

Consultation on Ireland 2040 Our Plan

Department of Housing, Planning, Community and Local Government

DJEI Submission

with IDA Ireland, Enterprise Ireland and Science Foundation Ireland



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Summary

Key enterprise messages

The Consultation Document: Ireland 2040, Our Plan, Issues and Choices issued by the Department of Housing, Planning, Community and Local Government (DHPCLG) sets out a total of 45 individual questions with the overarching question being *What sort of place should Ireland be in 2040, and what do we need to do to achieve this?* The National Planning Framework (NPF) aims *to manage the planning and development process so that the right development occurs in the most suitable places and at the right time, ensuring sustainability and best use of scarce resources*. The following sets out the key messages from an enterprise perspective, informed by analysis and agency insights, which will continue to inform how we influence the final NPF.

What the NPF can do

There is a strong **interdependence between the planning** and development of an **attractive environment and where companies choose to establish**, invest and create jobs. The NPF:

- is a critically important framework for the period to 2040 that will underpin Ireland's future economic development, and should be **statutorily based**;
- needs to set out the **outcomes** we wish to achieve – e.g. 'no more than 45 minute commute time' or 'access to international connections within 120 minutes from work';
- needs to **inform the strategic choices, investment** and resource deployment decisions of most (if not all) government departments and to inform regional and local planning;
- needs to be about ensuring that each region is enabled to develop real differentiators in order to realise its potential. It is about **maximising the capabilities of each region** as distinct from economic 'equalisation';
- needs to provide the certainty required to **stimulate investment** by public, commercial semi-state and private sectors so that the right development occurs in the most suitable places at the right time.

The overarching critical elements are:

- **Connectivity** rural, regional, national and international - to enable mobility of people and goods and making use of smart technologies to deliver enhanced productivity, competitiveness and quality of life
- **Concentration of developments** to build scale and internationally competitive locations and connections with wider hinterlands through technologies, community and infrastructures
- Delivering growth that is **environmentally sustainable** and efficient through effective planning and implementation to deliver higher densities, smart integrated transport networks and strategic development zones for renewable energy
- Celebrating difference – developing **distinctive propositions for each region** and realising the full potential for enterprise development, job creation and higher standards of living throughout Ireland.

Place-making: an attractive environment to live and work in, and to visit:

- **An attractive environment for enterprise encompasses a number of factors**. While Irish owned enterprises can set up almost anywhere in Ireland, potential foreign direct investors consider these factors *relative to* other international locations and seek out the benefits of scale, agglomeration and competitive ecosystems.

- In the context of a **mobile workforce**, quality of life factors, access to amenities and specifically **affordable housing** are important.
- The NPF needs to remain attuned to **technological drivers of change** that will have implications for businesses, the work place, modes of working, location decisions and the availability of world class digital infrastructures.

The role of our cities and towns

- **Dublin** and its future sustainable development remain key to Ireland's **international visibility** and attractiveness for mobile investment, entrepreneurship and talent.
- Developing competitive 'city-regions' of scale in their own right and that are interconnected, including the economic corridor between **Galway, Limerick, Cork and Waterford** as a **strong regional complement of scale** to Dublin that would facilitate greater growth than might otherwise be achieved.
- For all cities, **an urban policy centred on place-making is essential** to develop areas that provide a competitive environment for business and are attractive to live and work for people, together with integrated economic and social development activities, infrastructure investment and policy instruments to ensure the growth of environmentally sustainable cities over the decades to 2040. As a future-focused framework, the NPF should set out the ambition to lead on 'smart city' development through effective public-private collaboration.
- In other **large scale urban centres** the Institutes of Technology need to play a stronger role as key focal points for growth and development. The need for investment in high-speed digital infrastructures is absolutely critical.
- Addressing the challenges for **town centre renewal** can help to create vibrant town and village centres that support local communities and jobs throughout Ireland.
- A specific focus for the functional area of the **Border region** should identify the tailored policy response and investment needed to address the potential implications arising from Brexit (including physical infrastructures, enterprise capability, sectoral mix, skills etc).
- Rural policy needs, in turn, to be directed towards increasing the viability of rural areas to combat social exclusion and encourage the diffusion of enterprise.

Infrastructures and human capital

- Ireland's infrastructure investments remain low. The enterprise development agencies point to specific **infrastructure deficits that are currently constraining growth** within regions, which unless addressed will hinder future potential (See Appendix I in main report).
- The approach taken in the **regional skills fora needs to be more deeply systemised** in the context of ongoing change that continues to be driven by technological advances.

Administrative and governance structures

- The implementation of the NPF needs to inform and embed a more **integrated approach to infrastructure planning and delivery** through the alignment of the Regional Spatial and Economic Strategies with it, and to inform subsequent planning decisions throughout the country.

Table of Contents

Ireland 2040 – Our National Planning Framework

Joint DJEI agency submission	1
The National Planning Framework : underpinning Ireland’s future economic development	1
Ireland 2040: a vision and desired outcomes	1
What influences spatial patterns?	3
What can the NPF do?	4
What enterprises need	4
What role should our cities have as part of the NPF?	6
Dublin	6
Tier two cities: sustainable growth - options to deliver scale?	7
Urban concentrations – a strong regional complement to Dublin?	8
Urban densification and urban policy	8
Smart cities	9
Role of towns in wider hinterland – Place-making and developing value propositions	10
A specific focus on the Border region and all-island perspectives	11
Regional differentiators – clustering approaches	12
What needs to be done to increase human capital at regional level?	13
The environmental sustainability imperative	13
Do we need to reform administrative and governance structures?	14
A reality check – investment with limited resources	15
What choices are needed?	16
Priority National (and regional) capital investment projects	17
Distribution of agency supported companies - 2014	19
Education institutions, Research and technology centres	21
Enterprise agency supported full time employment by sub-region	23

Ireland 2040 Our Plan National Planning Framework

Joint DJEI agency submission

The Consultation Document: Ireland 2040, Our Plan, Issues and Choices issued by the Department of Housing, Planning, Community and Local Government (DHPCLG) sets out a total of 45 individual questions with the overarching questions being *What sort of place should Ireland be in 2040, and what do we need to do to achieve this?* In the introductory section it sets out 12 challenges – the final one captures the essence of the challenge facing Ireland’s future development and the need for a National Planning Framework *to manage the planning and development process so that the right development occurs in the most suitable places and at the right time, ensuring sustainability and best use of scarce resources.*

DJEI has made regular submissions to the NPF development process over recent months as a member of the Inter-Departmental Committee chaired by Minister Coveney, in collaboration with the enterprise development agencies.

This submission highlights key aspects from the perspective of enterprise growth, development and spatial distribution – and specific consultation questions are addressed where these are of most relevance to enterprise.

The National Planning Framework : underpinning Ireland’s future economic development

There is a strong interdependence between the planning and development of an attractive environment and where companies choose to establish, invest and create jobs.

The NPF is a critically important framework for the period to 2040 that will underpin Ireland’s future economic development. It should inform the strategic choices, investment and resource deployment decisions of most (if not all) government departments. The NPF should provide the certainty to stimulate investment by public, commercial semi-state and private sectors so that the right development occurs in the most suitable places at the right time. Its statutory basis complemented by strong governance and implementation structures will be key to its success.

The overarching critical elements are:

- **Connectivity** rural, regional, national and international - to enable mobility of people and goods and making use of smart technologies to deliver enhanced productivity, international competitiveness and quality of life.
- **Concentration of developments** to build scale and internationally competitive locations and connections with wider hinterlands through technologies, community and infrastructures.
- Delivering growth that is **environmentally sustainable** and efficient through effective planning, use of technologies and implementation to deliver higher densities, smart integrated transport networks and strategic development zones for renewable energy.
- Celebrating difference – developing **distinctive propositions for each region**, building on its competitive advantage and strategic assets to realise the full potential for enterprise development, job creation and higher standards of living throughout Ireland.

Ireland 2040: a vision and desired outcomes

Ireland 2040 should set out a compelling vision and the outcomes we wish to achieve – *what sort of place should Ireland be?* The policy choices made within the NPF will be determined by this.

Ireland 2040 encompasses a breadth of elements that should inform strategic choices, investment and resource deployment decisions of most (if not all) government departments - *what we need to do and where*

Ireland 2040 should have a statutory basis¹ and national context within which regional and local development land use and transportation strategies, and planning and investment decisions are made – *how to make it happen*

From the perspective of enterprise our ambition is that Ireland will be a place:

- that is the most competitive and advanced economy in Europe, affording a high standard of living and quality of life for all;
- where people will have no more than a 45 minute commute to work;
- where people (and goods) can access international connections within 120 minutes of their home or work base;
- where enterprises can access competitively priced development lands, utilities and commercial properties to the highest standards available internationally;
- where enterprises can access the skills and research they need to grow their operations; and
- that embraces sustainability: celebrates design/smart buildings/smart infrastructures, appropriate densities and concentration of activities.

At a regional level we see an Ireland where:

- Dublin is a well-connected attractive internationally competitive city and an attractive place to live and work with smart city policies driving quality of life improvements;
- the cities of Cork, Limerick, Galway as an economic corridor of scale act as a complement to our capital city and a national driver of growth, environmentally sustainable and competitive;
- Waterford and urban centres act as drivers for their regions and offer vibrant alternatives; and
- where if people choose to live in more rural areas – they are connected through technology and community.

Enabled and supported by an effective NPF, a successful enterprise sector will contribute to an Ireland as a place that offers a diverse range of occupations, sectors and activities and economic resilience in the face of global and technological challenges. We envisage an Ireland that provides quality of life choices for individuals and that protects its heritage, land and seascapes.

Enterprise 2025, our national enterprise policy, sets out its ambition for enterprise and at its core is to:

- attain full employment by 2020, based on an unemployment rate of no more than 6 percent and sustain that position over the longer term – extending over the term of the NPF; and to
- stimulate job creation throughout Ireland so that unemployment in each region is within one percentage point of the State average.

