

Large Scale Infrastructure Achieving Cost Effective Delivery

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Key Requirements

- **Maximise use of existing assets**
- **Anticipate problems**
- **Review proposals as circumstances change**
- **Break major projects into bite sized chunks, if at all possible**

Key Requirements

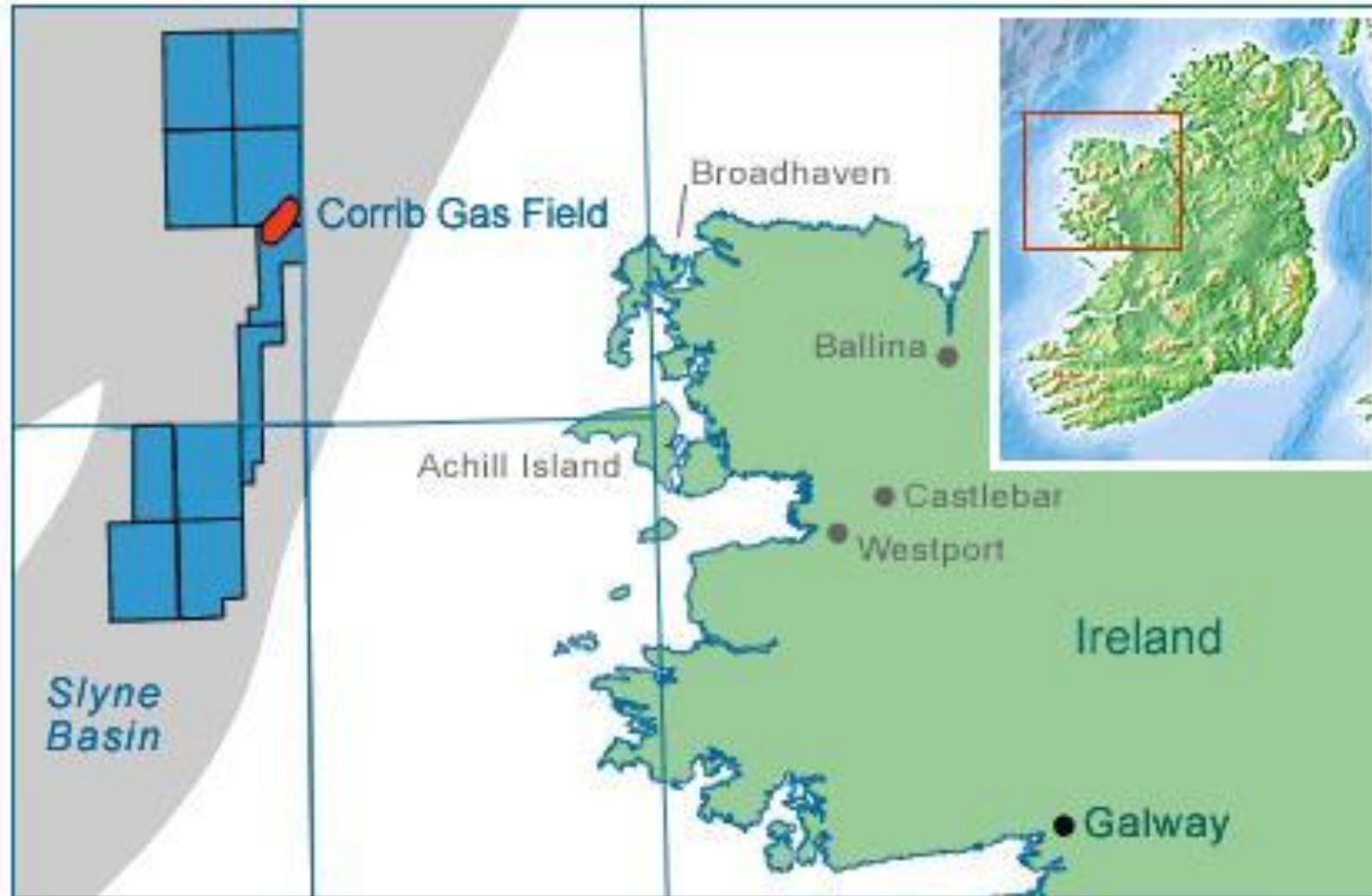
- **Maximise use of existing assets**
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- **Always remember that an Engineer**
‘should be able to do for 50c what any fool can do for a €’

Maximise the use of Existing Assets



Anticipate Problems



Corrib Field Development Options and Capex Estimates, Feb 1999

Landfall	Offshore Pipeline		Onshore pipeline		Connection Point	Estimated Total Development Capex £m
	km	Dia	km	Dia		
Blacksod Bay	85	14-18"	295		Network Dublin	
Killala Bay	135	18"	230		Network Dublin	460
Doughmore Bay	205	20"	75-125		Network North Cork	434
Doughmore Bay	205	20"	20		Moneypoint	362

