National Planning Framework: Ireland 2040 Our Plan

InterTradeIreland welcomes the invitation to respond to the public consultation on the National Planning Framework (NPF) 'Ireland 2040 Our Plan'.

In making a contribution to the next iteration of the plan, we highlight three areas where cross-border consideration can prove valuable: **1. Infrastructure; 2. Economic Clusters; 3. Functional Economic Areas.**

Please see our comments on each of these points below with reference to published InterTradeIreland reports in these areas.

1. Infrastructure

The NPF notes that a national population increase of almost 1 million people by 2040 is anticipated and that this 'could be higher'. This increase will take Ireland's population close to 6 million by 2040. InterTradeIreland, in partnership with Irish Academy of Engineering and Engineers Ireland, undertook research into the infrastructure needs for an island of 8 million in 2010[1]. The report makes recommendations on critical elements of infrastructure required to support a world-class competitive economy. The report is available here - InfrastructureforanIslandPopulationof8Million.

InterTradeIreland would like to draw attention to the following key recommendations from this research:[2]

City Regions

1. Cities deliver economies of scale and efficiencies that enhance international competitiveness. There should be a focus on improving the competitiveness of the eight City Regions that will account for 90% of the population i.e Dublin, Cork, Galway, Limerick, Sligo, Waterford, Derry and Belfast.
2. Plan for greater urbanisation and an increase in the population density in cities by one-third by 2030.
3. Develop the Dublin–Belfast Corridor with appropriate infrastructure investment between both cities and the important nodal points along the Corridor.
4. Promote a South Western Corridor linking Cork, Limerick and Galway.

Transport

1. Improve transport connections, including a high speed, high frequency intercity rail system, between the cities of Dublin and Belfast.
2. Develop a second transport corridor along the South Western Corridor between Cork, Limerick and Galway.
3. Improve the motorway network to meet the projected increased traffic flows between the eight principal cities and links to ports and airports.
4. Determine the complementary role of road and rail when planning to improve traffic flows between the main centres.
5. Make capacity available in Dublin Port by relocating the Oil Zone to a new dedicated port with pipelines to supply aviation fuel directly to Dublin Airport.
6. Develop Dublin Airport, complemented by Belfast International, as a major international hub to improve worldwide connectivity for business on the island.

[1] InterTradeIreland, Infrastructure for an Island Population of 8 Million: A summary report (2010).
[2] Many of the conclusions and recommendations contained in this report have been adopted and developed by IBEC/CBI in a report entitled 'Connected: a prosperous island of 10 million people' (2016)

Energy
1. Prioritise investment in research and development of offshore wind, marine renewables and smart grid technologies.
2. Determine the optimum share that gas, coal and nuclear should contribute to the non-renewable segment of electricity generation.
3. Prioritise the location of new wind farms adjacent to the high tension electricity grid.
4. Increase energy security by providing long-term strategic storage capacity equivalent to 20% of annual natural gas usage on the island in line with international norms.
5. Make district heating a requirement in all new high-density residential and commercial developments.

Environment
1. Base development plans for all City Regions on clear sustainable principles.
2. Establish appropriately sized waste to energy (WTE) plants and strategically locate them to cater for residual waste from the City Regions.
3. Manage demand for water with an emphasis on conservation, loss reduction, metering and an economic charge for water.
4. Develop a shared water mains network which will allow for bulk transfer of water between sources of supply and population centres.
5. Undertake a programme of sewer renewal in urban areas. Have separate storm and foul water sewers where practicable.

Climate Change
1. Increase the energy efficiency of residential and commercial buildings.
2. Develop new non-greenhouse gas (GHG) emitting baseload electricity generation, coal or gas with carbon capture and storage technology and imported nuclear power.
3. Plan for the protection of cities in coastal areas and river basins against flood damage and rising sea levels.
4. Establish a register of critical infrastructure vulnerable to climate change. Carry out a flood risk assessment for each critical infrastructure asset identifying its frequency of exposure to a hazard, its resilience to exposure and the consequences of its failure. 5. Focus climate research on identifying key parameters critical for infrastructure design.