Since the economic downturn, agency supported employment has grown in all regions, as is the case for the wider economy. Based on a population projection of 5.631 million, analysis by ESRI indicates an estimated labour force of 2.919 million. They project employment to be in the region of 2.674 million based on an unemployment rate of 8.5

¹ The placing of the National Planning Framework (as successor to the 2002 National Spatial Strategy) on a statutory footing was recommended by the Final report of the Tribunal of Inquiry into Certain Planning Matters and Payments (the Mahon Tribunal) published 22 March 2012

percent. This translates into an estimated 633,000 net new jobs over the period end 2016-2040 from a base of 2.048 million and an estimated 695,000 net new jobs if we are to reach and sustain unemployment levels of 6 percent.

What influences spatial patterns?

In today's globalised environment businesses, entrepreneurs and people are making choices about where to invest, work and live.

There is a strong interdependence between the planning, development and creation of an attractive environment:

- where companies choose to establish, invest and create jobs; and
- where people choose to live

Simply put (although not the only factor), the availability of jobs can be a key determinant of where people stay and/or move to live - including internal migration and/or emigration².

If we are to deliver on a vision for Ireland 2040 our policy choices need to have regard to competitiveness in its widest sense, taking an integrated and coordinated approach to deliver on key infrastructures, education, housing and wider services to create a compelling operating environment for enterprise and high quality places for people to live and work in.

It is challenging to garner specific evidence behind the drivers of Ireland's growth patterns, or constraints that impeded growth to date. However, the enterprise development agencies can point to specific infrastructure bottlenecks that are currently constraining growth within regions (Appendix I) and unless addressed, will hinder future potential. We can also surmise that the lack of affordable housing (particularly in urban areas) means that people live further away from their work than they might wish to – and face long commutes on a daily basis.

Ireland's infrastructure investments remain low, and public investment under the Capital Spending Plan 2016-2021 is back-loaded toward the end of the Plan's duration³.

The current fiscal constraints will have implications for the effective implementation of the NPF over the period to 2040 and mechanisms may need to be identified to demonstrate early evidence that a change in policy (if any) is delivering.

A changing dynamic – where people work

The NPF needs to remain attuned to technological drivers of change that will have implications for where and how businesses do business (global business models, global value chains), the types of work that people do, and where and how they work.

The spatial employment impact of companies is changing and will likely do so over the timeframe of the NPF. For example, today enterprises may consider establishing hub activities away from the core site, or facilitate home-

² In general, people have a preference to live within a reasonable distance to their place of employment. They also want access to core services retail, health, education, childcare etc. In addition other quality of life factors differ for individuals e.g. preference for rural location, proximity to the coast, connection to 'Place', community etc

³ We continue to operate within the context of EU fiscal rules – despite historically low borrowing costs for the state

working to a greater degree. This is already evident in some IDA supported enterprises and particularly for technical support/call centre activities.

Recent research⁴ indicates that one third of broadband users have remote access to their company network for work purposes. An estimated 150,000 workers avoid commuting some of all of the time because they can connect to work remotely. A study by Eir indicates that 21percent work from home although they are not based at home. Yet further studies indicate that an increasing proportion of people – almost half - use the internet at home in relation to work⁵.

The nature of work is also changing, with automation and automisation of services likely to impact on occupational profiles, employment intensity of activities, and the need for continuous transformation of the existing enterprise base.

What can the NPF do?

The NPF consultation document refers to making choices in order to influence Ireland's spatial development over the next decades.

The NPF should set the framework so that each region is enabled to develop real differentiators and magnets of attraction in order to realise its potential. It needs to redress the interpretation of balanced regional development away from redistribution of economic activity and population to achieve economic 'equalisation' across the country.

All regions are different, in terms of scale, population densities and enterprise mix which means that different policy responses are needed to maximise the capabilities of a region.

Investment is delivered through our own state resources in national infrastructures, commercial semi-state bodies and the private sector. The NPF plays a key role in setting out a vision for the coming decades that will provide the confidence to stimulate investment by all parties – so that the right investment occurs in the most suitable places and at the right time, enabled by a consistent, coordinated planning and development system.

The concept of making choices gives the perception of winners and losers. Yet, based on analysis undertaken by ESRI, projected trends show greater employment growth on the Eastern seaboard, urban sprawl, inner city decline, longer commute patterns, and greater economic divergence across the regions. In this 'no policy change' scenario, 'even' our capital city region would suffer a loss of competitiveness and be a much less attractive place in which to invest as a result of housing and infrastructural bottlenecks.

If we do not make policy choices now, everyone loses.

What enterprises need

Sustainable enterprise thrives in supportive business environments that enhance competitiveness and productivity. It is a combination of factors that delivers efficiencies, economies of scale and wider societal benefits.

⁴ <https://www.vodafone.ie/connected-futures/> these e-workers report that e-working means they can avoid commuting to work, typically about two days a week

⁵ Eir Connected Living Survey 2015 – 48% of workers specifically check work eMail at home (up from 42% in August 2015; and The Second UPC Report on Ireland's Digital Future reported that 47% of Irish employees use the internet at home in relation to work, up from 45% in 2012

The nature of the business activity or sector can influence the choice of location – for example if natural resource intensive, utility intensive, knowledge intensive, internet based etc. Aspects such as stage of development of the enterprise, business model, export or domestic market focus or scale come into play. The following elements can inform business location choices regardless of ownership:

- critical mass in population;
- connectivity and access is paramount – including nationally and internationally - enabled by physical and technology infrastructures with capacity resilience and quality. This has become even more critical in a post-Brexit environment;
- world class economic infrastructures and competitive services with capacity, resilience and quality;
- third level infrastructures, access to skills and to research, development and innovation;
- availability of property solutions – including ‘ready-to-go’ commercial properties, ‘landing spaces’, co-working spaces and flexible property solutions⁶ and affordable housing;
- competitive, smart and Integrated public transport networks within and between cities and urban areas;
- co-location or dynamic clustering plays a role – for example, in the agri-food sector, enterprises will seek to locate close to local suppliers of produce. Enabling connectivity and linkages within and between suppliers and purchasers, between enterprises and Higher Education Institutes (HEIs) is an important consideration for the NPF; and
- quality of life factors and sense of Place.

It’s important to note, that although Irish owned enterprises can be established almost anywhere in Ireland, we should not overlook the fact that many of our Irish owned companies are internationally mobile – they are making location choices in a global context.

From an FDI perspective, Ireland is competing with other jurisdictions for mobile investment. They consider factors *relative to other locations* and although similar to the factors that Irish owned businesses seek, scale in an international context can more often be the deciding factor. Global FDI trends indicate that increasingly city regions of scale are the focal point for internationally mobile investments. While FDI can and will contribute to economic growth within the regions, it must be clear that FDI is not *the only* answer to regional development.

Domestically trading companies are an important part of the economic and social fabric of the country and will tend to locate where there is a local/regional demand for services. They provide essential services to the broader business community and to consumers. In addition, they play a significant role in supporting vibrant neighbourhoods that are attractive for people to live and work in.

In the context of a mobile workforce, quality of life factors, access to amenities and specifically affordable housing are important.

World class infrastructures encompass not only our road and transport networks, but also: future proofed technology infrastructures; water and waste water, where quality is increasingly important; secure, sustainable and competitively priced energy; international connectivity for people and goods (air, ports and services).

⁶ Including lease terms, ability to scale/re-size, parking facilities, shared services, etc

While we cannot predict the future we can see the various social and technological trends that are already coming on stream and look at how they are likely to impact on the world of work in the future. Increased automation in manufacturing and services activities will see the benefits of strengthened productivity, although the labour intensity of activities and nature of jobs and occupations will likely change over time. Companies are more likely to engage in distributed forms of working which may have implications for spatial distribution of the workforce, where and how people choose to live and work, although the urbanisation trend is likely to continue apace.

This ongoing ubiquity of 'tech' places the paramount importance of access to leading edge technology infrastructures, as well as cybersecurity solutions, to the fore. Without the appropriate investment, Ireland is at risk of compromising its future growth potential.

See Appendix II for distribution of agency supported companies by employment.

Consultation questions and response

This DJEI and agency submission does not necessarily respond to each individual question, as there is some commonality between them and potential for duplication in the responses. We have not included responses to all questions, as in some instances, while acknowledging the importance for economic development, there are other contributors better placed to provide a more detailed response in terms of specific mechanisms.

What role should our cities have as part of the NPF?

Cities and dynamic urban areas are core drivers of national and regional economic growth if they can provide an attractive environment for enterprise to flourish. The NPF will need to consider the role our cities can play taking account of population capacity, enterprise mix and other factors that may inform their growth potential over the coming decades. Unlocking their potential to 2040 is key to ensuring we continue to generate the income to deliver a higher standard of living for all our citizens.

Dublin

The success of the Dublin City Region is key to the success of the Irish economy, and our ambition should be to make it the most attractive capital city in which to live and work in Europe. The city region extends out to eleven surrounding counties and ensuring that these areas also benefit from the dynamism of the capital is important – in a way that is planned and environmentally sustainable⁷.

As our internationally visible capital city, Dublin plays a crucial role in a number of ways. Dublin attracts more new business than the rest of the country. It is particularly attractive for large scale complex FDI that would not locate in any other Irish location. As a magnet for fast growing young internationally mobile companies, entrepreneurs and talent, Dublin can provide a unique business and living experience. It is a vibrant location for start-ups. The city boasts a high concentration of multi-disciplinary and multi-lingual talent and a range of internationally renowned

⁷ For example the recent opening of the Phoenix Park Tunnel has the potential to improve quality of life for people in Kildare as it reduces commute times, and potentially reduces congestion in Kildare

Higher Education Institutes (HEIs). Dublin provides easy access to international destinations is well connected nationally and is a substantive market place in its own right.