Potential Gas Treatment Site



History of Lattice Steel Transmission Line Construction in Past 30 Years

Circuit	Design	Length	Called for in	Completed
Aghada-Rafeen	220kV SC	18km, new	1986	2011, incl. significant cable
Flagford-Srananagh (Carrick on Shannon-Sligo)	220kV SC	55km	1992	2012
Cashla-Oldstreet	220kV SC	48km	Late 1990's	2003
Glasmore-Stevenstown (Swords-Balbriggan)	110kV DC	18km	2003	Not to Date

Review Proposals as Circumstances Change

The Grid Link Project

Report for the Independent Expert Panel

September 2015

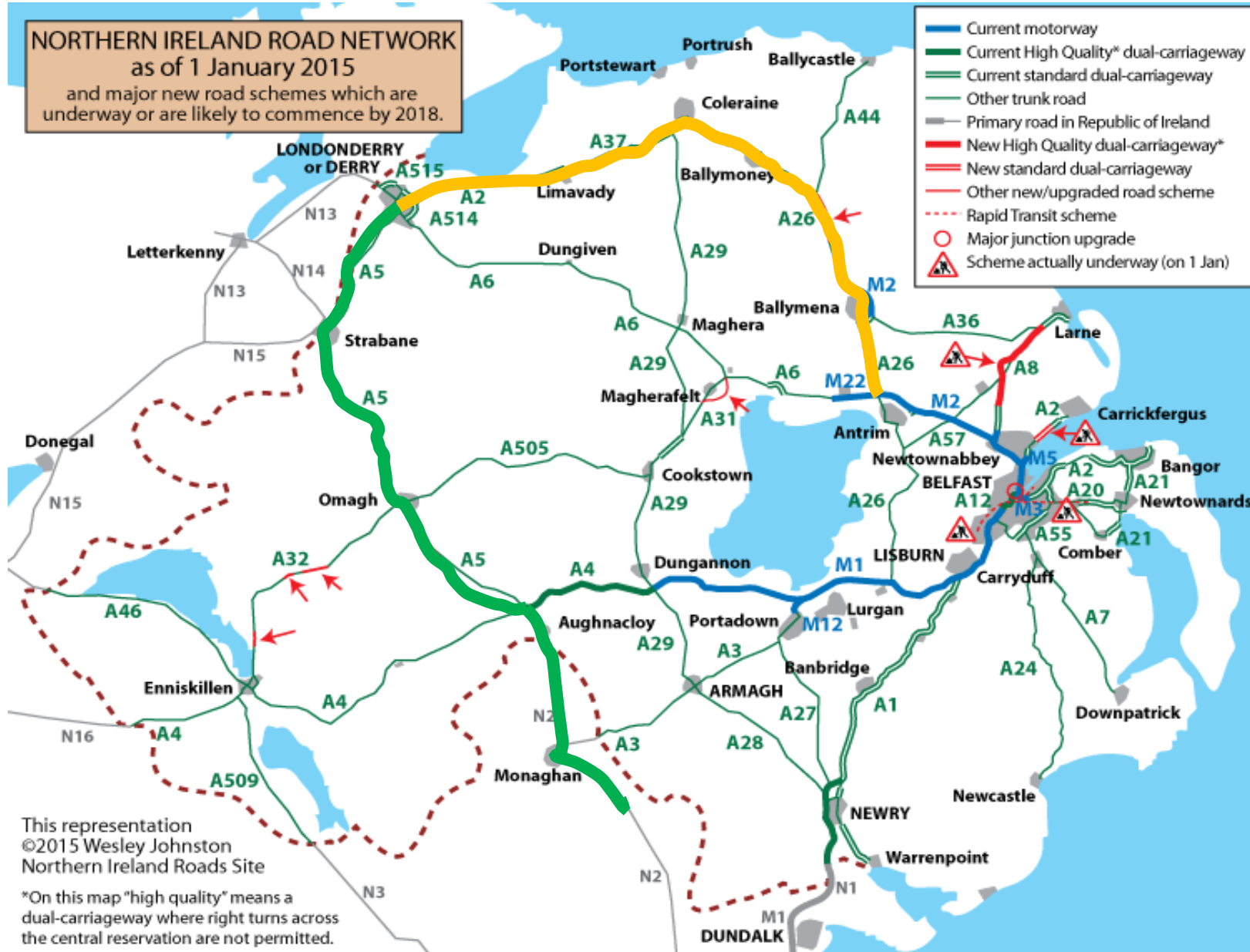


IS THERE A TECHNICALLY ACCEPTABLE
BUT LESS COSTLY AND LESS CONTENTIOUS
ALTERNATIVE TO
EIRGRID'S GRIDLINK PROPOSAL ?

