

## The Knowledge Economy



March 2016

### Introduction by Party Leader



I am pleased to commend the third of our policy papers to you.

Our vision for Northern Ireland is that we become one of the greatest small countries on earth in which to live, work, and invest. Part of getting there will require we take steps to develop our nascent Knowledge Economy. Across the globe, clusters of innovation, collaboration and new economic activity are developing which are transforming economies in those places, and Northern Ireland is poised to make the same journey.

The economic success we enjoyed during the industrial age relied upon the talents and ingenuity of our people. Today, when human capital is key, our people remain our greatest asset. Our talented and educated youth are the basis of our fantastic economic potential.

Developing the Knowledge Economy can do more than anything else to transform the lives of everyone living here. It will allow young people to realise their tremendous potential while remaining in Northern Ireland. It will attract new jobs and investment to these shores. And it offers the best chance to move from economic reliance, to becoming a valued net contributor to the UK economy.

Harnessing the potential of the Knowledge Economy is not a matter of quick fixes. The global, digital, interconnected future has already arrived, and politics in Northern Ireland is playing catch-up. If the Stormont Executive is to help us revisit the success of our past, then it needs to change the way it does business. Making aspirational statements or commissioning strategy papers are not enough. Seeking inward investment is not enough. We need more than 'business as usual' in the next Stormont mandate.

We require a government capable of leadership and vision, taking strategic decisions, and who will work together and with business. An Executive with the maturity to do this will help set the foundations for our Knowledge Economy to flourish.

Business expects more; you require more. It is high time the Stormont Executive raised its game. Our futures and those of our children depend on getting this right.

Mike Nesbitt

Leader, Ulster Unionist Party

### Overview

"In Europe, even as the old economy has stumbled, innovation and entrepreneurship have gone mainstream."

-EY, 2015 European Attractiveness Survey

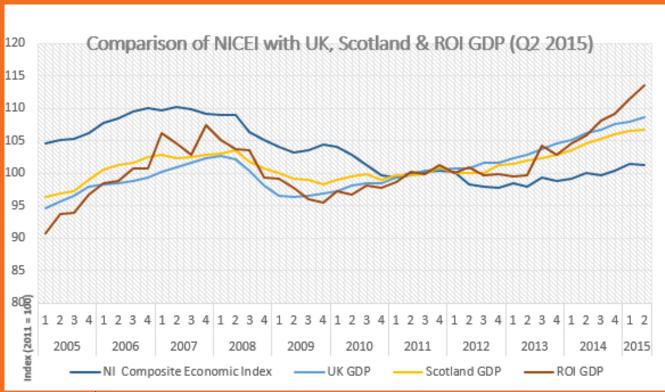
In the last two decades the manner in which businesses are created, run and develop has changed remarkably. In digital clusters across Europe, entrepreneurs are collaborating in workspaces, sharing ideas, developing connections and attracting capital. This is unlocking worldbeating patents, services and products. Collaboration and co-working is becoming the norm. Business is mobile, and can move to locations with better talent and conditions.

Growing our Knowledge Economy will transform not just the wider economy but society as a whole. It will raise our standards of living, enhance our quality of life, and improve political stability. We are particularly well-placed to develop our Knowledge Economy because of our comparative advantage in that most important component for creating growth and attracting investment and talent.



Our private sector is relatively small, and our Knowledge Economy is the tenth largest out of twelve UK regions. But it is also the second fastest growing, and offers an unprecedented opportunity to transform our economy. Our tech firms are increasing, and now attracting significant investment capital. Manufacturing exports and R&D investment are growing. In 2012 we attracted 7% of total UK jobs generated by inward investment compared to our population share of less than 3%.

According to the Enterprise Research Centre, entrepreneurs in NI are most likely to reach £1 million turnover within three years<sup>iii</sup>, but we have a particular need to grow the scale, output and number of local businesses. In 2014 Northern Ireland had the lowest number of new business births, and worst business births/deaths ratio of any UK region<sup>iv</sup>. We must also strike a better balance of public and private sectors. Our public sector is 26% of our total employment compared with 16.1% in England<sup>v</sup>. This imbalance, which protected us from the worst of the economic downturn, may hinder recovery as conditions for growth return. Gaps in growth, GVA, employment and productivity with the rest of the UK and the ROI are increasing.