It is important to acknowledge that Dublin is small relative to other cities and capitals in Europe and elsewhere – although it continues to punch above its weight. We need to ensure that it continues to benchmark favorably as a quality place to do business and to live over the decades to 2040.

Strategic investments are needed to redress urban sprawl and to reduce traffic congestion by implementing a fully integrated smart transport network system including the Metro link to Dublin Airport and underground Dart, as well as upgrading commuter trains and looking to Dublin Airport capacity over the time frame to 2040. In Dublin's context we need also to reconsider densities/building height restrictions, initiatives to regenerate the urban core, and to redress the more immediate under-supply of housing. [See Appendix I National Priority Infrastructures. Refer also to Dublin Action Plan for Jobs 2016-2018, DJEI 2016, for economic infrastructure priorities pages 66- 69]

The NPF provides an excellent platform to strengthen our capital city for the future and to take innovative approaches that will establish Dublin internationally as the Ideas Capital. This could involve a more aggressive approach to Smart Dublin initiatives, involving Local Authorities, Government departments and HEIs and initiating concepts such as 'Street of the Future' to test, experience and showcase technologies for a living⁸, or putting in place architecturally distinctive strategic mixed use developments in areas centred around Global Business Services for example.

As we return to economic growth, and within the context of the UK's vote to leave the EU, it is timely to assess what actions are required to refresh the concept of a Dublin-Belfast corridor, and/or to assess that as a viable option. The Dublin-Belfast corridor takes the form of economic and trade links, shared infrastructure, employment markets, social cohesion and cooperative initiatives that benefit the areas located between Dublin and Belfast⁹.

Tier two cities: sustainable growth - options to deliver scale?

While ensuring that we remain focused on sustaining Dublin's international competitiveness, the NPF presents the opportunity to consider options that deliver scale, diversity and world-class infrastructures. The consultation paper highlights a relative weakness in Ireland's position in terms of the number and scale of Tier two large urban centres.

Cork plays a key role as a driver of growth for the South West region – a region that boasts a compelling combination of urban living proximate to a distinctive natural landscape. It has a dynamic enterprise mix with depth in pharmaceuticals, ICT, food and tourism, with significant potential in medical devices and internationally traded services. There is potential for high density planning and the development of a new City Quarter, and implementation of an integrated light/commuter rail over the period of the NPF.

More recent developments and investments in urban regeneration, and changes to administrative structures have addressed one of the primary constraints that impacted on effective development of Limerick city in the past. It has core assets such as Plassey Technology Park, access to Shannon international airport, strong HEIs and research

⁸ Ibid, pages 74-78. A High Level Implementation Group has been established to drive the actions set out in the Dublin Action Plan

⁹ Ibid, pages 70-73

institutes with sectoral strengths in manufacturing, global business and internationally traded financial services. Limerick plays a key role in the development of the wider Mid West region.

Galway in the West is situated within a region that is rich with natural resources and habitat and has delivered strong economic performance. The city is recognised as a vibrant and cultural urban centre and the region benefits from the high visibility Wild Atlantic Way tourism strategy, its diverse enterprise base and HEI infrastructures which offer a host of opportunities for growth. Nevertheless, issues have been cited in relation to city planning, cross city commuting and congestion, and the need for strengthened land use and transportation strategies.

Each of these cities offer a range of third level education alternatives as well as a number of strategic research centres of international significance based on their research excellence.

Waterford plays an important role as a driver of growth for the South East Region. Further development and investment would be facilitated through the availability of high-specification office developments within the cities themselves as well as the strategic development of Belview and Rosslare ports. Waterford Institute of Technology (IoT) plays a strong role within the region and includes a number of key research institutes and effective connections with enterprise both nationally and internationally.

Urban concentrations – a strong regional complement to Dublin?

Can more be achieved over the period to 2040? The NPF offers the opportunity to set out a strategic vision to develop city-regions of scale in their own right and to interconnect these, such as the nascent economic corridor of scale between the cities of Cork, Limerick, Galway and extending to Waterford, that facilitates the synergies and growth potential that might not otherwise be achieved. If planned and developed in a coordinated way, this corridor could become a complementary growth centre for the country – building on its combined population scale, strong enterprise mix, education/research infrastructures and quality of life offerings. The functional area of these cities would stretch well beyond the cities through strategically planned approaches that enable interconnectivity between the urban areas and surrounding towns and counties. Planning and delivering the physical road networks and transport connections is only one element of realising such a vision, although an important one, which spans much broader inter-connections in relation to research, education, and enterprise clustering activities. Road investment priorities are set out in Appendix I, and IDA cites the upgrade of the N20 Limerick-Cork as being of primary importance.

There is also a need to further strengthen the connections between Waterford, Kilkenny, Carlow and Dublin in a planned way that recognises the strengths, assets and potential of each urban area in its own right.

As acknowledged in the NPF Consultation Paper, the UK's Northern Powerhouse Model is one approach to development that while unproven, merits some consideration. More recently, the UK has extended this approach in its Midlands Engine Strategy. The experience in Ireland of the Regional Competitiveness Agendas, South East Employment Action Plan and the subsequent Regional Action Plans for Jobs demonstrate the benefits of a focused and integrated approach to addressing development challenges.

Urban densification and urban policy

The development of an urban policy that sets out a strategic framework for city development is essential – acknowledging that different responses may be necessary for individual cities, based on their current land use and

functional footprint. We need to set out the policy instruments necessary to achieve the desired outcomes and specifically to address the doughnut city development evident in recent years¹⁰.

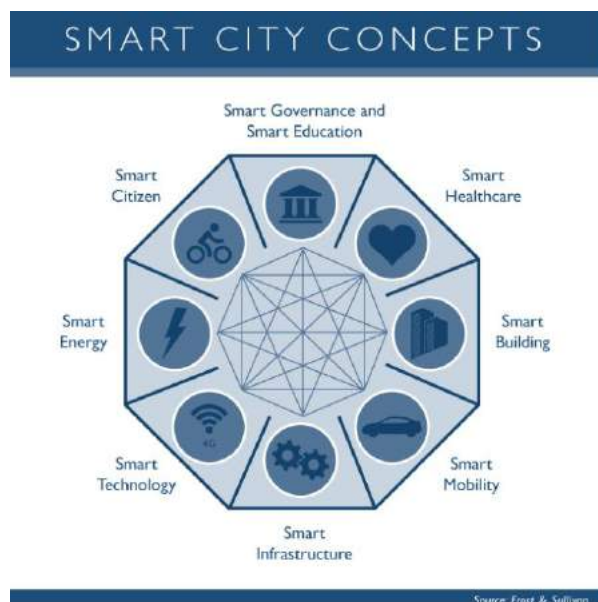
For all of our cities, a focus on urban renewal, brownfield site development, assessment of building height restrictions, integrated public transport networks and the implementation of effective land use and transportation strategies are crucial to ensure the growth of environmentally sustainable cities over the decades to 2040. A reduction in congestion, in private sector car use, and in journey times all contribute to productivity enhancements and a city's competitiveness. If Ireland is to realistically stand over its offering of a 'world-class infrastructure', then focused, targeted and considerable investment is needed as a matter of urgency¹¹.

Enterprise agency client companies and prospective investors cite the lack of availability of affordable housing as a significant obstacle to attracting investment and talent. As these city locations compete internationally for investment and talent, we need to determine appropriate density levels, informed by European city comparators.

Connectivity to their wider environs, high speed rail connections to Dublin, motorway interconnections between cities and international airports and ports is paramount to efficient and well planned growth.

First and foremost, it is crucial that each individual city is functioning efficiently, is environmentally sustainable, and offers an attractive environment in which to invest, start and grow a business, to live, study, visit and to work.

Smart cities



<http://www.forbes.com/sites/sarwantsingh/2014/06/19/smart-cities-a-1-5-trillion-market-opportunity/>

Many cities are seeking to derive place competitiveness benefits by developing 'smart' characteristics.

Although there is no single definition, at its simplest, the concept envisages a smart city as one that has digital technology embedded across all city functions. The smart city is a way to solve complex challenges and achieve policy outcomes: efficient use and deployment of infrastructure and services in context of increasing costs and reducing budgets, increase public safety, increasing entrepreneurship and attracting high value businesses, through the intelligent usage of technology. Although technology is a necessary tool in realising a smart city vision, technology is not the smart city itself.

While the objectives are to achieve environmental, economic and social sustainability through systematic integration of ICT in their planning, design, operations and

¹⁰ Although it did not proceed due to financial constraints, the Gateway Innovation Fund had stimulated the leadership and collaboration needed to develop 'Place' and vibrant urban areas

¹¹ Ireland is currently ranked 23rd in terms of infrastructure; at a sub-index level 40th for basic infrastructure, IMD, 2016 World Competitiveness Yearbook. Based on an assessment of 61 countries, using over 300 competitiveness indicators, which ranks and analyses the ability of national to create and maintain an environment in which enterprises can compete

management for the benefit of the citizen, smart cities boost the location's attractiveness for people and businesses, especially those who want to innovate¹².

From Ireland's perspective, Enterprise 2025¹³ highlighted that the smart city concept plays to our strengths in ICT and our small scale, and in this respect could constitute an opportunity to develop a differentiated offering, to attract mobile talent, entrepreneurship, FDI, and to stimulate innovation across all enterprise. One of the key challenges identified by Frost and Sullivan¹⁴ relates to the ability of private sector players to navigate public-private collaboration – and it is this collaboration that is a defining dynamic of nearly all smart city projects.

Role of towns in wider hinterland – Place-making and developing value propositions

Enterprise 2025 identified Place-making as one of the areas in which Ireland can differentiate itself in an international context. Place-making is the process of creating quality places that people want to live, work, play and learn in – that is, creating a *strong sense of place*. This extends well beyond urban policies. It is a multi-faceted approach to the planning, design and management of public spaces, and that capitalises on a local community's assets, inspiration and potential. Establishing a strong sense of place contributes to the attractiveness factors for entrepreneurship, for business investment, for FDI, for talent and for tourism¹⁵.