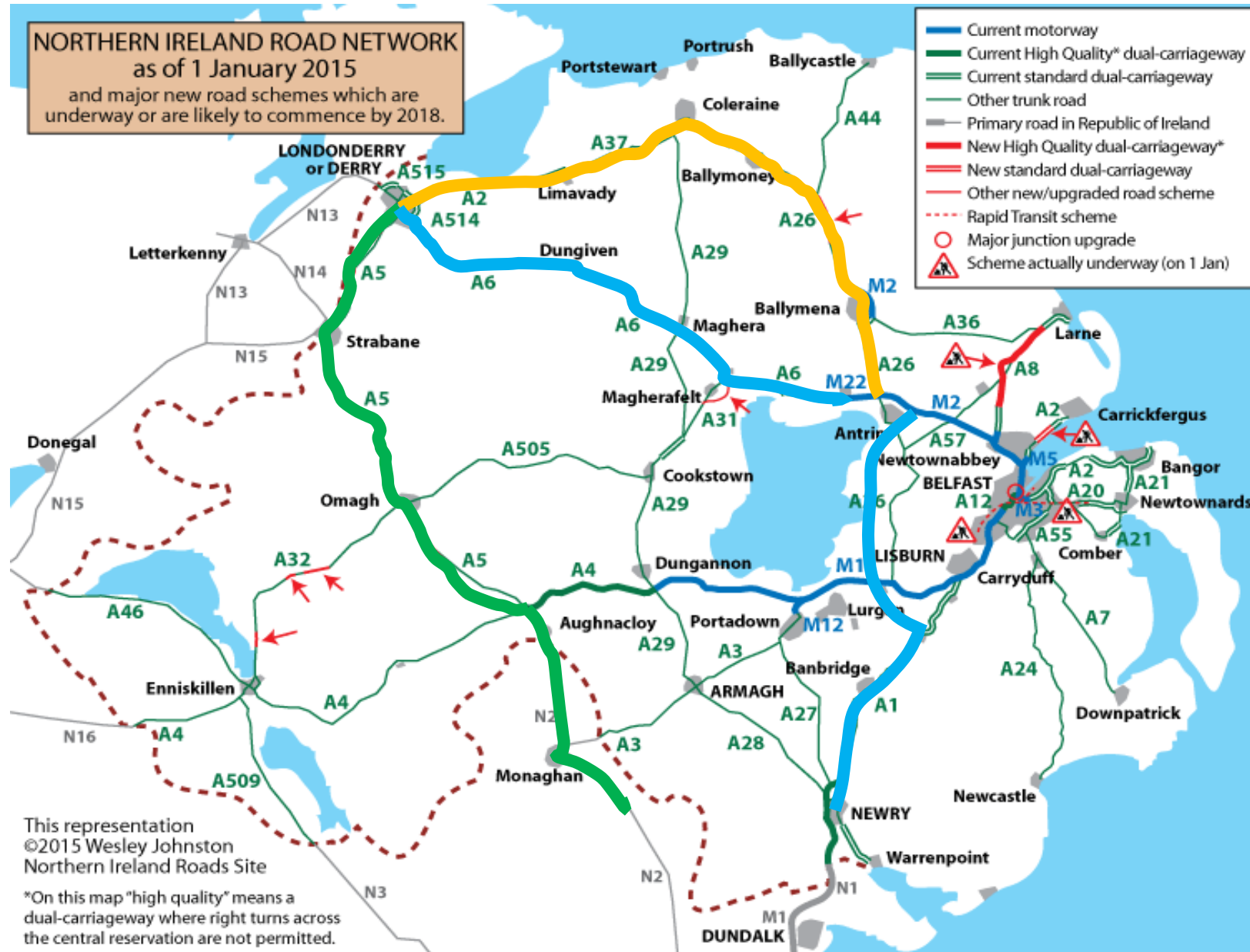
Gerry Duggan

Jan 2014

Review Proposals



