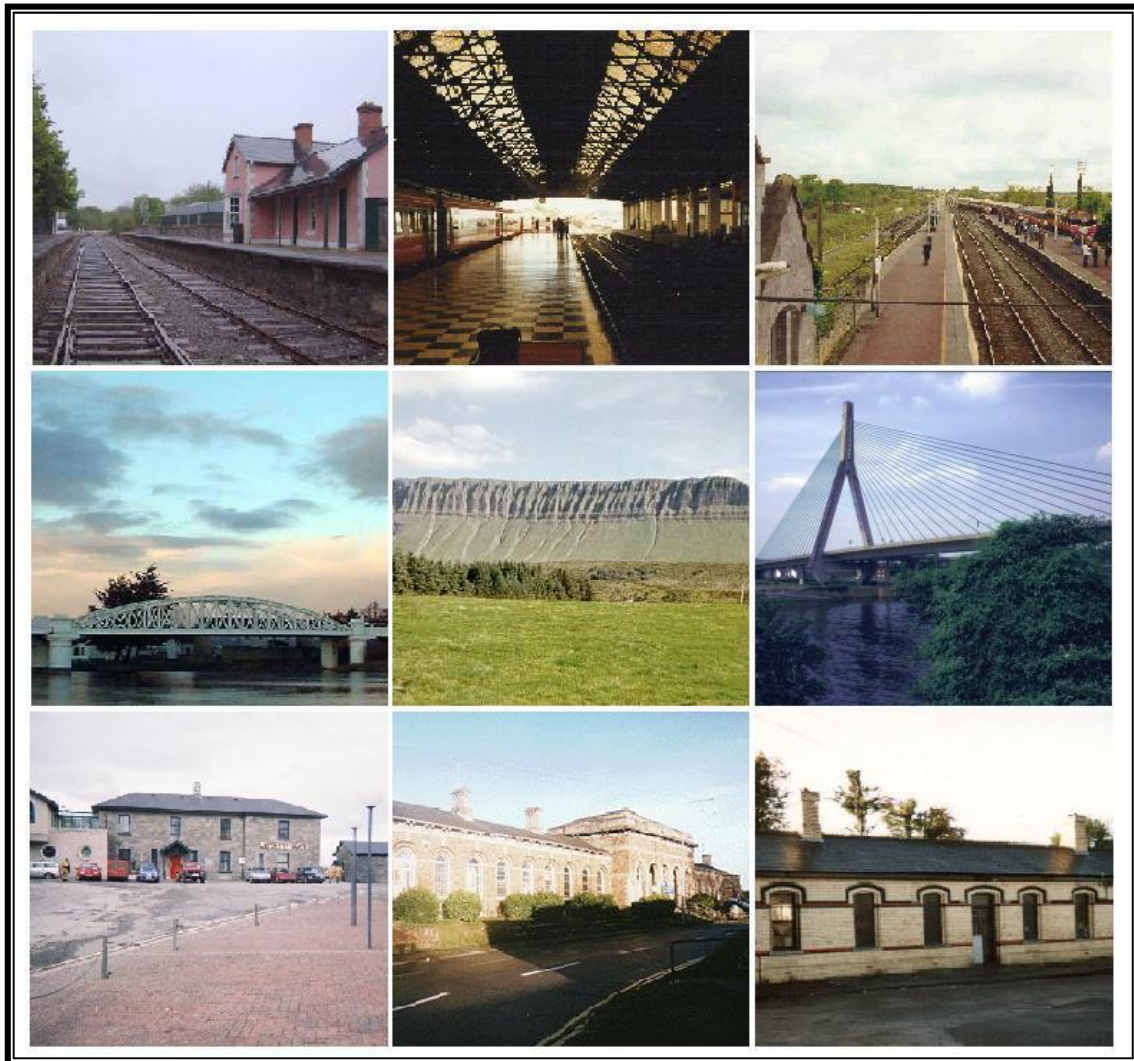




INTERCITY NETWORK EXTENSIONS PROGRAMME



By : Brian Guckian
Rail and Integrated Transport Researcher
Email railprojects@eircom.net

What is NEXT?