Throughout Ireland, we have a range of other large scale towns that provide significant opportunity for growth. The enterprise development agencies cite the importance of towns such as Sligo, Letterkenny, Athlone, and Carlow providing potential urban growth centres, inter-connected with settlements in their regional hinterland and with each other where relevant. The enterprise development agencies cite potential in Sligo/Letterkenny in the North West for a Global Services (virtual) Centre outside of Dublin; Athlone and the Midlands has a strong life sciences and services cluster from which to build.

The Institutes of Technology (IoTs) can play a stronger role than they do currently as key focal points for education, innovation and connections with enterprise. Again issues of physical infrastructures, international access, existing enterprise strengths and access to skills are important determinants of success.

Absolutely critical is the need for high-speed digital infrastructures if we are to realise potential – acknowledging that broadband in and of itself is not the only solution. But without it, there is little prospect of attracting and retaining businesses that trade on international markets, or that could operate with a dispersed work-force model (homeworking). In addition, the current target of 50mb up/down speeds for the National Broadband Plan are too low and not reflective of current industry needs of 100mbps. The evidence underpinning the NPF and the objectives that flow from this will likely further the case for State intervention in areas with potential for growth, but which remain uneconomically viable for private sector investment currently.

¹² Examples of smart city initiatives include: Amsterdam Smart City (ASC); Barcelona (e.g. Open Data BCN); Copenhagen (first carbon neutral city ambition); and Esbjerg, Denmark (Next Step City)

¹³ Enterprise 2025, Innovative, Agile, Connected, Ireland's National Enterprise Policy 2015-2025, Background report, DJEI, November 2015

¹⁴ Global Smart City Market, a €1.5 trillion growth opportunity in 2020, Frost & Sullivan

¹⁵ Enterprise 2025, Innovative, Agile, Connected, Ireland's National Enterprise Policy 2015-2025, Background report, DJEI, November 2015; refer also to People, Place and Policy: Growing Tourism to 2025, Department of Transport, Tourism and Sport, 2015

There are other towns and villages that are located outside the influence of cities or large towns which have a vital role to play in delivering economic growth. Where there is an existing third level institute and strong enterprise base, there may be potential to win FDI projects. For some areas economic growth is more likely to be driven by the indigenous base and tourism sectors, or by new approaches such as IDA Ireland led our 'Working from Home', Virtual Working projects and/or hub and spoke models¹⁶. These initiatives can result in increased employment opportunities in regional locations which may lack employers of scale and where there is an availability of skills. The main roles suitable for homeworking including multilingual customer services, tech support, IT/software related activities.

Addressing the key challenges for town centre renewal can help to create vibrant town centres, that support local communities and jobs, which in turn helps to make a place attractive to live, work and invest in. There is no one solution. Each town, location and region faces both opportunities and challenges that are specific to it. There are examples of where a community has tapped into its local networks and defined its unique value proposition including Skibbereen as and ICT hub, Clonakilty and Westport amongst others.

Competitive funding initiatives can provide the stimulus needed to harness local and regional actors to identify their unique platforms for growth. A number of town renewal initiatives have been launched by the Department of Heritage, Arts, Rural, Regional and Gaeltacht affairs. A Framework for Town Centre Renewal will be launched by the Minister for JEI by the end of April¹⁷. The Regional Action Plans led by DJEI harness the local knowledge, energy and commitment to take action that aims to stimulate economic growth.

It may be timely to assess how effective such initiatives have been and to capture lessons learnt. Successful case study examples should be analysed to identify factors of success and promoted.

The development of any further initiatives likely require a cross-departmental approach, clear definition of objectives, and to be of a scale and duration that is appropriate to ensure that positive impact is sustained over a longer period.

A specific focus on the Border region and all-island perspectives

The configuration of the Border region and its physical geography has set it apart from other sub-regions (former NUTS III regions). In reality, it incorporates three independent urban areas – Sligo, Letterkenny-Derry and Dundalk-Newry. It has been a region long challenged by the previous unstable political situation in Northern Ireland, although developments and investments in the past decade had seeded the basis for change and future growth. Brexit has brought with it a particular significance for these counties. The outcome of negotiations is unknown. At a practical level, the unknown implications arising from currency fluctuations, possible border controls and continuing investments in cross-border infrastructure create uncertainty.

The enterprise development agencies cite the potential to build on the recent growth in internationally traded services activities in the region, and particularly in the Donegal/North Western border area. There has been

¹⁶ IDA Ireland is tapping into the emerging trend in the US of companies operating home working programmes, that facilitate staff working from home – varies from one day per month to 100% dedicated homeworking

¹⁷ Forthcoming – The Retail and Town Centre Renewal Working Group (as part of the Retail Consultation Forum), and in response to the Joint Oireachtas Committee on Jobs, Enterprise and Innovation report on Policy Options to Support Business Growth and Job Creation and Retention in Town and Village Centres

growth of 34 percent in employment in agency supported internationally traded services in the region over the past decade, and a substantial 350 percent since 1996. If we are to realise this ambition, investment in broadband and associated skills sets is paramount.

A more in-depth analysis may be required to appreciate the potential implications arising from Brexit on the economic development of our border counties, including addressing the need for structural shift in enterprise capability and sectoral mix, attractiveness for investment and talent, specific infrastructure needs etc. Having said that, investment to complete road infrastructures to the North West from Dublin and the Western region is crucial.

The NPF needs to acknowledge the challenges we face and more specifically in relation to cross-border collaboration on infrastructures, and/or the implications for our own national infrastructure investment priorities, depending on developments post-Brexit. This is particularly the case in relation to energy network inter-connectivity, resilience and redundancy in broadband infrastructures, road networks and international access (air/ports). While it is challenging to be definitive, some judgements will need to be made in the context of potentially significant change on the island of Ireland.

A study undertaken by InterTrade Ireland identified a number of areas of potential advantage that could be realised by taking an all-island approach to sectoral eco-system development. The findings indicate that the benefits of all-island interaction lie primarily in the areas of the labour market, education and training, infrastructure provision, goods and services markets, research technology and innovation. The study provided a snap shot of the areas of opportunity that included Pharmaceuticals (coordination of research centres, institutes and education networks); medical devices (cooperation in the health information sector, training in commercialization) and software development (all-island internship scheme and research collaboration).

The DoHPCLG consultation document states that ‘irrespective of the impact of Brexit, cross-border collaboration will be maintained’. The potential outcome of the UK-EU negotiations remains uncertain, and the NPF may be well placed to specify the areas in which ongoing cross-border collaboration can continue to mutual benefit without disruption.

Regional differentiators – clustering approaches

Clusters and clustering activities vary in their configuration in terms of geographic concentration, the core and defining specialisation; the actors involved; the dynamics and linkages that occur; critical mass; lifecycle and degree of innovation. Today, clusters are widely accepted as an important factor for economic development and research has shown that the State can have a very effective role in enhancing the scale and competitiveness of clusters. Ireland’s landscape of clustering activity, as distinct from ‘just’ colocation, continues to evolve and can be described as nascent relative to other developed economies.

Although not regionally confined, there are some concentrations in sectors that can form an opportunity for regions to differentiate themselves internationally to set themselves apart as being a place that is known for a particular specialism.

From a regional development perspective, there is an opportunity to build on the approach being driven by the Regional Action Plans and the regional skills fora and to strengthen inter-agency approaches to sectoral development. Enterprise Ireland is scoping an initiative that will deliver on DJEI’s commitment to a €60 million regional fund, which could play a key role in identifying areas of opportunity.

What needs to be done to increase human capital at regional level?

The HEIs (Universities and IoTs), Technology Centres and Research Centres play a key role within their regions and need further investment to enable deeper community engagement – to interact with businesses within their area, to stimulate innovation, business networking, dialog on skills needs, specific training/education courses, public engagement with science, technology, engineering, maths etc. See Appendix III.

As highlighted above technological trends will have implications for the world of work in the future. The development of augmented reality/virtual reality, artificial intelligence and robotics are likely to have increased applications in a wide range of sectors from obvious ones such as manufacturing to less obvious ones such as tourism. An aging workforce will mean we need to take lifelong learning and skills training much more seriously. Responding to the challenges these new technologies will present requires a flexible and adaptable approach to skills development and lifelong learning at the regional as well as the national level.

The regional skills fora that have been recently established and are supported by Department of Education and Skills represent a good starting point for region specific human capital development.

This approach to developing an informed two way dynamic assessment of skills needs, supply and demand, and training/re-skilling solutions available regionally needs to be kept under review (what's working, what's not) and more deeply systematised over time. This reflects a broad agenda capturing all skills levels and occupations, as well as a range of approaches and solutions that serve to embed life-long learning as part of our 'way of doing things' - including apprenticeships, in-work re-skilling, higher and further education alternatives, tailored sectoral courses.

This is particularly pertinent in the context of ongoing change that continues to be driven by technological advances and at an unprecedented pace.

The environmental sustainability imperative

Ireland has been given ambitious national objectives in relation to reducing CO₂ carbon emissions and to achieving longer term environmental sustainability. Even as it stands today, current pressures mean that we are likely to miss both the 2020 and 2030 EU emissions targets.

The NPF is a crucial policy instrument in this regard. Planning decisions need to be sustainability-proofed in light of Ireland's projected population growth so that we do not inadvertently further increase pressures on the environment. Long commutes, single vehicle occupancy, congestion and ribbon developments all contribute to environmental pressures, and now is the opportunity to do something to redress these problems. We have already highlighted the need for effective land use and transportation strategies and for smart integrated public transport networks within and between cities. Not only would such approaches and infrastructure investments contribute to increased productivity and competitiveness, but they would also contribute to reducing CO₂ emissions in Ireland which are among the highest in Europe on a per-capita basis.