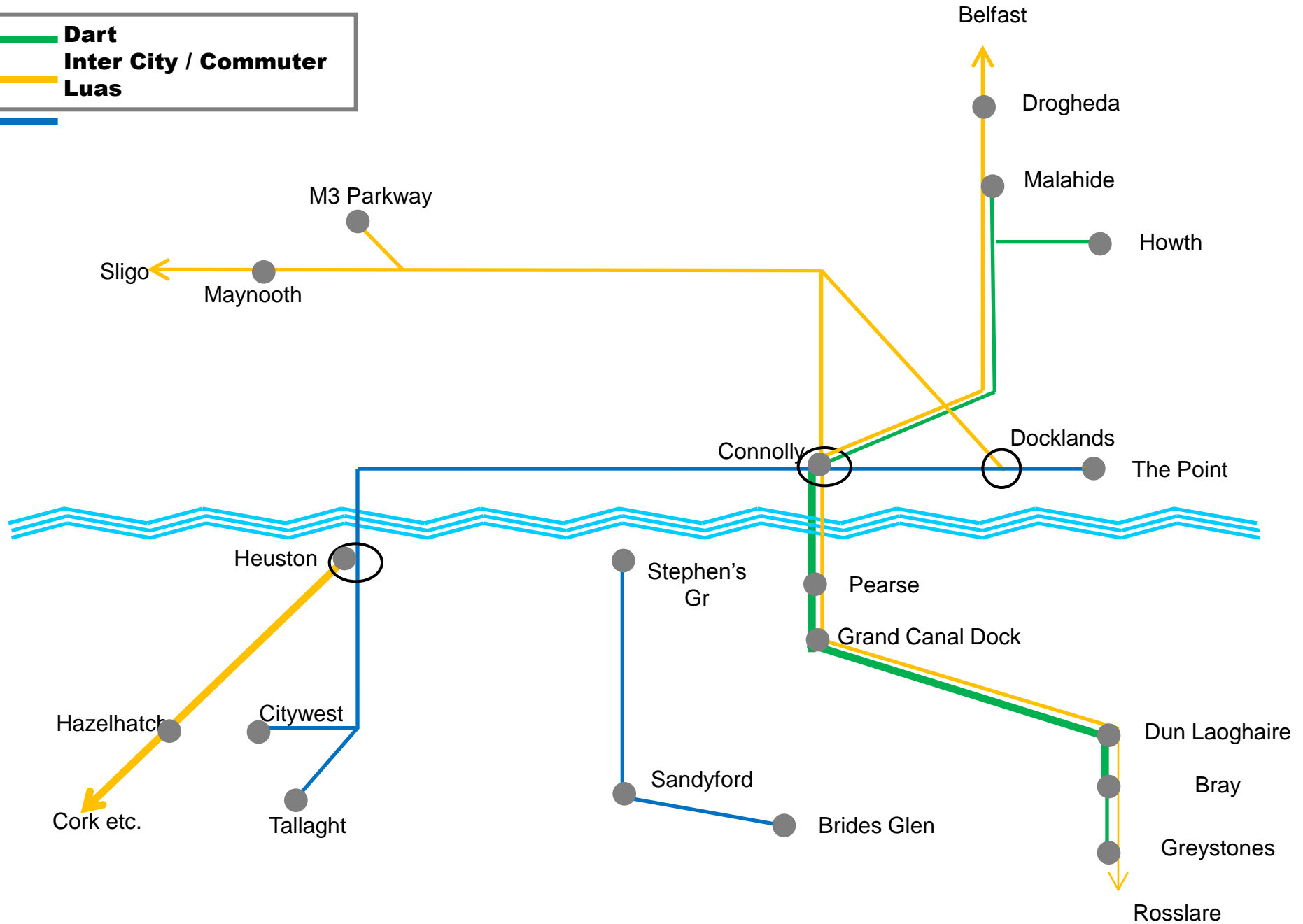
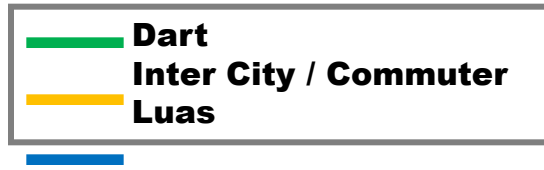
Look for More Cost Effective Options