The InterCity Network Extensions Programme, or NEXT for short, is a development mechanism for enlarging the current Iarnród Éireann rail network between major settlements, and is intended to be the rail component of the National Transportation Corridors Framework derived from the National Spatial Strategy (NSS). It specifically deals with inter-urban rail lines; those outside this category come under Regional and Local / Commuter Rail (including Light Rail).

Essentially, NEXT re-opens a number of selected routes to InterCity traffic, and establishes new dedicated connection points. Such lines can then also accommodate Freight, Regional and Local / Commuter services. NEXT also involves a limited extent of “new build” rail links.

The key to NEXT is inter-connectivity. Unlike the present “radial” system (Fig. 1), NEXT permits “cross-radial” journeys starting from points on the radial lines, and also incorporates some new “radial” schemes (Fig. 2). Consequently, NEXT takes the best features of both “radial” and “cross-radial” lines and combines them in an expanded InterCity passenger and freight framework.

Current Situation

Rail campaigners and others have consistently demonstrated how the present network is Dublin-centred, with investment and development following this policy. Current national planning trends, passenger demand and other factors are often cited in justification. Routes are termed “radial”, which conveys a sensible, semi-scientific approach. Significantly, the phrase “non-viable” is often used with the phrase “cross-radial”, thus creating a negative association, and undermining attempts to develop these lines.

Radial development has been encouraged by a centralised governmental system (in the sense that local taxation powers remain unlikely at this time), and indeed the centralisation of transport management structures on Dublin. Coupled with a Dublin-centric national media this adds up to a hostile environment for regional rail services outside of the “Radial” lines.

Economic Approaches

A difficult factor in the mix has been the very limited and narrow economic approach to rail, and the prevalence of market-based thinking that uses simplistic and inappropriate analyses. This so-called “baked beans” approach evaluates rail purely in narrow income-and-expenditure terms, ignoring the more complex role it has to play in the environmental, social and economic spheres, and also very subjectively defines the income and expenditure parameters. Regrettably, there are only a handful of studies that challenge this predominant economic approach, and curiously, many of the arguments put forward against regional inter-urban rail development are not applied to complex motorway projects often running through the same areas.

Cont.../

Rail development has also been hampered by a history of line closures, which resulted mainly from application of misguided economic analyses as mentioned above. This has promoted a false perception that railways “don’t work” and that untrammelled promotion and use of the car and lorry is the answer to all transport problems. The long decline of railways since the Second World War has also caused the definition of “transport” to be narrowed, so that many professional organisations, freight forwarders, construction companies, and other business concerns view transport almost entirely in terms of the road, sea or air modes.

Consequences, and the InterCity Brand

Given these factors it’s not surprising that the current IÉ “InterCity” brand has had its literal meaning distorted, so that it no longer refers to linking all Irish towns and cities, but rather only specifically connecting large towns and cities around Ireland to Dublin. This explains the major anomaly of lack of direct rail connections between Sligo, Galway, Limerick, Cork, and Waterford, even though such connections existed in the past. It also demonstrates the faulty logic of previous attempts to close routes such as Limerick – Waterford and Limerick – Ballybrophy. Such moves are a predictable outcome where a rail network has been viewed solely in terms of lines leading to and from one point, and this dysfunctional standpoint both opposes balanced regional development and retards further development of the network.

However, with NEXT, the positive elements of the InterCity brand – comfort, speed, reliability and service, can be used advantageously in a re-defined InterCity system. Also, the advent of the higher quality regional InterCity railcars in the next year or so should show what can be achieved on the cross-country InterCity routes.