In addition, public sector procurement of innovative solutions could provide a considerable stimulus and reference site for our Irish-owned technology-rich enterprises.

Effective planning is central to realising a de-carbonised Ireland through encouraging increased population densities, public transport connectivity and options, and the enforcement of energy-efficiency standards in new-builds.

Diversifying energy sources and supplies is critical to ensure security of supply. Ireland currently imports the vast majority of its energy needs and has relatively low levels of interconnection and storage capacity. The NPF should seek to be part of the solution to the mismatch between the location of energy generation and the location of demand, and can also provide an evidence-based context for decisions regarding energy interconnection, both north-south and east-west. The NPF can also set out strategic zones for renewable energy infrastructures such as onshore windfarms and inform relevant grid connection policy.

The NPF should include a strong focus on climate change adaptation measures. Climate change is already occurring, and Ireland needs to put in place infrastructure that will enable it to adapt to the changing climate. This infrastructure takes two forms: dealing with long-term climate change effects on existing infrastructure, such as rising sea levels, and developing resilience to acute and extreme weather events such as flash flooding. Most of this infrastructure (coastal defences etc.) is productive capital investment. Planning has a role in ensuring this infrastructure is constructed in a timely manner to reduce the economic and societal impacts of ongoing climate change. Planning also has a key role also in the prioritisation of vulnerabilities in the infrastructure system to ensure that the most critical elements of climate change adaptation infrastructure are frontloaded.

Do we need to reform administrative and governance structures?

Some reform has already been undertaken in relation to governance and administrative structures. Progress is being made in a number of our urban areas including Limerick and Cork. The implementation of the NPF will be reliant on its statutory status in the first instance, on the specifics set out in the Regional Spatial and Economic Strategies (RSES) and alignment with the NPF, on subsequent local planning development decisions. To be effective the NPF needs also to inform priorities in the present Capital Plan and its successors. Within the national framework, mechanisms need to be put in place to empower (and appropriately fund) local authorities to respond to evidence-based constraints that hinder economic growth – congestion in Parkmore, Galway is a clear case in point.

It is important that the RSES take a broad regional perspective that, while informed by local and sub-regional evidence, is not limited by Local Authority, county or sub-regional boundaries. As a small country, we need to be aware that sub-regions are not necessarily viable economic entities in their own right and should not be seen in isolation from each other despite the application of necessary administrative boundaries. Therefore not every region needs to have all elements of infrastructures within regional boundaries e.g. Universities, Research Institutes, airports etc. In addition, although proximity and sectoral concentration may attract business investment and start-ups, clustering activities are not limited by administrative boundaries. It is the ease of access across 'boundaries' that is crucial.

At a very practical level, Ireland's institutional framework for planning and delivery of national infrastructures is fragmented. Infrastructure investment involves a host of Government departments, regulators, local and regional authorities, state-owned providers as well as the private sector. Under the current construct, there is little opportunity for unlocking the potential of a region by investing in combinations of infrastructure for example. This lack of coordination means that economies of scale are not being maximised, contribute to cost overruns and delays, and weaken the ability to jointly deliver projects.

A statutorily based NPF combined with institutional reform is key to effective implementation.

There is the opportunity to consider approaches used in other countries, to establish sectoral fora, to embed a more integrated approach to infrastructure planning and delivery, and embed rigorous ex ante evidence basis for the delivery of publically-funded infrastructures¹⁸.

We need also to consider how the planning process can best take account of ‘not in my back yard’ objections, engage in more informed consultation from an early stage in the process. One of the objectives of the NPF is (and must be) to move Ireland away from sub-optimal business as usual processes. Part of this means providing the statutory framework which ensures that the correct decisions for Ireland are made and are not thwarted or unduly delayed by narrower interests. For example, the NPF should play a role in setting out zoned areas for particular types of developments (e.g. wind farms, waste infrastructures etc.) having regard to national objectives in relation to sustainability, preserving the landscape, and economic imperatives for example.

A reality check – investment with limited resources

We know that public capital investment in physical infrastructures is low currently – and much lower than it needs to be to address Ireland’s potential demographic and economic growth. Some investments are being made with these limited resources, although in many instances the time-line for delivery is toward the latter stage of the current capital plan (2021).

We need to make clear, strategic and evidence-based choices to support the productive sector in the first instance.

In that context we need to prioritise investment to:

- Address bottlenecks that are constraining growth today;
- minimise new bottlenecks (invest in advance of/ preparing for demand);
- invest where economic development is likely to occur (or where we would like it to under the NPF); and
- unlock potential of regions throughout Ireland, with a particular focus on realising the benefit of investing in combinations of infrastructures.

While NPF may not be intended to list specific investment projects – our agencies have identified a number of instances where the lack of investment is currently constraining our capacity for growth – Appendix I

Further discussions are warranted in the context of the review of the Capital Plan to consider options that would allow Ireland to invest at an earlier stage within the period of the plan, while continuing to have regard for fiscal rules. For example, should new opportunities or flexibilities emerge within fiscal rules which allow for more adequate levels of investment, the NPF should provide the evidence-based context for decisions about how and where that investment is made.

Strategic investments within the overarching national context, and actions focused on maximising the competitive advantages and potential of each of the regions are key to ensuring each region can both benefit from and contribute to Ireland’s future national growth.

¹⁸ Refer to National Planning Framework Position Paper, DJEI, July 2016 (unpublished)

What choices are needed?

We cannot predict the future – nor can we be overly prescriptive in terms of where people choose to live, or in terms of where companies establish, grow and create jobs.

Nevertheless, we can make policy choices today that will influence the pattern of investment. Public sector investment, effective zoning and strong planning regulations will in turn leverage and stimulate private sector investment.

There are a small number of critical elements:

- Connectivity in terms of: transport and digital infrastructures (making Ireland smaller!) that enable the easy mobility of people and goods; in terms of interconnectivity between urban centres; national and international connectivity; between places within urban areas; making optimum use of smart technologies and delivering enhanced productivity, efficiencies, quality of life and overall competitiveness.
- Concentration of developments to build scale and internationally competitive locations of choice for investment and for people to work, visit and live. This involves considerations regarding densities, brownfield investments, urban renewal, land use and transportation strategies, clustering activities, and how we ensure that smaller towns and villages are connected through technologies, community and physical infrastructures.
- Delivering environmentally sustainable growth that, in addition to the items above, requires determining preferred locations for investment in renewables, grid connections, smart city initiatives, etc.
- Celebrating difference.... Not all regions are the same and we need to harness the best of what Ireland offers as a country, and make strategic and informed choices about preserving our heritage, culture, land and seascapes; and developing distinctive propositions for a region based on its natural assets, enterprise mix, and population. The NPF should aim to develop an Ireland that is 'boundary less' and is connected.

Appendix I

Priority National (and regional) capital investment projects

Based on their ongoing engagement with enterprises, the development agencies have identified a number of infrastructure requirements that without investment, are already acting as a constraint on potential growth.