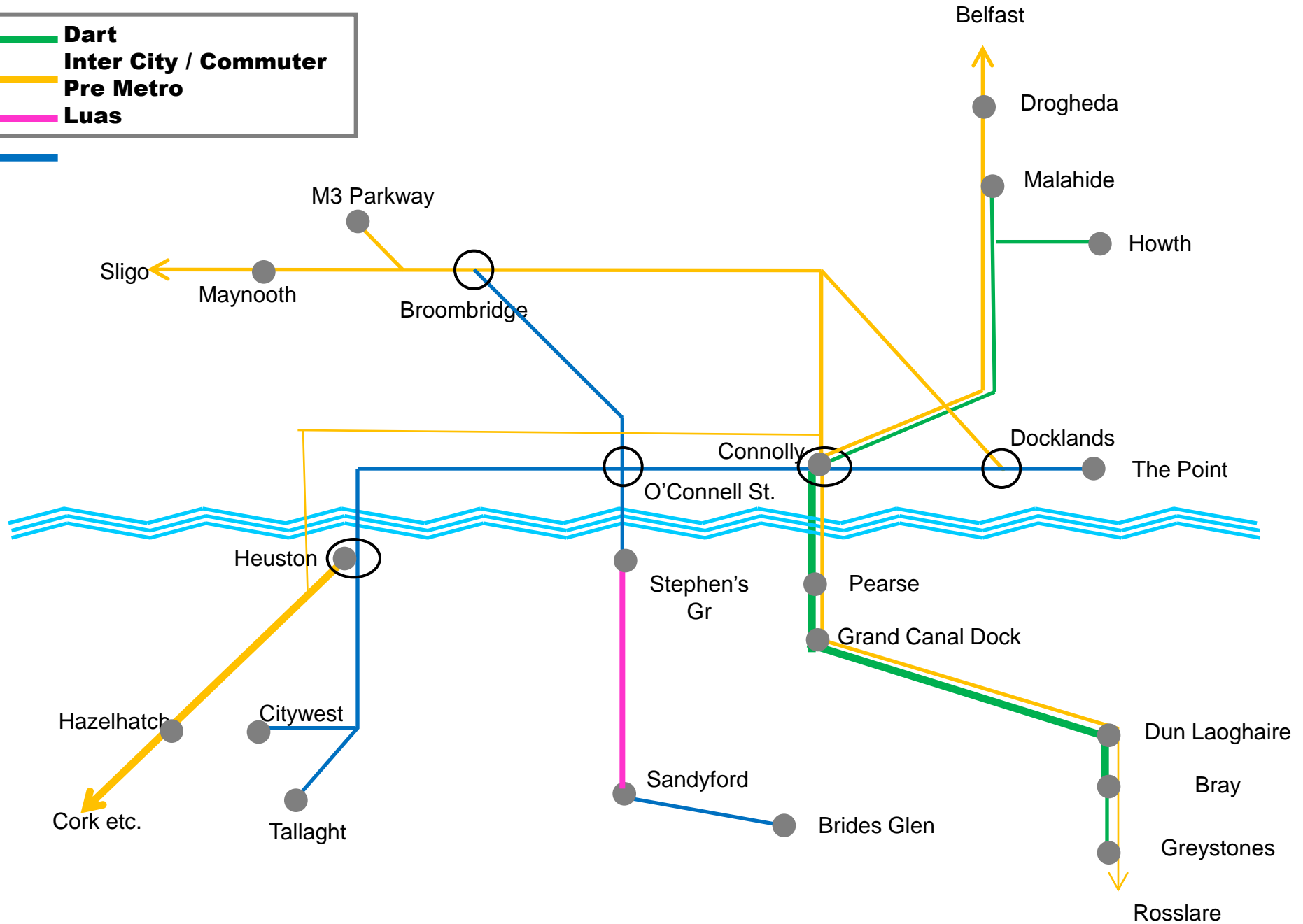
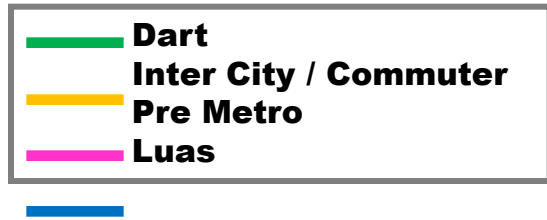
Break Major Programmes into Bite Sized Chunks