Information & Communications Technology (ICT)
1. Develop a high speed and large capacity information highway which will match the performance of that in the most advanced global economies. Prioritise the high density population corridor linking Dublin and Belfast and also the South Western Corridor.
2. Harness the potential of advanced IT and communications technologies to improve efficiencies and enable a sustainable competitive economy.
3. Establish a direct connection to Europe, in addition to routes through Great Britain, using advanced communication technology, thus enabling Ireland to be a virtual extension of the main internet exchanges in mainland Europe.

Enterprise
1. Encourage the development of specialised industrial clusters and innovation hubs in each city. 2. Maximise the enterprise opportunities arising from the island's climate advantage.
3. Support research and development (R&D) and innovation in higher education institutions. Support industrial investment in R&D.

Engineering for Health
1. Build an advanced IT infrastructure within the healthcare system linked to the broadband network, which will enable the use of sophisticated personal-use diagnostic devices and allow for early detection of life-threatening events.

Infrastructure Integration
1. Adopt an integrated approach to all infrastructure planning to ensure improved efficiency, effectiveness and competitiveness at minimum cost.

Economic Assessment
1. Finance the development of infrastructure using a combination of innovative financing sources including the Exchequer, public private partnerships, a possible island of Ireland infrastructure bank, capital markets and the European Investment Bank.
2. Develop a framework which will allow the private sector to increase its share of investment in provision of infrastructure.

2. Economic Clusters

InterTradeIreland concur with the NPF that there is both need and opportunities for further development in the regions. We were pleased to see reference to the potential for cross-border or all-island clustering of economic activity. InterTradeIreland has recently undertaken a study entitle 'Mapping the Potential for all-island Sectoral Ecosystems (2015) [3], which highlights the potential benefits of economic clusters for the regions on the island. The report can be read here: MappingthePotentialforall-islandSectoralEcosystems.

InterTradeIreland, in the context of the NPF, would welcome the opportunity to share our most recent data on sectoral ecosystems with the Department, particularly the sectoral maps which strikingly highlight regional strengths, and in the meantime would draw attention to the following opportunities:

The primary objectives of the report were to map sectoral ecosystems on the island of Ireland and to identify opportunities to develop sectoral ecosystems which are mutually beneficial to both jurisdictions. The result of the research was a detailed study, the first of its kind, which maps all-island geographic concentrations of inter-linked firms in the same sector, provides in-depth case studies of three prominent sectors and identifies a series of nine opportunities, the development of which could lead to leveraging the full potential of all-island sectoral ecosystems.

The report starts from the small size of the island and the proximity of businesses to one another and to other potential partners such as research institutes. Proximity can give rise to potential cross-border ecosystems with the distinctive advantages of economies of scale and scope/ diversity. This framework distinguishes six areas in which potential benefits could theoretically occur:

- Labour market;
- Education and training;
- Infrastructure;
- Goods and services markets;
- Research, technology and innovation;
- Institutional support infrastructure.

The benefits in each of these areas are expected to arise out of scale or scope economies. Regarding scale economies for example, a cross-border ecosystem would typically encompass a larger labour market than one restricted to either Northern Ireland or Ireland. A larger cross-border ecosystem would also be able to justify and utilise more fully specialised infrastructure. Scope economies are closely related to scale economies in that greater scale

[3] InterTradeIreland, *Mapping the potential for all-island sectoral ecosystems: A summary report* (November 2015).

also implies the possibility for greater variety. For example, given the scale of universities in either part of the island, the variety of research centres in a particular sector is limited. Adding universities through the development of an all-island sectoral ecosystem increases that variety. An important aspect in the emergence and development of ecosystems is the degree of interaction between the various stakeholders which itself has a natural spatial dimension as interaction with geographically proximate actors arises more readily. To overcome the limitations of existing measures of industrial concentrations in the spatial dimension of sectoral ecosystems this study develops a new measure to map industry concentrations. This measure improves on existing ones by incorporating both employment scale and the number of enterprises. The measure also uses labour fields based on commuting data to identify the extent of concentrations rather than administrative units. The new measure was applied to a combined all-island dataset. Unfortunately, the nature of the data that was made available for Northern Ireland did not allow for as tight a delineation of concentrations for Northern Ireland as in Ireland.