Source: DETINI<sup>vi</sup>. NB NICEI is approximate to GDP, in a NI context

This trend will likely continue as the impact of austerity measures feed through to Northern Ireland. Setting a goal of developing a globally-recognised Knowledge Economy hub is realistic and necessary if we are to close the gap with the rest of the UK.

Below we set out ideas to encourage growth in the Knowledge Economy. Many are achievable in the short term. Others require more profound changes to how the Stormont Executive works

With a change in attitude and priorities, we can work to create the conditions in which the Knowledge Economy can thrive. We concur with the NI Science Park, who in 2012 outlined a vision of a successful Knowledge Economy by 2030 and developed eighteen stretch targets. If these targets are met, £8bn of additional GVA and 60,000 jobs could be generated, which would be transformational<sup>vii</sup>. Northern Ireland has the potential to become one of the most prosperous economies, not only in the UK, but across Europe.

"[I believe that] Northern Ireland's Entrepreneurs are on an unstoppable path of progress."

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### **Setting the Scene**

The Knowledge Economy is broadly defined as economic activity seeking to "create, develop, hone and commercialise new and emerging ideas, technologies, processes and products and export them around the world"ix.

In this paper we follow the definition used by the Northern Ireland Science Park (NISP) which includes the following export-focussed industries:

- Pharmaceuticals and biotechnology
- Medical devices
- Software & digital content
- IT services
- Telecommunications
- Computing and advanced electronics
- Creative content and digital media
- Other technical services
- Aerospace and other transport equipment
- High-tech financial services

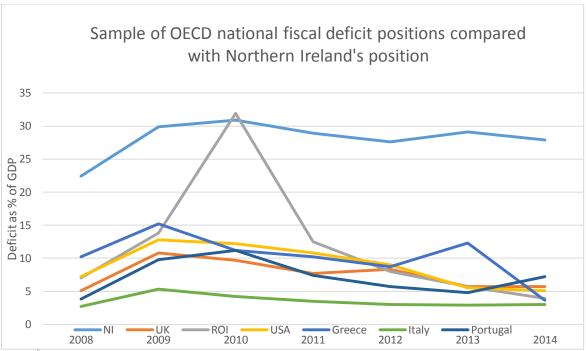


The attractions of this sector are obvious:

- Northern Ireland's sector is the second fastest growing Knowledge Economy region in the UK, with 410 businesses starting up last year
- Sales are £4.4bn, with 85% outside NI and 64% outside the UK
- Our Knowledge Economy is directly or indirectly responsible for £3.4bn of NI's economic output, which is 10% of our economy
- It employs directly or indirectly 76,000 of usone in ten of our workforce
- Average wages are one and a half times the NI average<sup>x</sup>

### Why focus on the Knowledge Economy?

The strength of our economy is indicated by comparing the annual cost to run Northern Ireland against taxes raised here. In 2013/14 the DFP estimated Northern Ireland expenditure to be £24.1bn. Taxes generated were estimated at £14.9bn. The fiscal deficit, or 'subvention' was therefore estimated at £9.2bn×i, or 28% of GVA.



OECD<sup>xii</sup>. NB if ROI's exceptional bank measures in 2010 are excluded, the figure for her 2010 deficit falls to 12.2%.

As the graph above shows, this deficit has been on the gradual increase, and is extraordinarily high, especially compared against countries which in this period experienced fiscal crises. The Economist last year described our economy as 'lamentable'xiii.

This is borne out in our productivity levels. Our GVA per person sits at about 80% of the UK average. According to PwC, our productivity is "amongst the lowest in the developed world" xiv.

Running a budget deficit close to a third of economic output is not sustainable. Growing the private sector, and particularly the Knowledge Economy, offers the best chance to address this, because:

- It requires less infrastructure investment compared to traditional industries
- Its businesses are mobile and can establish themselves quickly
- The above-average productivity of the sector will close the productivity gap quickly
- The human capital required for the Knowledge Economy is our strongest asset
- The multiplier effect every Knowledge Economy job indirectly creates another job elsewhere in the economy

An enhanced Knowledge Economy is therefore the perfect fit as an answer to our economic needs. Matrix, the NI Science Panel has identified a number of sectors where Northern Ireland has potentially world class strength – Life & Health Sciences, ICT & Digital, Advanced Materials, Engineering & Manufacturing and through its foresight reports has identified a number of recommendations on policy which we will ensure are implemented\*\*. It is not a question of whether the Knowledge Economy is to be prioritised over less export-focussed or knowledge—based areas. Making the necessary changes to assist the growth of the Knowledge Economy will also help growth in all sectors.