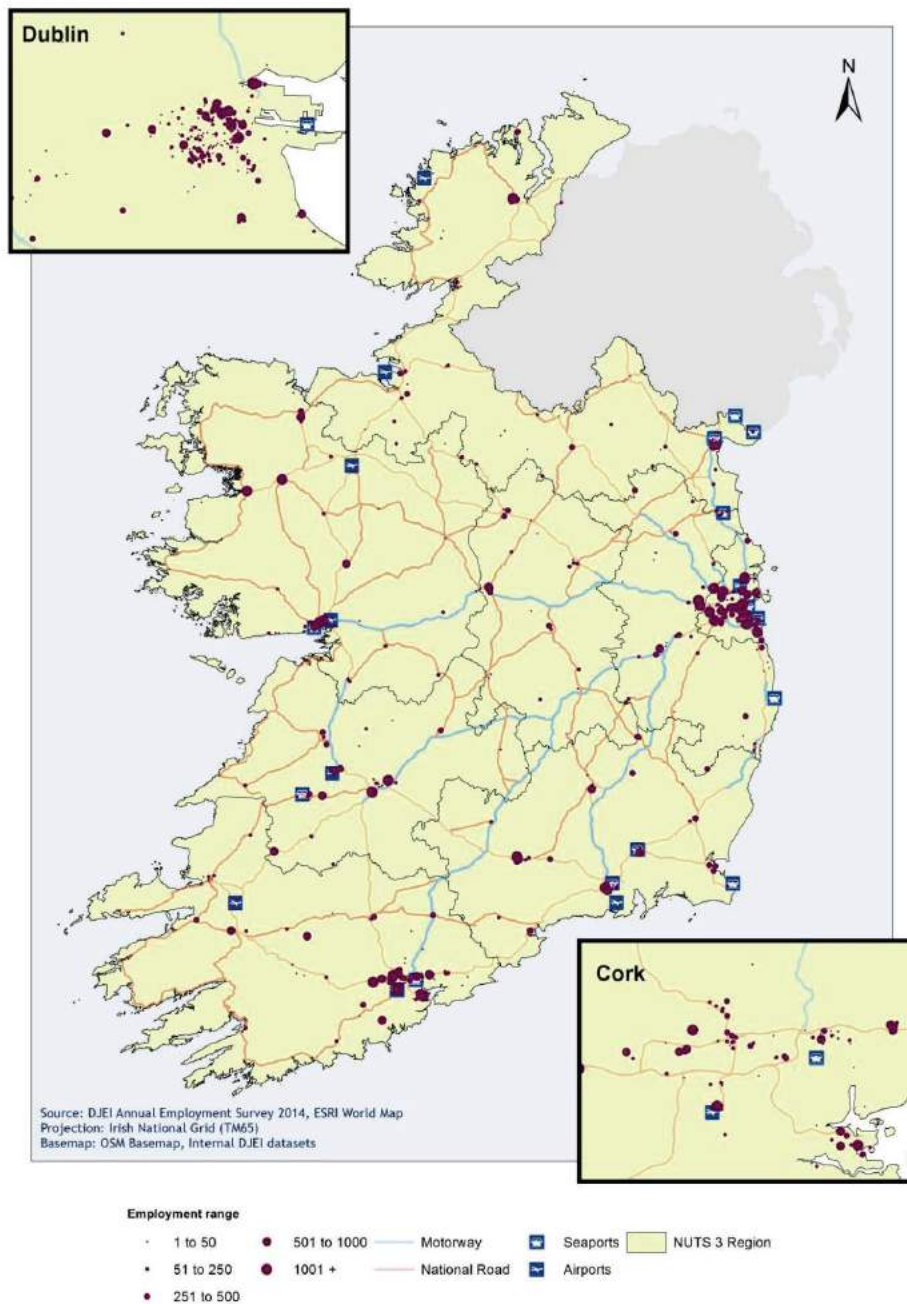
Addressing current constraints Projects 1-14 are mentioned in the existing capital plan: additional resources should be allocated to bring forward delivery, and completion date set out	Addressing potential barriers to growth and unlocking economic potential Priorities identified by enterprise development agencies: informed by enterprise needs	Longer term strategic national projects
<ol style="list-style-type: none"> 1. N4 Collooney to Castlebaldwin section of Dublin-Sligo road 2. M7 Naas-Newbridge widening project including the Sallins Bypass and new Osberstown interchange 3. N59 Moycullen bypass outside Galway on the road to Sligo 4. Grange Castle Business Park works in west Dublin 5. Dunkettle interchange which links the M8 Dublin-Cork, N25 Waterford-Cork and N40 Cork South Ring Road-Ballincollig routes 6. N28 Cork to Ringaskiddy 7. N22 Ballyvourney to Macroom section of the Cork-Killarney-Tralee route 8. N20 Limerick-Cork upgrade, N21 Limerick-Tralee upgrade / Adare 	<ol style="list-style-type: none"> 1. Deliver water/wastewater infrastructure improvement schemes at Vartry, Ringsend and Stillorgan, and the Dublin Region Watermains Rehabilitation project. 2. Address the winter-peak electricity supply deficit in Dublin region, and overall deficits, by specific dates 3. Deliver the necessary energy capacity to strategic sites (e.g. for data-centres) 4. Bring Corrib gas supply up to capacity 5. Improve gas interconnection to Scotland 6. Deliver the second, North runway at Dublin Airport and address other airport bottlenecks 7. Increase LUAS Green Line capacity 8. Design of Bus Rapid Transport option (Blanchardstown to UCD, Clongriffin to Tallaght) 9. Install travel demand management measures for the M50 (e.g. multi-point tolling, ramp metering) to reduce congestion) 10. Invest to improve competitiveness of rail freight options 11. Promote private investment in thermal, biological and 	<p>Facilitate the implementation of national port and aviation policies through coordinated planning, use of Strategic Development Zones, and to facilitate timely investment in access routes (incl Foynes, Waterford, Rosslare) [See item 13 in column 1]</p> <p>Strengthen roles of key airports/access routes that serve South West/West regions (Shannon, Cork) and potential for economic growth</p> <p>Improve competitiveness of commuter rail options including inter-city, e.g. Sligo-Dublin and light/commuter rail options in urban areas</p> <p>Plan for motorway Limerick-Cork</p> <p>Assess potential/demand for outer orbital</p>

<p>Bypass</p> <p>9. Sections of the N25 Cork-Waterford road</p> <p>10. Galway city Outer Bypass</p> <p>11. Preparatory design and planning work for Metro North</p> <p>12. Preparatory design and planning work for DART to Balbriggan</p> <p>13. Greater Dublin Drainage, and Eastern and Midlands Water Supply projects</p> <p>14. Develop deeper water facilities at Irish ports</p> <p>15. Deliver North-South electricity interconnector</p> <p>Not in Capital Plan (regional issue) : significant constraint</p> <p>16. Address congestion in Parkmore, Galway</p>	<p>recycling facilities</p> <p>12. Upgrade N52 Tullamore – Portlaoise; Mullingar – Ardee</p> <p>13. Continue upgrades along N5</p> <p>14. Extend M17 Tuam-Sligo</p> <p>15. Upgrade N24 Limerick-Waterford</p>	<p>route in Dublin subsequent to implementation of effective LUTS, integrated transport networks within/across the urban area and densification strategies.</p>
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Appendix II

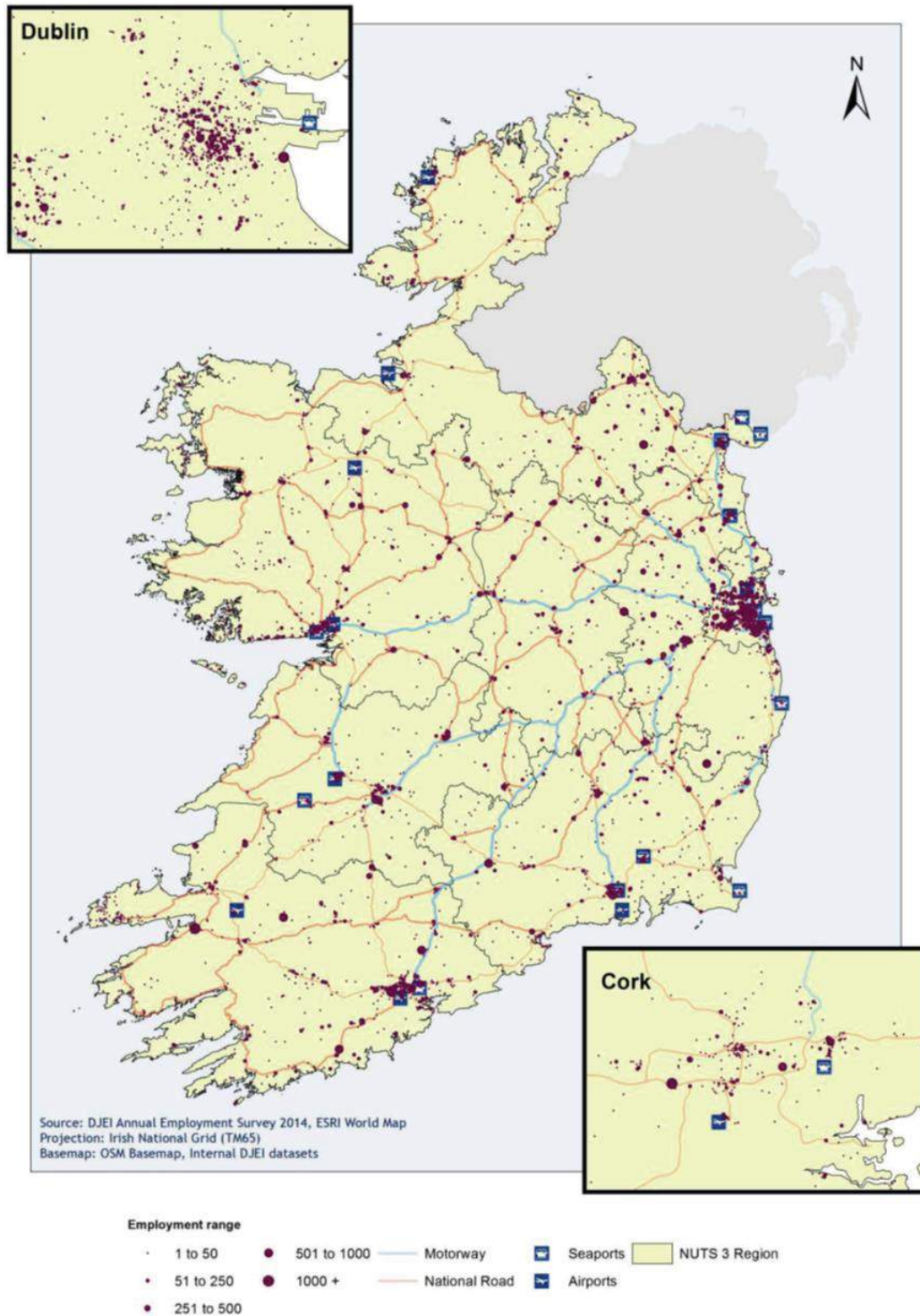
Distribution of agency supported companies - 2014

Foreign owned companies in 2014 classified by employment



See Enterprise 2025 background report : although relating to 2014 data, the key message regarding distribution remains valid. Maps can be updated if required

Distribution of agency supported Irish owned companies in 2014 classified by employment size



Appendix III

Education institutions, Research and technology centres

 Universities  NUI Colleges  Institutes of Technology  Private Institutions

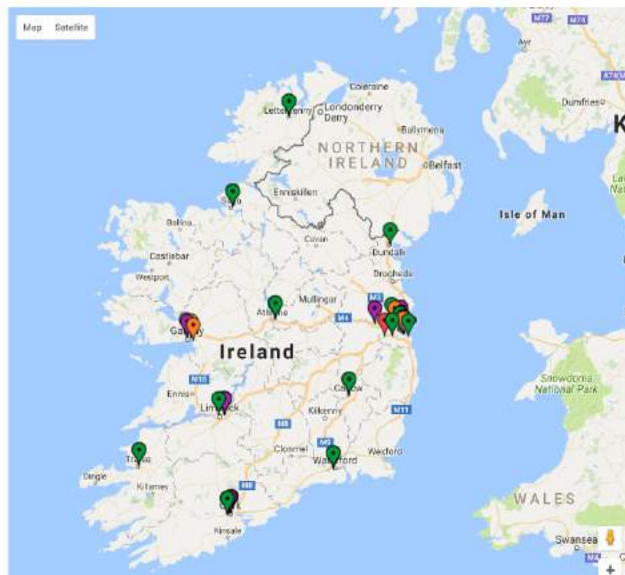


RESEARCH MAP OF IRELAND

Research in Ireland / Research Map of Ireland

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-  ARCH - Applied Research for Connected Health - Dublin [View profile](#)
-  Ashlone Institute of Technology (AIT) TTO [View profile](#)
-  BDR - Biomedical Diagnostics Institute - Dublin [View profile](#)
-  CAPPA - Centre for Advanced Photonics and Process Analysis - [View profile](#)