The report also developed a new measurement index to identify and map all-island sectoral concentrations. Four categories have been distinguished:

1. Dispersed significant concentrations such as the manufacture of medical devices (see Figure 2) of the information services industry.
2. Concentrations with a cross-border element such as manufacture of pharmaceuticals (see Figure 3) or the software industry (see Figure 4).
3. Ubiquitous across the island, such as the manufacture of food products or the furniture industry (see Figure 5).
4. Ubiquitous in Northern Ireland and significant concentrations elsewhere such as manufacture of electrical equipment or financial services activities.[4]

[4] The data available for Northern Ireland lacked point data identifications for firms and thus did not allow for as tight a delineation of concentrations in Northern Ireland as in Ireland. One option to deal with this, agreed to by Invest NI, is to run the mapping again using their company data.

Figure 2: Sectoral concentration map for manufacture of medical devices

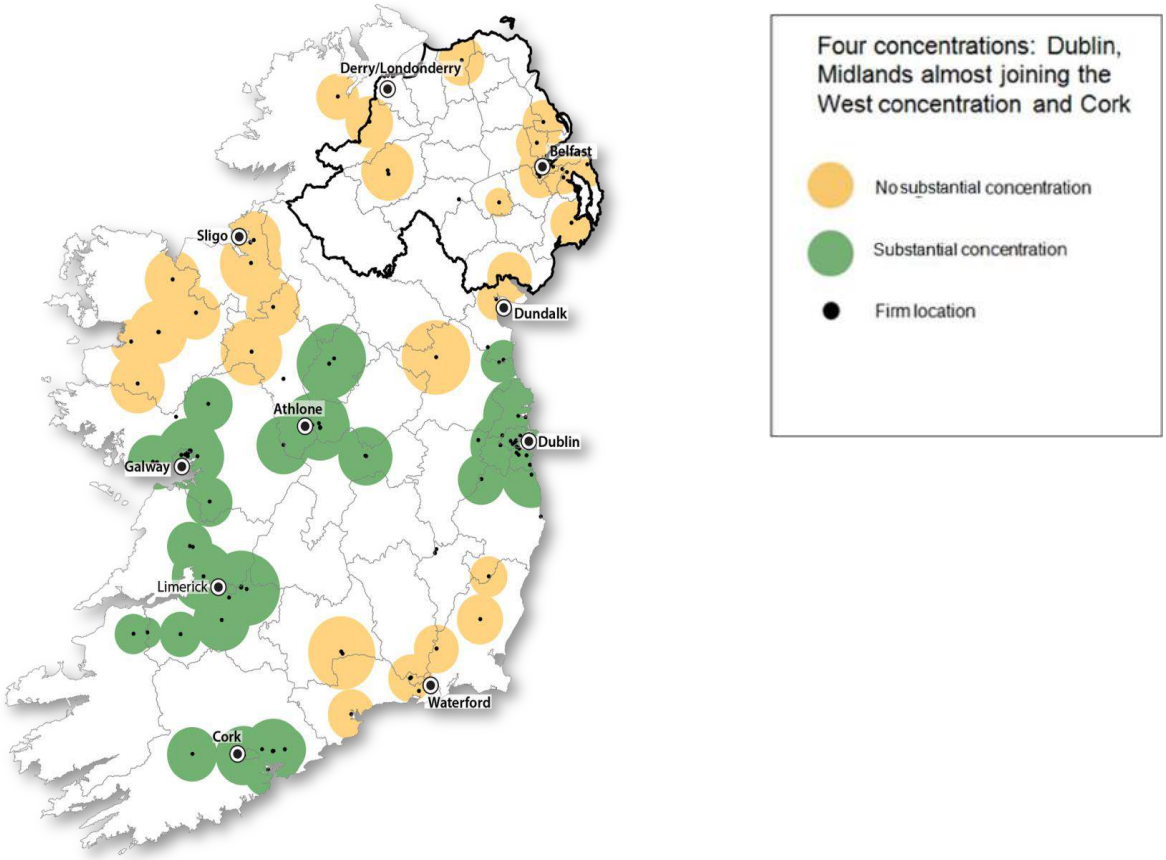


Figure 3: Sectoral concentration map for manufacture of pharmaceuticals

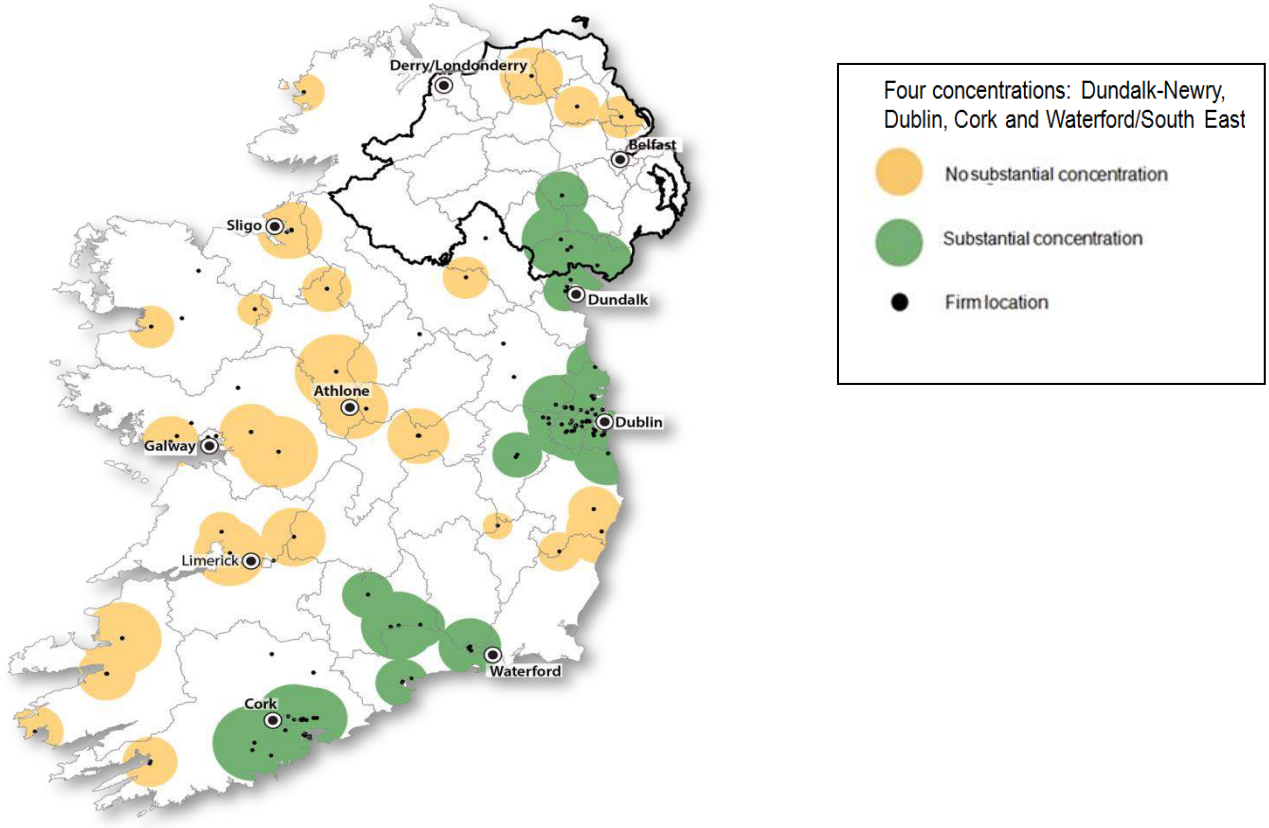


Figure 4: Sectoral concentration map for software

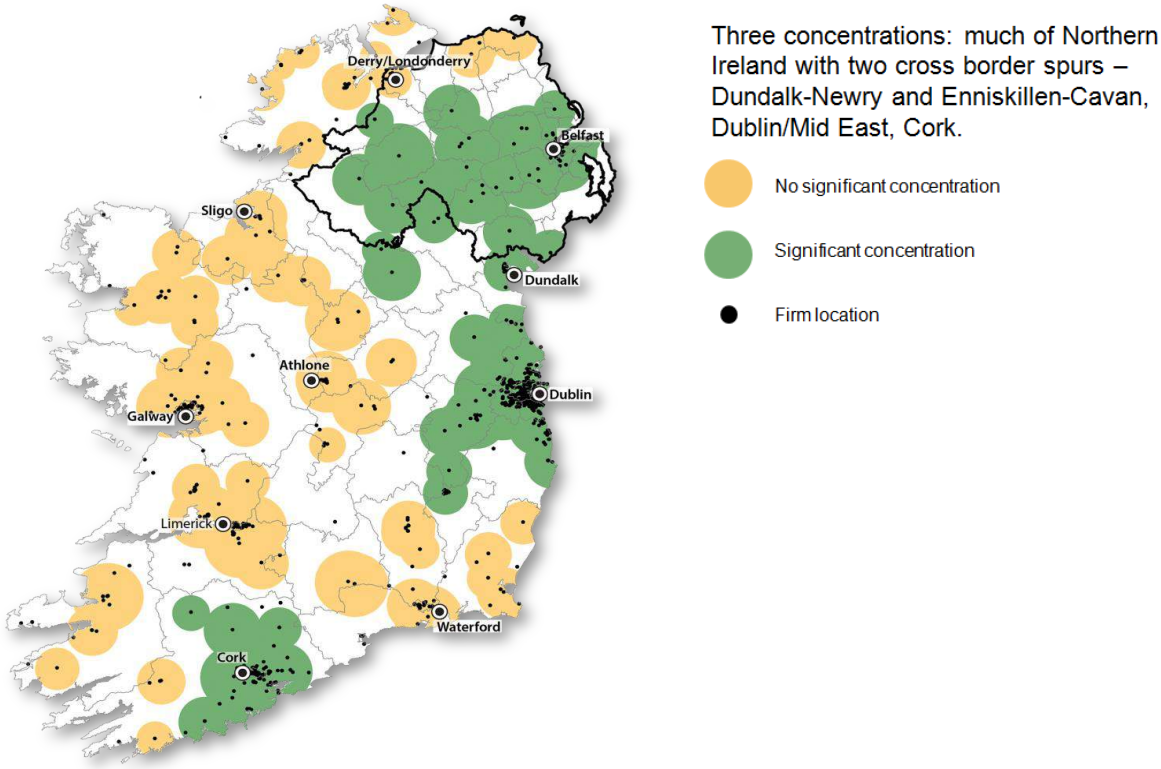
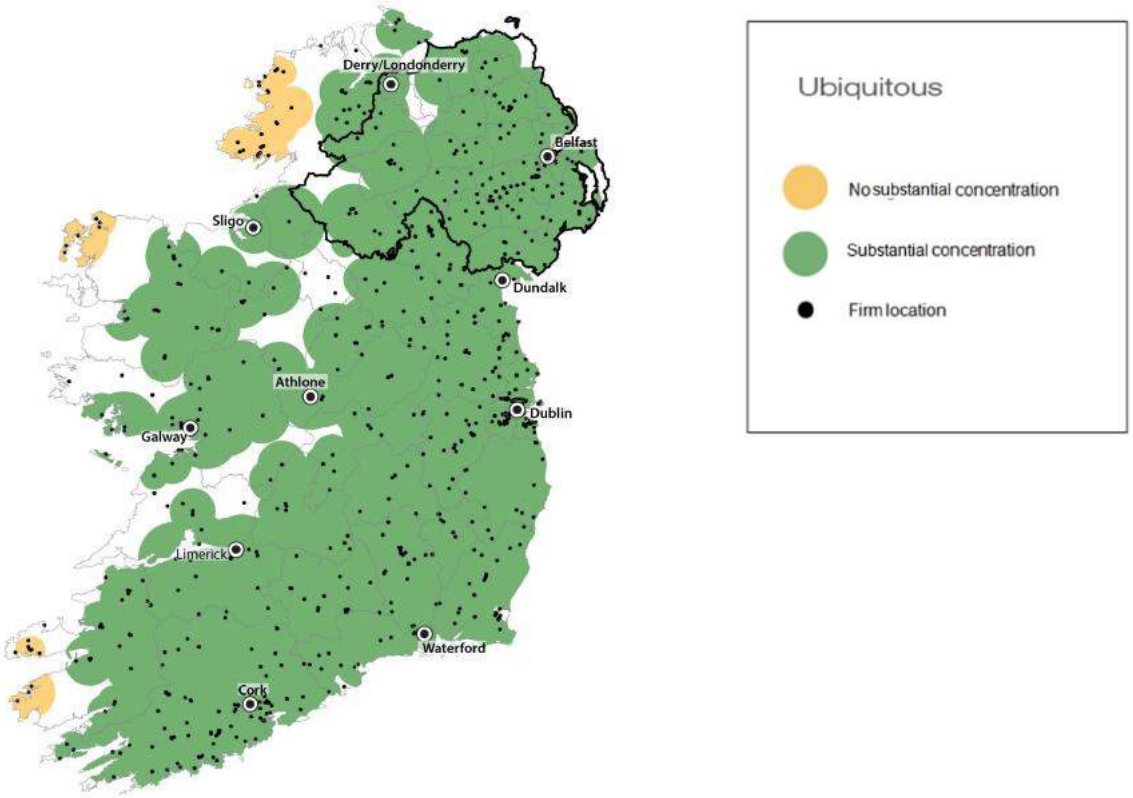