## How do we get there?

The DUP have managed the Department of Enterprise, Trade and Investment (DETI) since 2007. Stormont's attention to economic development since then has centred on hailing investment announcements from Invest NI, or responding to businesses which have suffered redundancies. Credit is taken for jobs promoted rather than jobs created; economic conditions/austerity/other political parties are blamed for jobs lost. But government can do much more to promote growth than attracting inward investment and providing grants to business.

### **Costs**

Cost affects all existing businesses but particularly the viability of new businesses such as knowledge-based start-ups. We campaigned for and achieved devolution of Corporation Tax, and the proposed reduced rate is welcome, but many Knowledge Economy start-ups will realise more immediate benefits from mitigating upfront costs like non-domestic rates, rent, employer National Insurance, transport and energy costs.

With SMEs averaging 37 hours per month on compliance<sup>xvi</sup>, the regulatory environment is a significant indirect cost, and this also requires improvement.

### We would:

- Work across departments to secure agreement on prioritising investment in infrastructure, including reduced energy costs from renewable and non-renewable sources
- Prioritise the construction of Grade A office accommodation



- Lobby Westminster to consider increasing the NI Employer Allowance to £10,000 for SME start-ups on a UK-wide basis
- Cost the expansion of the Air Passenger Duty reduction to short haul flights
- Work with the business community to agree how administration costs can be reduced, such as red tape, as this indirect cost is the most-cited barrier to business<sup>xvii</sup>
- Implement more fully the recommendations of the Red Tape Review, including establishing an Independent Scrutiny Committee to oversee Regulatory Impact assessments, and publish a Regulatory Budget focussed on regulatory costs to business
- Align employment laws with the rest of the UK to ensure simplicity, clarity and competitiveness
- On a cost-neutral basis, simplify the nondomestic rates system, permit reduced rates for start-ups and businesses, and allow credit for investment and R&D (see below)
- Decouple domestic and non-domestic rates, and commit to finding efficiencies elsewhere to fund a reduction in non-domestic rates

These measures would make it less costly to create and maintain a new business, and attract new staff.

"Unless the issue of high costs is addressed, the creation of jobs and new investment will be reduced..."xviii

-Glyn Roberts, Chief Executive, NIIRTA



### Rates and Zones

Enterprise Zones and Business Improvement Districts (BIDs) offer a model for concentrating businesses in hubs, increasing collaboration, bringing jobs to areas of particular need, and revitalising town centres. Political will is required across departments to see these established and developing. The increasing development of the ecosystem to support entrepreneurship and innovation such as the launch of the Belfast 'Hatchery', the business accelerator programme by Ulster Bank, KPMG and Entrepreneurial Spark, the StartPlanet NI accelerator and NISP CONNECT is to be welcomed, and will offer a template the rest of the country can follow.

### We would:

- Consider a renewed commitment to Enterprise Zones, and work with local authorities to identify suitable locations for town centre BIDs
- For SMEs and start-ups in both areas, introduce time-limited non-domestic rates credit for capital or R&D investment, to remove the disincentive to invest
- Introduce time-limited full rates relief for new start-ups moving into these areas
- Identifying whether certain non-domestic reliefs should be restricted to outside BIDs/ Enterprise zones, with gradual phase out
- Guarantee superfast broadband in each Zone or BID, and introduce legislation for streamlined planning
- Identify and help establish suitable coworking zones where there is a need within BIDs
- Consult with and take direction from the NISP on catalysing the growth of the Knowledge Economy through scaling its activities and ultimately on the strategic roll out of their coworking model to regional hubs

Establishing Enterprise Zones and BIDs, and supporting the development of co-working hubs would support the collaboration that is central to the Knowledge Economy. It would also help revitalise our town centres with new footfall and creativity, and reduce under-occupancy in town centres.