- **Dublin Rail Development 2015-2040**
- **Possible Sequence of Development**

Dublin Rail Network 2015

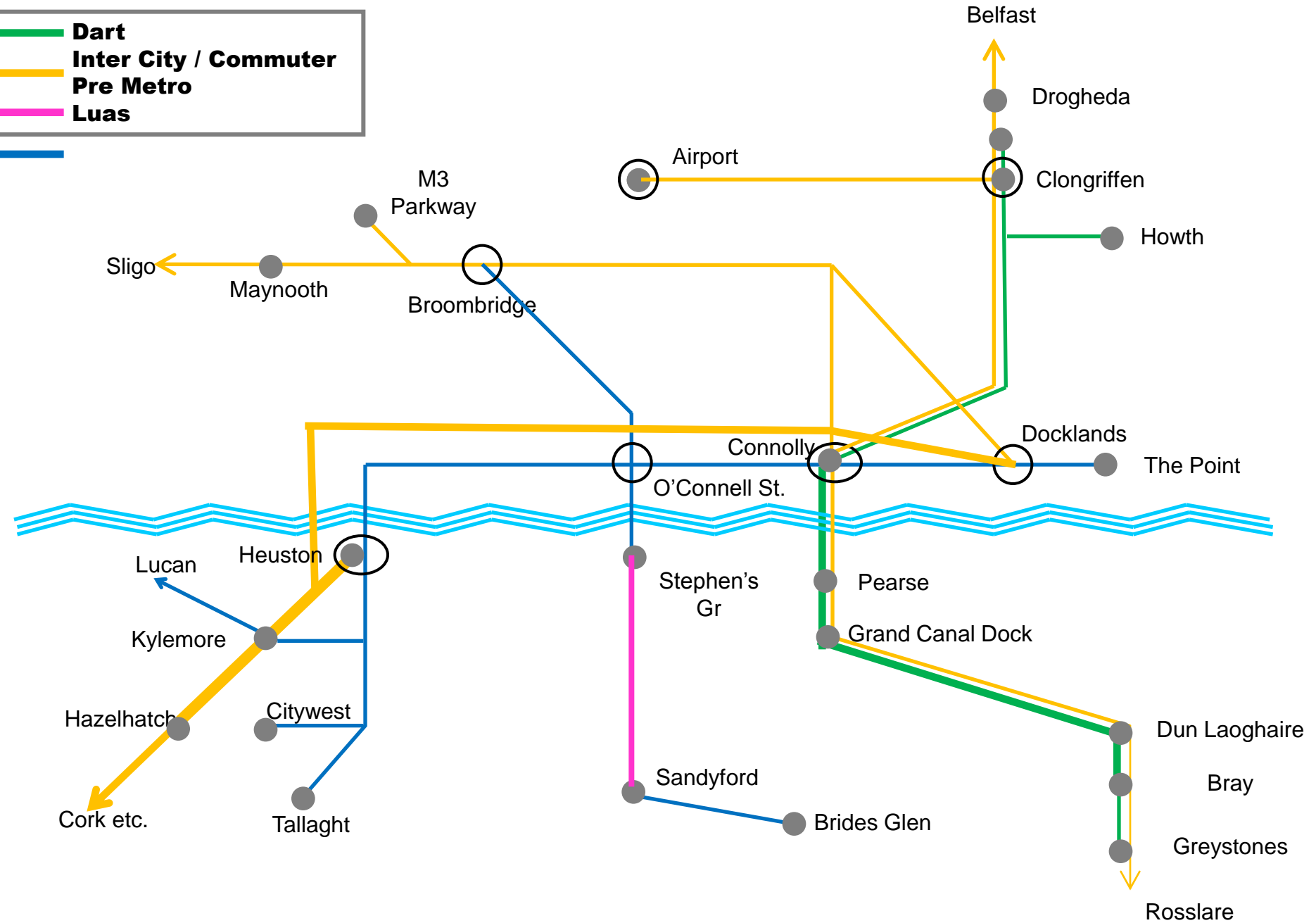


Dublin Rail Network 2020



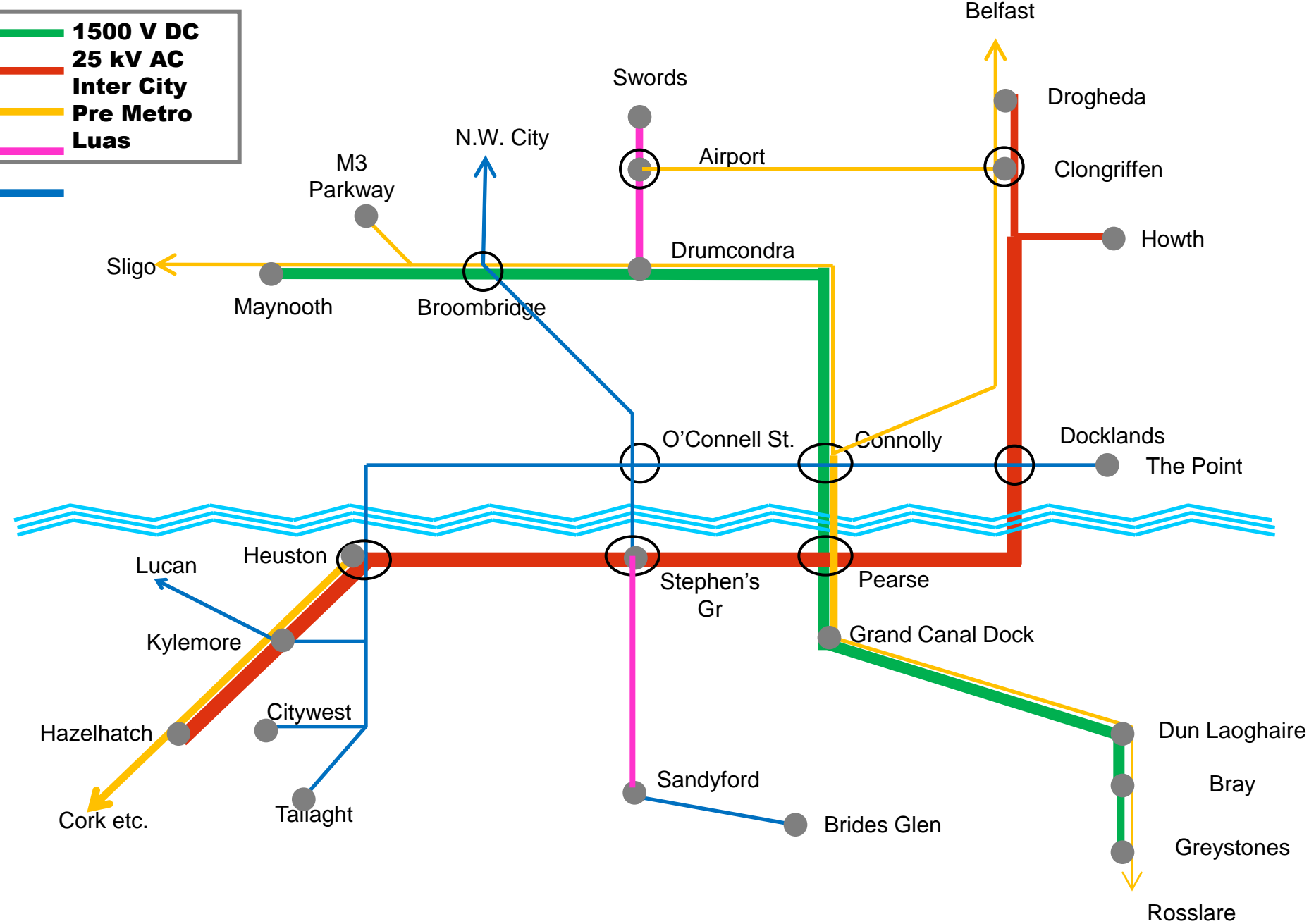
Dublin Rail Network 2025

Dart
Inter City / Commuter
Pre Metro
Luas