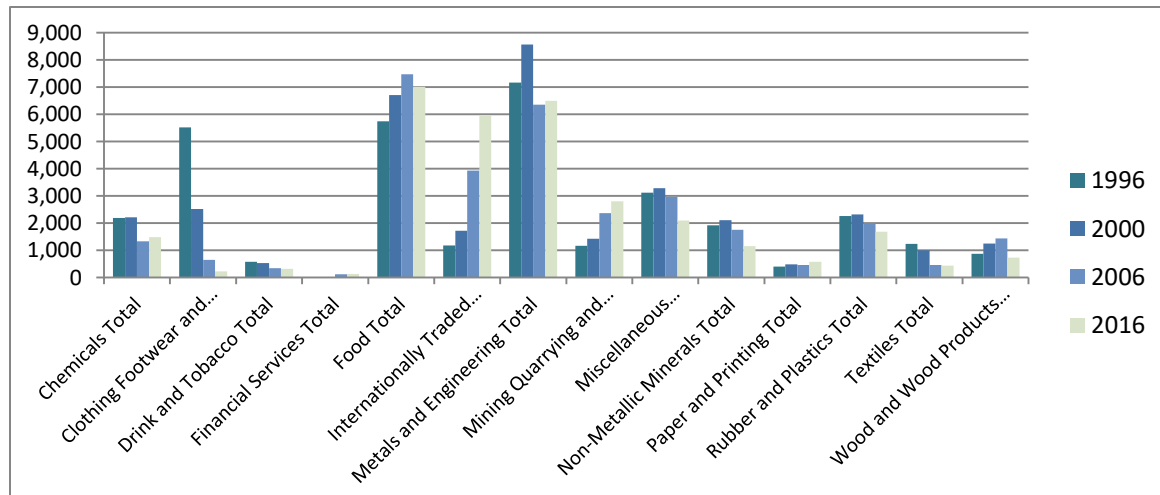
Relevant maps can be developed for NPF – including e.g. sectoral concentrations etc.

Appendix IV

Enterprise agency supported full time employment by sub-region

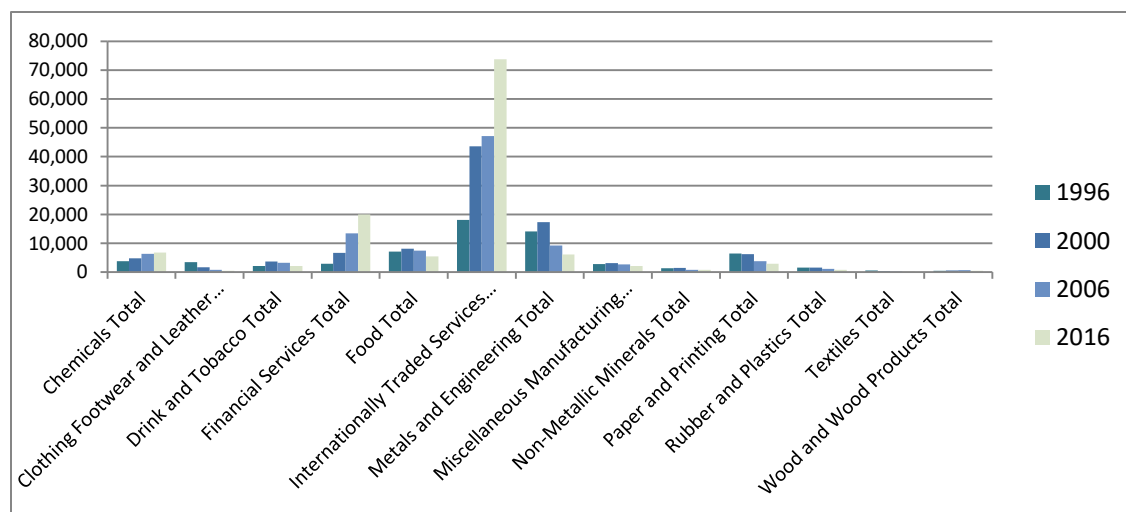
The time series covers the dot.com era 1996-2000, the boom peak circa 2006/2007 and recovery period to 2016 - DJEI Annual Employment Survey.

Border : 1996-2016



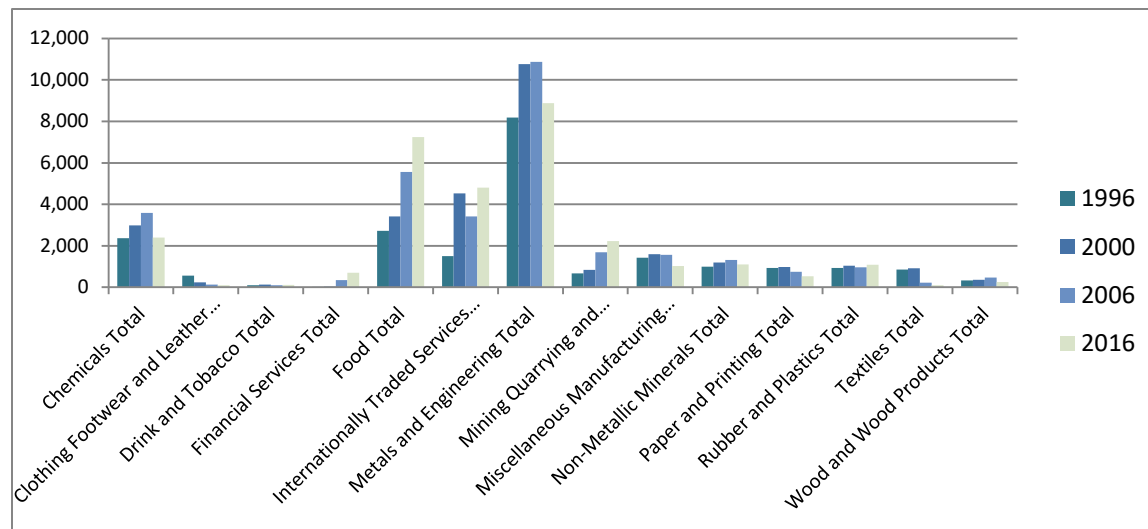
Total full-time permanent employment in agency supported enterprises in 2016 was circa 31,000. Decline in footwear and leather has been replaced largely by strong growth in Internationally Traded Services, while food and Metals & engineering have continued to be key contributors to total employment over the period 1996-2016

Dublin : 1996-2016



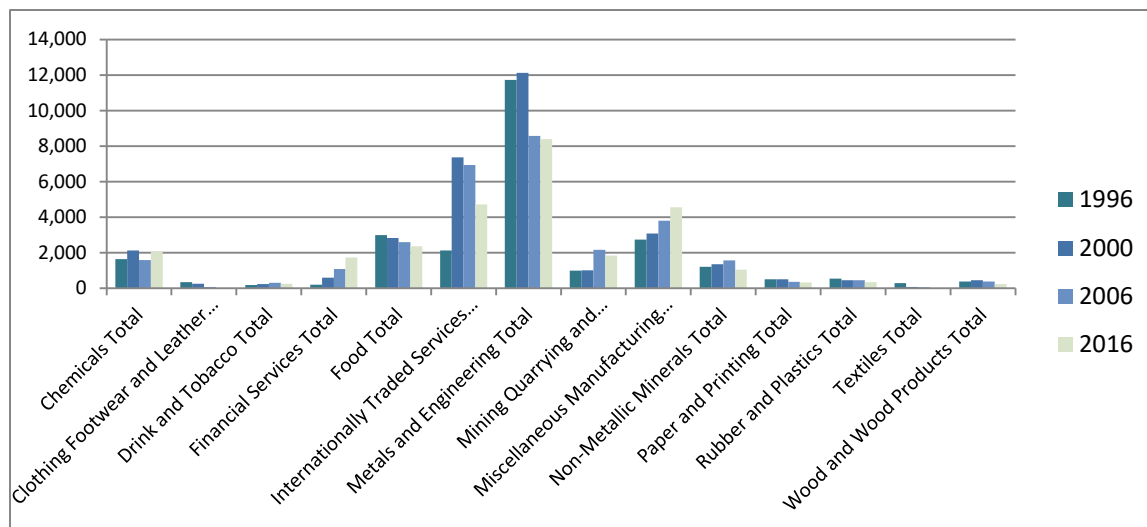
Agency supported enterprises based in Dublin employ 122,100 full-time permanent. Sixty percent of this employment is in the internationally traded services sector and financial services contribution to employment continues to increase over the period since 2016. Employment overall has increased by almost 90 percent over the period when 64,650 were employed in 1996.