National Spatial Strategy

The National Spatial Strategy (NSS), produced in 2002, represents the first attempt in the history of the state to put in place a comprehensive and sustainable planning framework for national development. A keystone of the project is the recognition that continued Dublin-centred expansion at the expense of the rest of the country is unsustainable for social, economic and environmental reasons. Central to the NSS approach therefore is the designation of key urban centres as “Gateways”, with neighbouring smaller settlements designated as “Hubs”. This immediately eliminates the Dublin-centric approach, and creates new connections between urban areas that had previously solely been defined in terms of their links with Dublin. For transport, the NSS also creates National Transportation Corridors (NTCs).

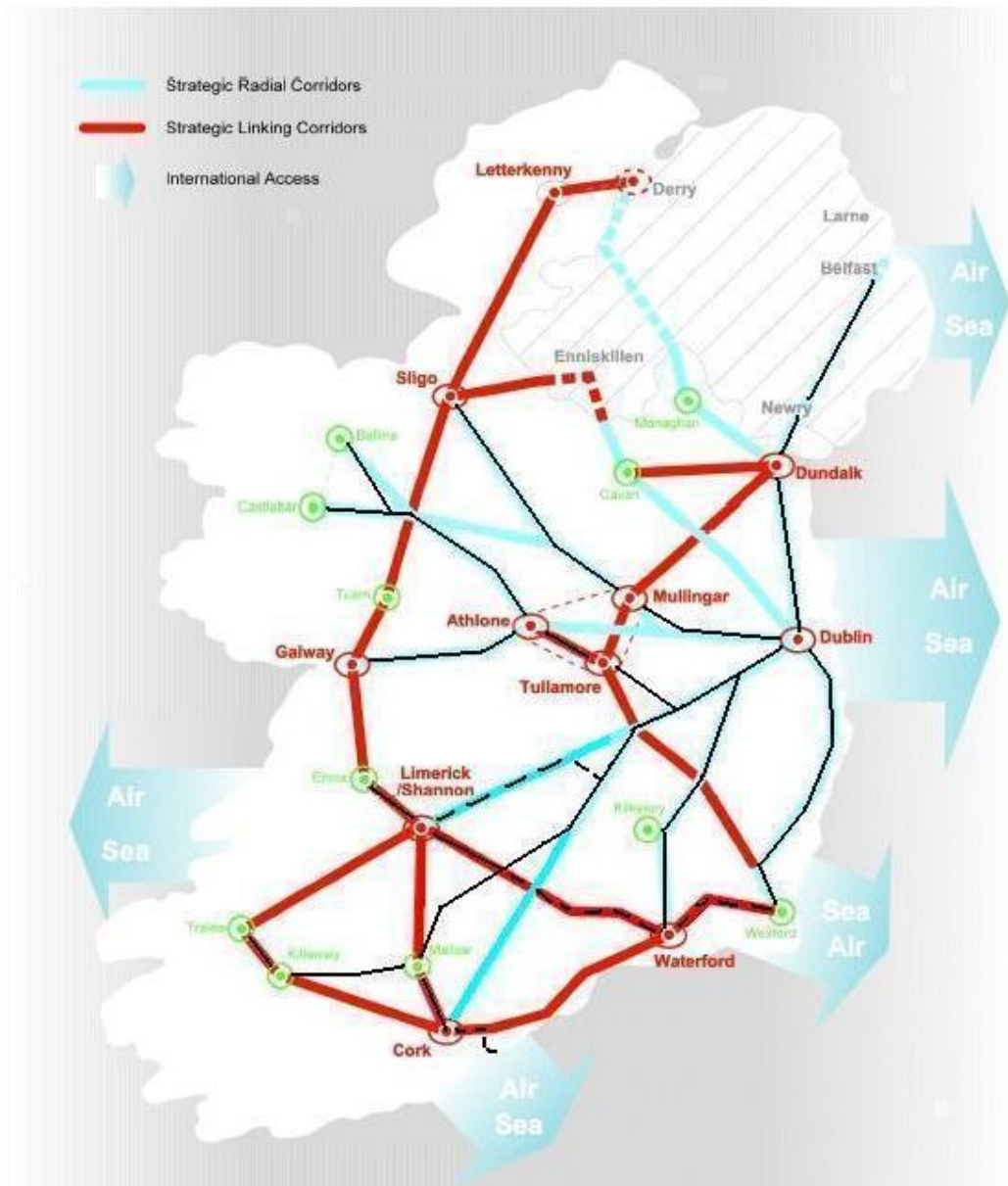
New Thinking for Transport Solutions

