re-invested in the network. e-Net is entitled to off-set this revenue-share with any investment it makes in the network. For example if e-net spends EUR1 million on network investment and the government is entitled to EUR2 million under the revenue-share agreement, e-net will only pay the government EUR1 million. The revenue share agreement also covers limits on profitability.

However, for central government return on investment has only been considered as an ideal scenario and not as the main objective of this project. The government's primary aim is to develop the infrastructure required to provide public services.

The business plan for e-Net assumes that initially about 80% of its revenues will come from sales of dark fibre, but it expects that over 2-3 years this will shift and the sale of wavelengths will represent eventually 80% of the total company revenues.

e-Net has not been required to pay a concession fee to operate the network but it has to take all the commercial risk. All operational expenditure is paid for by e-Net. The company estimates that its required financial investment will be of EUR15 million (this has been provided by equity and bank facilities). A total of between EUR5-6 million in cash is planned for the first year of operations and the plan assumes the company will be cash positive after the third year of operations.

e-Net believes that the four big cities will provide the majority of its income and will ultimately be the ones that will be most profitable. Its expected operational expenditure for the smaller towns ranges from between EUR20 000 and EUR30 000 per year.

► *Role of government agencies*

Both the DCMNR and local authorities have been involved in this project. Because of their local knowledge, local authorities were given the role of managing the construction of the networks. They tendered the contracts for this work individually so that local companies which were already involved in other type of construction work such as water or electricity could apply.

The DCMNR also held negotiations with local authorities on the route of the networks. These ranged between 6-32kms in length. The DCMNR established a formula to estimate the length of the network in each case based on the available funds for each of the cities.

The DCMNR wrote the contracts for the build-out and passed these on to local authorities. A set of detailed guidelines was also available from central government regarding all technical, financial and operational issues concerning the construction.

During 2001 Shannon Development completed a detailed review of the telecommunications infrastructure in the Shannon Region with a particular focus on the availability of broadband connectivity. As a result of this review, significant supply side deficits were identified. Subsequently, Shannon Development developed a strategy and action plan to address these deficits. This action plan included contributing a strong regional perspective to the ongoing national debate on broadband issues, as well as undertaking direct actions to address market failures identified in the region. The focus of these actions were to attract new carriers, infrastructure and services into the Shannon region. The ultimate objective is to facilitate the delivery of pervasive broadband for all users in the Region at affordable rates.

All the local authorities, the Mid-West Regional Authority and business associations in the Region subscribed to this strategic approach to addressing the Broadband deficits in the Region. The business model established to deliver this strategy has been the establishment of Shannon Broadband Ltd. The shareholders in Shannon Broadband are :

- Clare County Council

- Limerick City Council
- Limerick County Council
- Offaly County Council
- Tipperary North County Council
- Shannon Development

This company has considerable resources at it's disposal through each of the Local Authority Managers who are Directors of the company . This company has brought all the partners together in one cohesive structure with the common purpose of addressing the broadband deficits. Each organisation is not only comiting to the vision but is also contributing financial and other resources to the company. It is a real and active partnership commited to the Region and the resolution of the broadband problem.

► *Financial requirements*

The Irish government funded 100% of the network construction totalling EUR64 million, of which 90% is provided by the DCMNR and the remaining 10% by the local authorities. Funds from the DCMNR include monies from the EC under the National Development Plan 2000-2006 (these funds are managed by the finance minister).

The DCMNR asked the EC at an early stage for approval. Government officials visited Brussels to explain the project at every stage of its development. The government was able to go beyond the threshold of 55% imposed by the EC as a limit for state aid, as the infrastructure remains in state ownership (even though it is managed by a private contractor).

► *Economic and technical specifications*

e-net is required to provide wholesale services at layer 1 and 2 only and all of the MANs networks are available on an open access basis - including to eircom.

e-Net is free to choose its tariffs based on market prices, as There are no explicit price caps in the contract. It remains to be seen how aggressive eircom will be in its pricing, but there is not much network duplication with the possible exception of Cork.

e-Net has an agreement with ESB to provide end to end services. The company is encouraging as many long distance operators to co-locate at its centres, so that there is a competitive service available to all. Its agreement with ESB is non-exclusive and the company has also reached similar agreements with ESAT BT, for example.

► *Project design*

The routes of the networks were established in consultation the local authorities. They sought to pass business parks, schools, hospitals and other government buildings whenever possible. Colocation centres were built across the street from eircom exchanges when possible.

All materials for the networks were bought centrally by the government to achieve better prices. e-Net has the responsibility for maintaining the equipment and updating it as necessary. All networks have 48 fibres.

e-Net's network operations centre (NOC) is located in Limerick and it operates from 9-5 on business days (at other times it switches to an outsourced NOC). Equipment for the NOC is from Tellabs.

If there is a requirement for the extension of the fibre network to reach a particular customer, e-Net would charge clients at cost plus 20%. Civil work is done by a company called TE Services. 1 shows the locations of the cities in which a MAN has been built for phase 1 of the project.

1: *Map of the locations of the Irish MANs [Source: e-Net, 2004]*

► *Regulatory and legal issues*

Because network infrastructure remains under government ownership, there are no legal requirements to comply with state aid regulations for this project. The MSE has been required to be operator neutral and is obliged to provide wholesale services to all interested operators.

All tenders for the construction and management of the network followed public sector standard procurement procedures.

e-Net has notified ComReg as a wholesale operator, as required by law.

Impacts and feedback on implementation

Only two months after the MANs were turned on, most of them already carry commercial traffic.

Competitors have also started to change their behaviour. Following the launch of the MANs, eircom launched an Ethernet product for enterprises. The incumbent is also marketing heavily its DSL service to pre-empt the emergence of competition through LLUB operators using the MAN infrastructure. In fact, operators like Smart Telecom have announced they will use the MAN infrastructure for backhaul from the local exchange to offer unbundled DSL services in addition to services to corporate customers.

The Economic and Social Research Institute is watching closely to see how the programme develops. It aims to measure any tangible impacts. The DCMNR itself has not developed any metrics to carry out this analysis.

The next phase of the MAN programme is already under way. The objective is to build 91 MANs in smaller towns of more than 1500 inhabitants. Total funding of EUR105 million over three years is available for this phase of the programme. A similar funding structure to the previous phase is provided, with central government providing 90% of investment and local government supplying the remaining 10%. The central government investment includes funds from the EC as per the previous phase.

Once these MANs have been constructed, they will be transferred to e-Net for operation under the same contract that was signed for the first phase. All other conditions will remain the same as the infrastructure will again remain under government ownership.