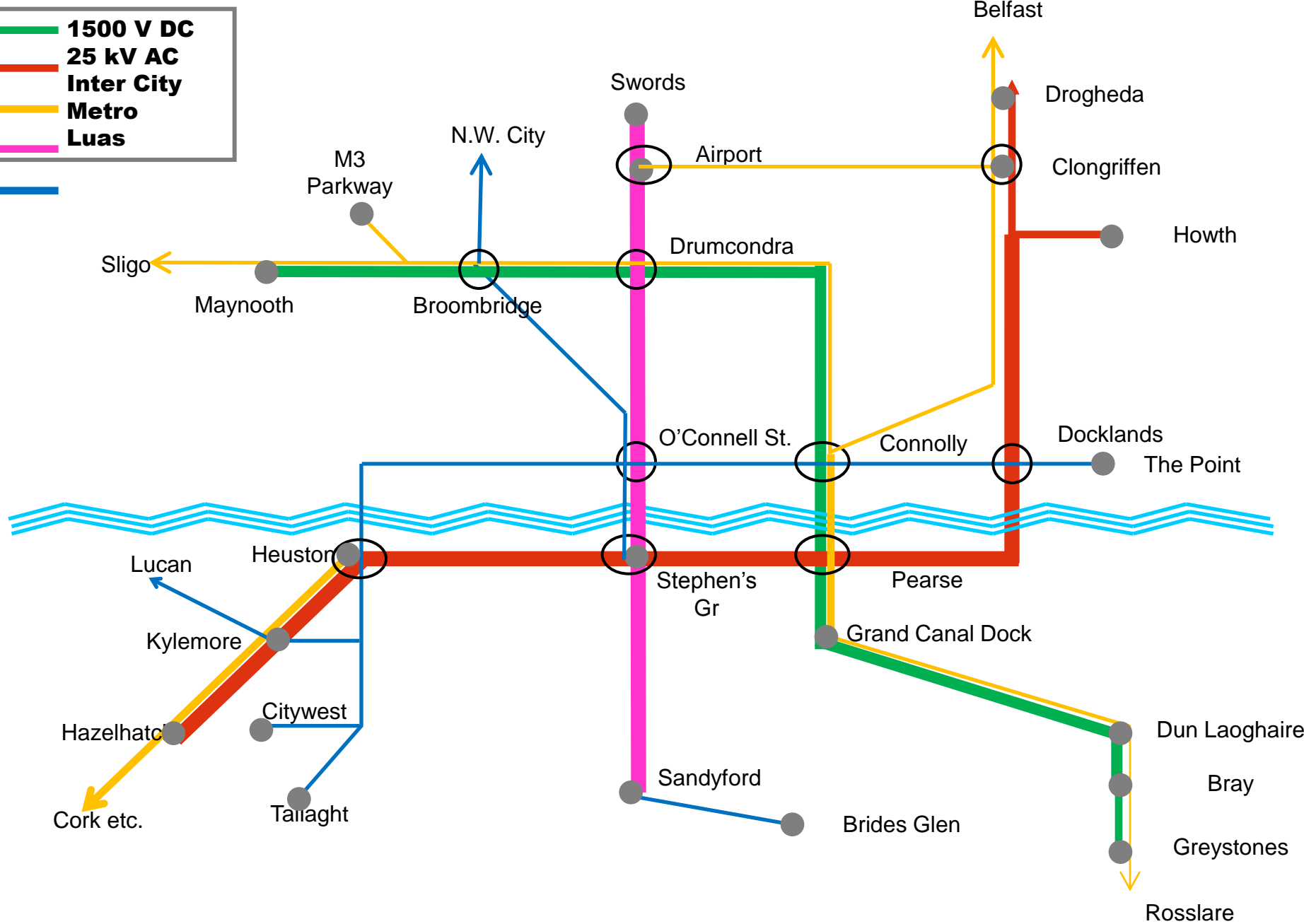
Dublin Integrated Rail Network 2030

- 1500 V DC
- 25 kV AC
- Inter City
- Pre Metro
- Luas



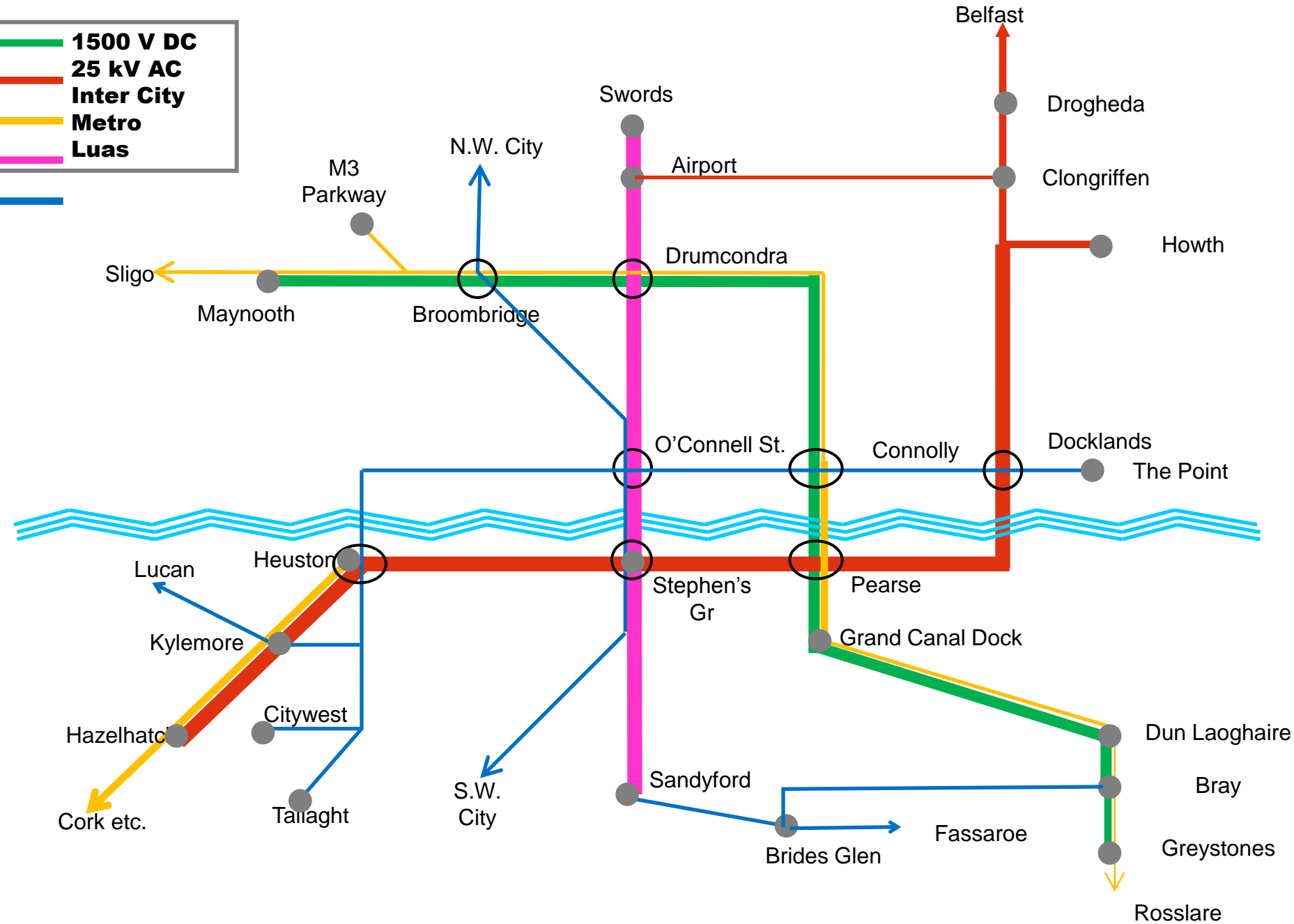
Dublin Integrated Rail Network 2035

- 1500 V DC
- 25 kV AC
- Inter City
- Metro
- Luas



Dublin Integrated Rail Network 2040

- 1500 V DC
- 25 kV AC
- Inter City
- Metro
- Luas



Conclusions

- **The key to financing energy infrastructure is to**
 - **Reduce investment requirements and project scope**
 - **Minimise risk**
 - **Divide major programs into discrete projects**
 - **Look outside your own areas of expertise for guidance**