It follows that this new way of thinking has implications for rail development, driven as it now is by the urgent need to reduce vehicle emissions, a growing awareness of its key role in regional development, the need to minimise the environmental impact and number of motorway schemes and also the pressing need to reduce dependency on the private car. *InterCity Network Extension will lead to reduced “inner city” congestion.*

It can be seen from Fig. 1 that the current IÉ InterCity network follows the NSS Strategic *Radial* Corridors, fitting in with the pattern described above. The NEXT programme “fills the gaps”, as it were, to also incorporate the NSS’s Strategic *Linking* Corridors.

(Continued on Page 8)

NSS TRANSPORT FRAMEWORK MAP WITH CURRENT IARNROD EIREANN INTERCITY NETWORK SUPERIMPOSED



Source: National Spatial Strategy

Fig. 1 Iarnród Éireann InterCity Network in 2004, overlaid (black lines) onto NSS National Transport Framework. (Dashed lines indicate local / regional services)

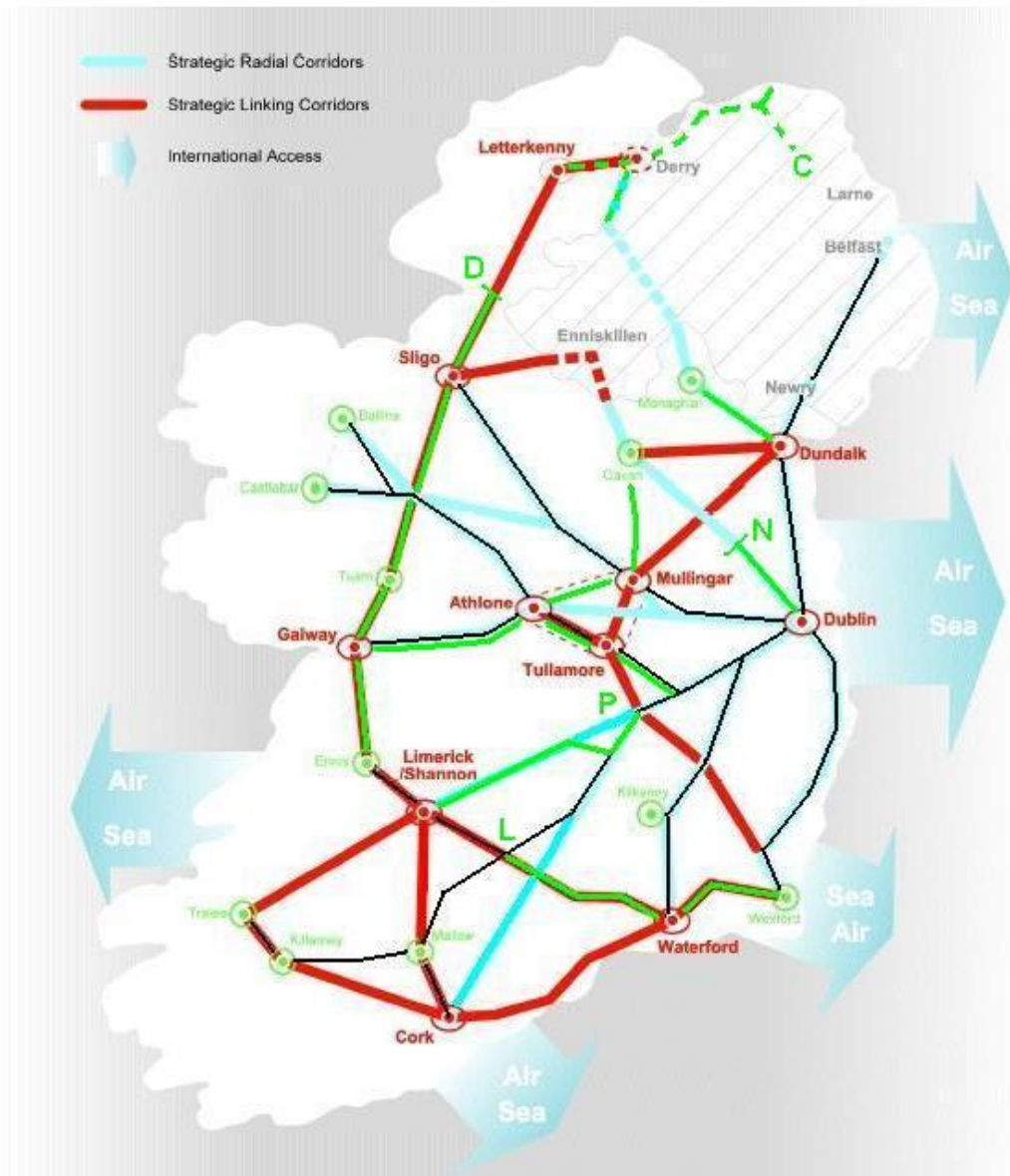
Notes :