Mid East : 1996-2016



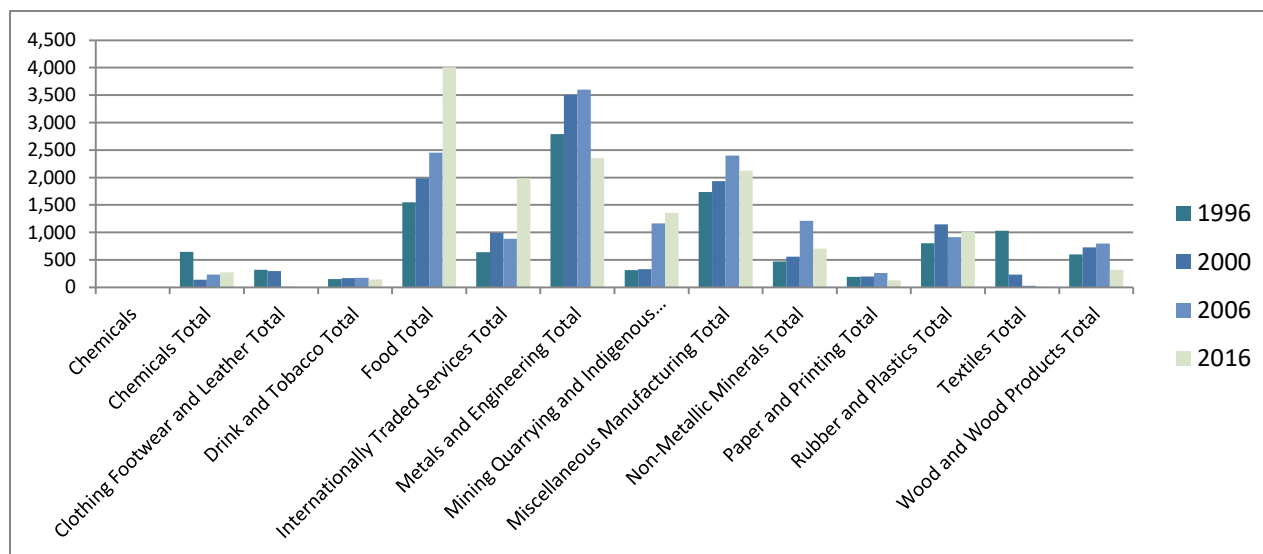
Total full-time permanent employment in agency supported enterprises in the Mid East in 2016 was circa 31,000. Manufacturing (metals and engineering, food and, chemicals miscellaneous manufacture) continues to feature strongly, with solid growth in food, and a more uneven growth pattern for metals and engineering and chemicals. The emergence of services is also evident.

Mid West :1996-2016



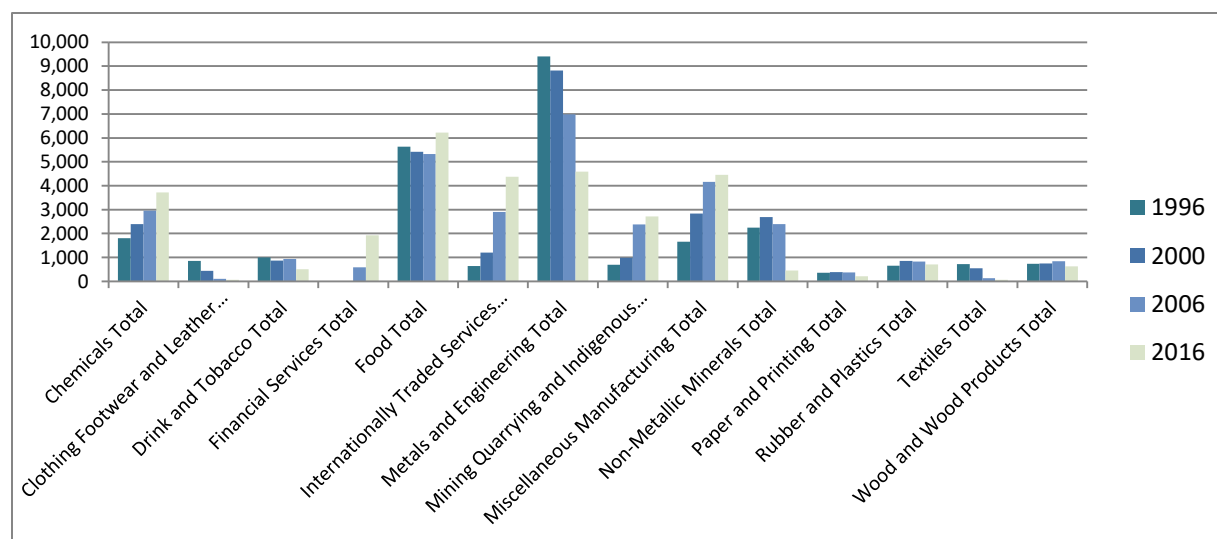
Total full-time permanent employment in agency supported enterprises in the Mid West in 2016 was circa 28,000. The region has witnessed a decline in metals and engineering over the period together with a mixed growth pattern in internationally traded services. Agency supported employment in this region has been relatively stable over the past two decades.

Midlands : 1996-2016



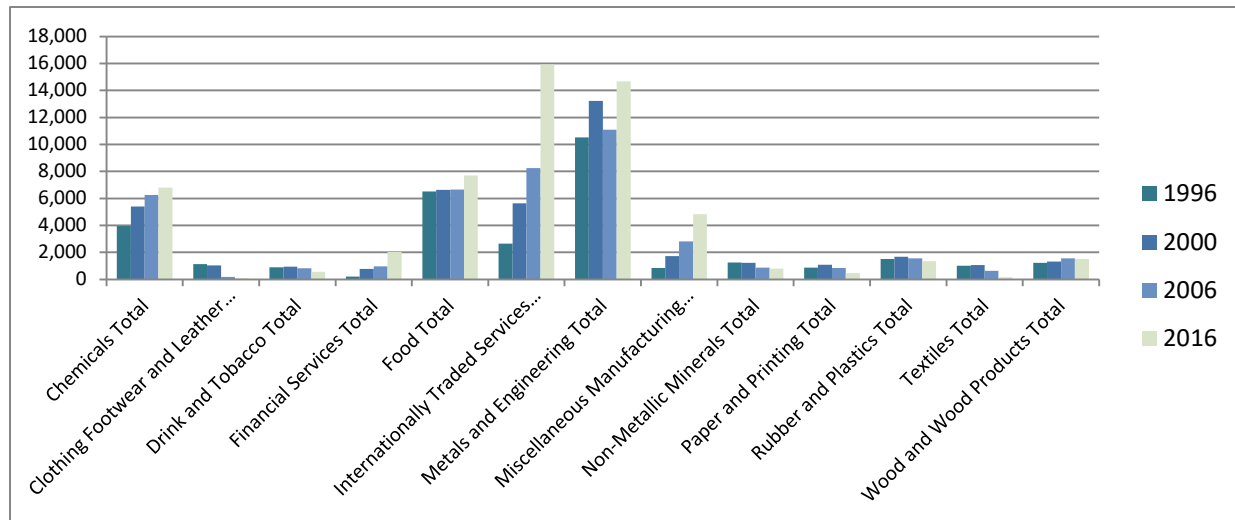
Total full-time permanent employment in agency supported enterprises in the Midlands in 2016 was circa 11,200. The data indicates a shifting and diverse sectoral mix, with food and internationally traded services demonstrating considerable growth over the past decade. The region remains involved pre-dominantly in manufacturing activities although the level of sophistication cannot be determined by employment data.

South East : 1996-2016



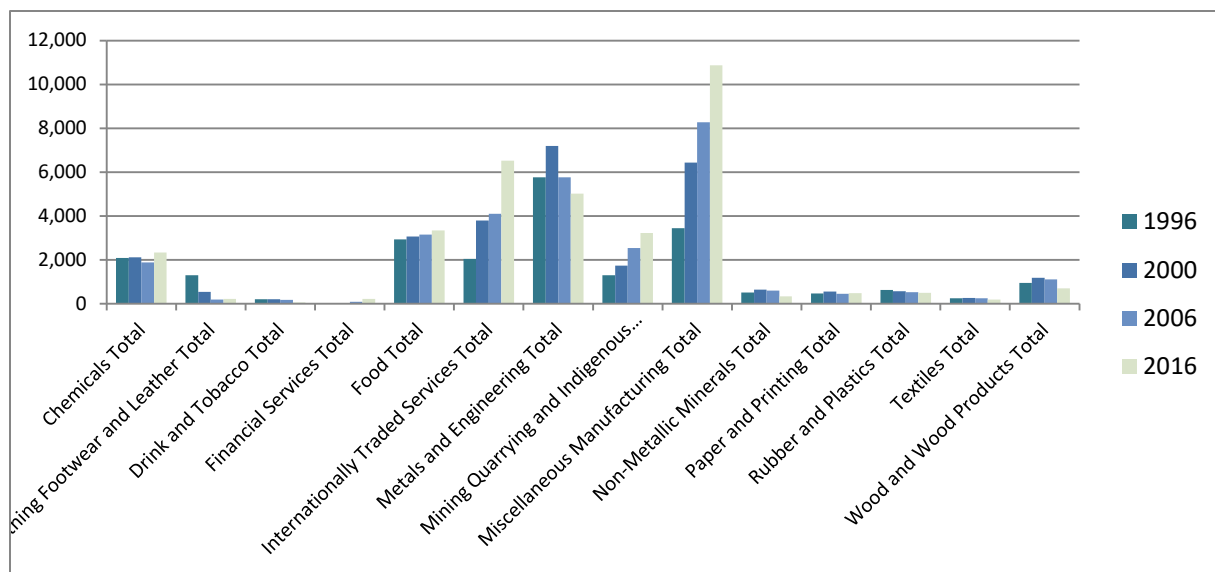
Total full-time permanent employment in agency supported enterprises in the South East in 2016 was circa 30,600. Manufacturing activities (excluding food) now contribute 42 percent to employment compared with 49 percent in 1996 although the mix between sectors has shifted from metals and engineering to chemicals and other manufacturing activities. There is also evidence of increasing contributions from services in the past decade.

South West : 1996-2016



Total full-time permanent employment in agency supported enterprises in the South West in 2016 was circa 56,901 and demonstrates considerable growth since 1996 when agency supported employment was 32,552. The region demonstrates a strong sectoral mix between services and manufacturing activities, with particularly strong growth in internationally traded services over the past decade.

West : 1996-2016



Total full-time permanent employment in agency supported enterprises in the West in 2016 was circa 34,900 and increase of over 13,000 since 1996. The significant growth in miscellaneous manufacturing relates primarily to medical devices and strong and continuing growth is evident in internationally traded services.