Figure 5: Sectoral concentration map for the agri-food sector



Finally, the report included detailed case study analysis on three identified growth sectors: medical devices, pharmaceuticals and software (mapped in Figures 2-4). This was done in order to assess the economic benefit arising from the development of all-island sectoral ecosystems. Given the different nature of the three sectors the case studies have produced individual opportunities for each. For example, in the medical devices industry, there is scope for pooling research and industry expertise which would be of great advantage in maximising the significant opportunities for this developing market, particularly in the area of heath informatics or 'connected health'. To maximise opportunities within the pharmaceutical sector, the report recommends developing an all-island inter-operable clinical trials coordination network as well as exploring the potential for supplier linkages on a cross-border basis. In the software sector, one recommendation is to develop an all-island internship scheme for software skills which would help to address the immediate skills gap in that sector, particularly for growing firms.

While different areas offer different levels of potential and benefit for each of the growth sectors, the report contains some general conclusions pertaining to all-island sectoral ecosystems. Cooperation in the areas of research, technology & innovation and education & training is identified as offering the greatest potential benefit across the three sectors. And, in all three sectors, the current level of all-island co-ordination is relatively low and the potential benefits of further co-ordination are perceived to be large.

An important conclusion in the report is that sectoral ecosystems can develop organically but that policy interventions often shape their growth and development. This leaves open the scope for proactive activity by agencies to redefine ecosystems on an all-island basis where the economic case is justified in terms of additional economies of scale and scope.

A sectoral forum in InterTradeIreland has been organised by the agency to begin the process of sparking this proactive activity by the key agencies named in the report: Enterprise Ireland, IDA Ireland, Invest NI and Science Foundation Ireland.

3. Functional Economic Areas

In respect of the cross border relationship with Northern Ireland, InterTradeIreland was pleased to see reference to the strategic potential of the Dublin-Belfast (eastern seaboard) corridor and how it can be developed to better influence planning decisions between the two Capital cities on the island of Ireland.

We recognise the importance of Functional Economic Areas in the border region and consider that they would benefit greatly from further focus in the final NPF Plan, and we would ask the Department to consider the further development of actions within this area in the final plan. We would add that InterTradeIreland research on spatial strategies on the island of Ireland[5] emphasised the importance of cross border collaboration on infrastructure. This research established that in order to make a step change there was need to consider the potential for a new all-island spatial planning initiative, building upon exiting arrangements. We note that the publication 'Framework for Co–operation: Spatial Strategies of Northern Ireland and the Republic of Ireland' (2013), seeks to examine the key planning challenges faced by both jurisdictions and the opportunities as part of a co-operative approach to spatial planning, and welcome this.

[5] InterTradeIreland, *Spatial Strategies on the island of Ireland: Development of a Framework for Collaborative Action* (June 2006).