- Internal NI Railways lines not shown
- Timetabled connectivity present only at Ballybrophy, Limerick Junction and Mallow

NSS TRANSPORT FRAMEWORK MAP WITH NEXT PROGRAMME SUPERIMPOSED

C = COLERAINE; D = DONEGAL; L = LIMERICK JNCT; P = PORT LAOISE; N = NAVAN

Dashed Line Indicates Cross-Border NEXT Route



Source: National Spatial Strategy

Fig. 2 InterCity Passenger / Freight Extensions (NEXT) based on the NSS (Extensions in Green)

Notes :

- Internal NI Railways lines not shown
- Introduces connectivity at multiple locations (see Fig. 4)
- All NEXT routes use former rail alignments either wholly or in part
- Accommodates both passenger and freight traffic
- Slight differences between NEXT and NSS due to historical layout of rail network
- NSS routes not covered by existing lines & NEXT could be evaluated for Light Rail

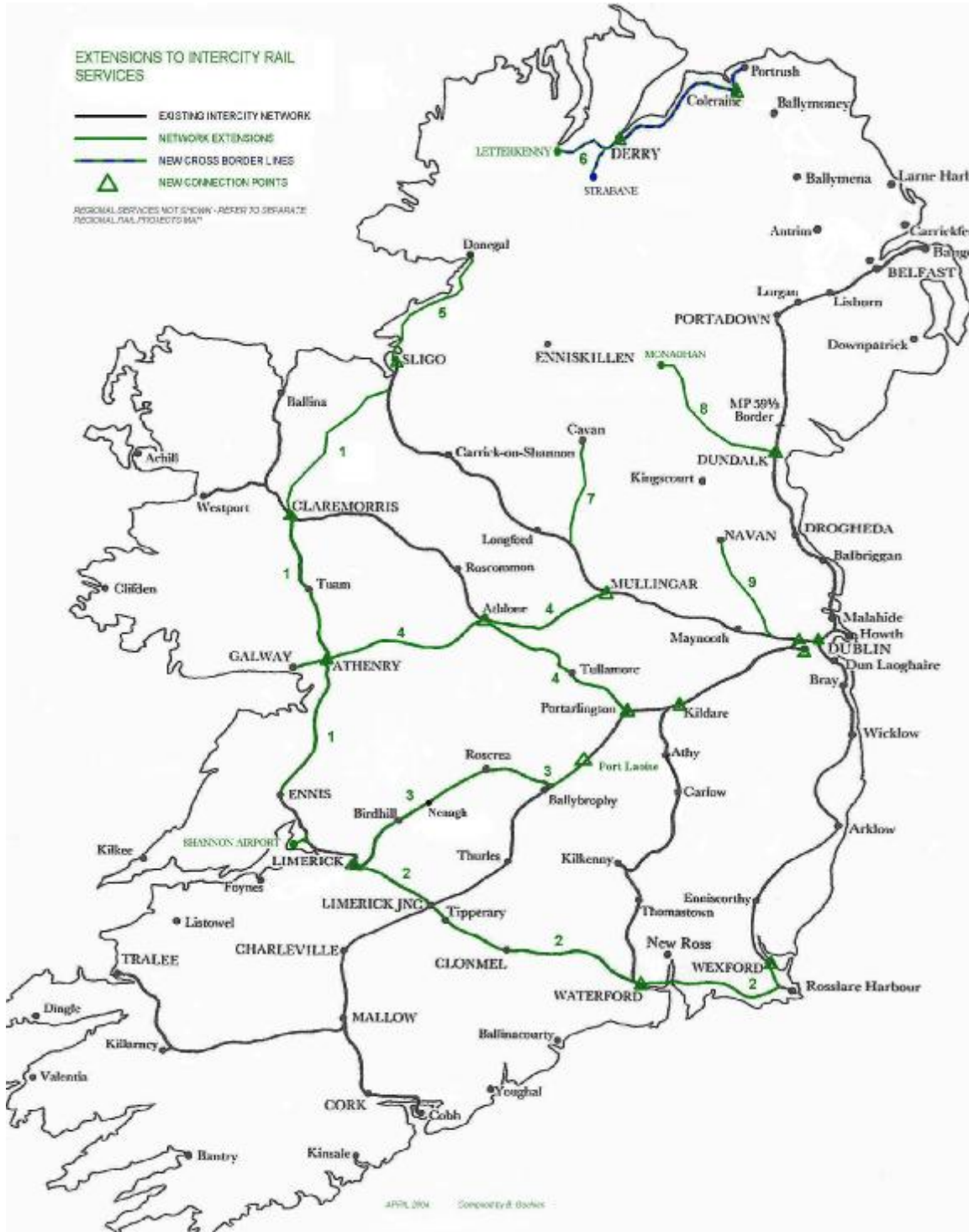


Fig. 4 NEXT Passenger & Freight Programme (Geographical)

(Internal NI Railways lines not shown; new connectivity points indicated)

Cont.../

(Cont. from Page 3) InterCity Rail Network Extension

More sophisticated economic and financial appraisal tools, as well as the application of technology to reduce costs and improve efficiency and performance have been critical in bringing about new possibilities for rail development and wider re-development in Ireland*. In this environment, extension of the present IÉ InterCity network becomes a realistic and achievable goal.

Route details

The 9 qualifying NEXT routes serve large catchment areas, **and only those meeting an investment recoupment period* of 10 years or less were selected:**

	ROUTE	RPES‡ Weeks	INVESTMENT €M	RC Yrs	IB/Yr €M	Km
1	Sligo to Galway & Limerick (WRC)	7	250	2	101.0	208
2	Limerick to Waterford & Wexford	10	366	4	88.5	182
3	Limerick to Nenagh & Port Laoise	6	211	5	40.8	84
4	Mullingar & Portarlinton to Galway	12	471	4	136.4	187
5	Sligo to Donegal	8	307	10	31.1	64
6	Carrigans to Letterkenny	3	125	10	*25.3	*52
7	Mullingar to Cavan	5	187	7	28.2	58
8	Dundalk to Monaghan	5	189	7	27.2	56
9	Dublin to Navan	9	321	9	35.0	48
	TOTAL		2427	-	513.5	939

‡ Roads Programme Equivalent Spend index, measured in weeks

* Part of larger NW Rail cross-border project

NEXT is only concerned with large inter-urban settlement connection, so that route appraisal and selection reflects this. This by no means limits rail development, and indeed NEXT connection points are also in many cases the starting / finishing points for Regional and Local / Commuter services.

Design and Engineering

One of the most exciting aspects of the NEXT programme is the opportunity to incorporate a very wide range of technological advances in railway construction, from sustainable cost-efficient station design, to new signalling technologies to new freight handling methods. Likewise, introduction of a cross-network smartcard (e.g. the “NEXTCard”) would guarantee very high levels of patronage from day one.

Engineering would also address issues such as minibus, cycle and pedestrian access to stations, passenger comfort, energy efficiency / sustainability, and so on.

In short, NEXT allows for a complete, holistic approach to all aspects of the design and engineering process across the chosen routes.

Rail Development Zones (RDZs)

Importantly, NEXT also creates Rail development zones (RDZs) located at strategic points in the network, and designed to safeguard valuable railway land from private development. RDZs would mainly protect currently “mothballed” lands around stations, e.g. at Dublin, Cork and Galway, for re-use in the future. This is especially critical in the context of expanded and re-designed freight services, and is also relevant to provision of new rolling stock maintenance depots.

Cont.../

Funding

NEXT is part of the proposed National Transportation Corridors (NTCs) framework which balances funding between road and rail projects, as opposed to the largely roads-based funding approach used up until now. It's important to stress that this frees up significant resources and should be able to come from within the existing transport infrastructure budget. Relevant bodies have now been circulated on the NTCs†.

* Please refer to "Irish Rail Development – New Economic Analyses" by this author

† Please refer to "National Transportation Corridors" by this author

Implementation

Working under the overall National Transportation Corridors umbrella, NEXT would be implemented by a dedicated project team set up within Iarnród Éireann. Carrying out all the work in-house keeps costs under control and represents best value for money for the Taxpayer.

Also, productive community involvement could be achieved through the holding of Workshops in various locations along the NEXT routes. This approach has worked very successfully in other projects¹ and is a worthwhile step forward from the current, sometimes adversarial, "public consultation" approach².

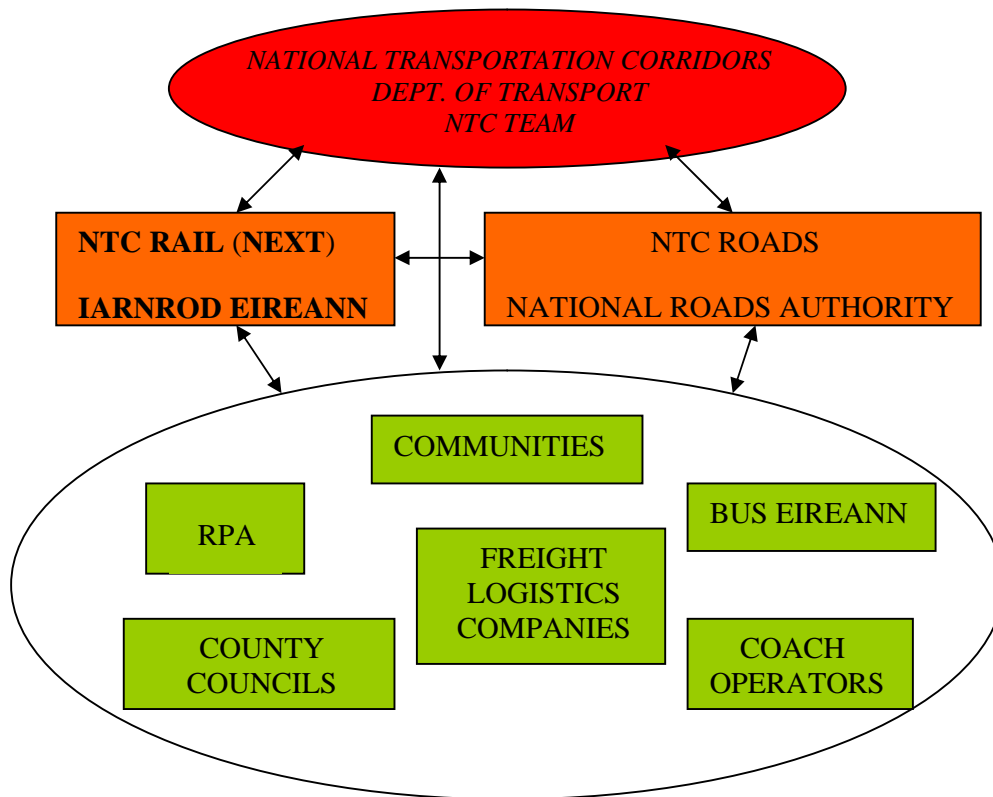


Fig. 5 - NTC Work Model showing how NEXT is situated within the framework, and showing the basic relationships structure between the participants and stakeholders

Conclusion

NEXT is an integral component for implementation of the NSS. With the growth in car usage in Ireland expected to be in the region of 140% in the next 10 years (more than double the expected increase for the rest of Europe) if it continues unchecked, the development of new roads will be unable to maintain pace. An alternative and greatly enhanced form of public transport and freight carriage is therefore essential.

NEXT may not provide all the answers to sustainable growth on its own, but it is an essential ingredient that will assist Ireland to meet many future requirements that affect ways of life. It will assist business not only by improving public transport and rail freight links between main towns and cities, but the resulting reductions in road traffic will help those whose journeys cannot be made by rail. It will improve the quality of life as rail is more environmentally friendly and it will play its part in the reduction of road accidents and the growth of HGV lorry movements. *In short, the NEXT programme, as part of the broader National Transportation Corridors framework, is an essential component for the future growth of Ireland.*

Further Information

All nine NEXT projects are individually documented, with this document acting as an overview.

References

¹ Spencer Dock Development Scheme, 2003;

² Oral hearings, etc. into projects are often reported to be confrontational, etc.

Note

All maps, diagrams and alignments detailed in the individual NEXT project documents are indicative only, and are not to be interpreted as final.

Compiled by B. Guckian V5 16/3/2005

With thanks to T. Casterton

NEXT Programme Summary

- ü **NEXT - Intercity Network Extensions - is a mechanism that permits realistic expansion of the Irish rail network in line with the National Spatial Strategy (NSS), and with the current need to move away from a largely roads-based approach to transport development in Ireland**
- ü **NEXT is all the more important in the light of new climate change data, and in the context of balanced regional development.**
- ü **NEXT will greatly reduce Ireland's exposure to Kyoto Protocol emissions penalties**
- ü **NEXT is part of the larger National Transportation Corridors framework, which embeds "bi-modal" road and rail development, and has very significant environmental, financial and social benefits**
- ü **The NEXT appraisal methodology uses new cost-benefit techniques which incorporate the indirect benefits of the rail mode into the evaluation process**
- ü **An "all-purpose" NEXT railway design, carrying several types of passenger and freight traffics, will maximise direct receipts**
- ü **New technologies such as Smartcard integrated ticketing and MiniModal cargo handling, and local connections to stations, will permit "door-to-door" passenger and freight movements, radically boosting ridership and re-introducing freight to the railways**
- ü **NEXT creates Rail Development Zones (RDZs) around major stations and other locations, protecting them from private development and safeguarding so-called "mothballed" lands needed for new freight facilities and maintenance depots**
- ü **Adoption of NEXT will significantly contribute to Ireland's growth and competitiveness in the years ahead**
- ü **The total required investment for the 9 qualifying NEXT lines is estimated at €2.427 billion; this will be offset by total calculated benefits to the Irish economy and society worth approx €0.514 billion per annum**
- ü **The NEXT total project / kms figure comes in at 939km, or 587 miles**