### **Securing funding**

Despite significant EU investment via Horizon2020 among other programmes, our record on attracting EU funding does not compare well with the Republic of Ireland. Funding applications are made relatively late in the process. This leaves inadequate time to consult and co-ordinate with the business community necessary to produce a joined-up, convincing application.

### We would:

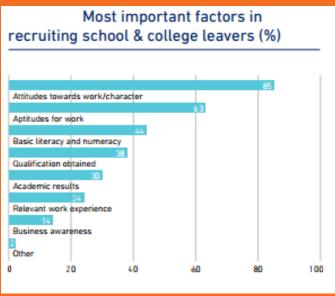
- Make better use of the unique opportunities presented by the NI Task Force to further improve participation at EU level
- Improve coordination between the NI Task
  Force, Northern Ireland Contact Points,
  business community, researchers, existing
  networks and the Executive, to maximise the
  drawdown of current EU competitive funds
  like Horizon2020, and better prepare for
  future programmes
- Set ambitious targets for the drawdown of EU competitive funds



### Schools

Our education system should equip children with the skills necessary to succeed. Yet too many of our children leave school without the qualifications, skills, direction or confidence they need to succeed in life and work.

In addition, many children are left behind by the education system altogether, with two thirds of children on free meals leaving school without five good GCSEsxix. 60% of businesses are not confident they will find the necessary skills in the market, and 41% report having to provide literacy and numeracy training.xx We need "young people who are rigorous, rounded and grounded – with key attitudes and behaviours."xxii



Gateway to growth: The CBI/Pearson education and skills survey 2014, CBI, July 2014

"In Northern Ireland a lack of collective vision and coordinated action has restricted the achievement of positive change"

-Nigel Smyth, Director, CBI NI

A skilled workforce and culture of entrepreneurship is the most important condition for growing the Knowledge Economy. The Stormont Executive must anticipate the learning needs of students, to equip them for their future careers and businesses. It must recognise that children are gifted in different ways, and that ascertaining their abilities and teaching accordingly is key to them reaching their potential.

The importance attached to careers advice in schools needs to be raised. Too many students leave school with an unclear idea as to what they want to do, or where their talents lie<sup>xxii</sup>. All students need to be able to draw upon an expert careers advisory service which can provide bespoke, proactive student-centred advice, and anticipate future employment needs to help students future-proof their career prospects. Only 7% of employers believe careers advice is adequate<sup>xxiii</sup>.

We support the recommendations and general direction of the Ambrose Careers Review report published in October 2014\*\*\*, and welcome the recent announcement these are to be largely adopted, but we would go further.



### We would:

- Introduce a course on professional soft skills, financial and business awareness
- **Ensure schools promote and provide access** to contemporary market-relevant subjects like **Mandarin and Entrepreneurship**
- **Consult on establishing Computing and Entrepreneurship as core curriculum subjects**
- **Consult on establishing English and Maths** as a continued educational requirement for those in full-time education
- Consider ways of increasing the incentives to attract and retain STEM subject teachers
- Introduce careers education within the school curriculum on a par with the attention devoted to curriculum subjects
- **Ensure that school key performance** indicators reflect the importance of careers advice, and introduce earlier than the recommended age of 16-18
- Adopt recommendations as they emerge from the newly-established Careers Advisory
- Establish a peripatetic arms-length careers advisory service, leading the delivery of careers provision to support nominated careers teachers
- Set out a formal structure for developing links between schools and local businesses, to include mentoring and work experience for all pupils

- Learn from the experiences of the recently established University Technical Colleges and **Studio Schools in England**
- Provide that children are directed toward areas in which they excel, and have started a careers and skills pathway pre-GCSE
- **Explore how teaching can be adapted** to different learning styles, particularly enabling schools to assist children with an entrepreneurial mind-set

These measures would help schools align curriculum and teaching method to student needs. This would improve the ability of school leavers to step into knowledge-based industries, or differently put, help a far greater proportion of children achieve their potential.

"Business is clear that the school and college system must deliver young people who are rigorous, rounded and grounded - with key attitudes and behaviours as well as knowledge and skills"

-Nigel Smyth, Director, CBI NI

### **Further and Higher Education**

We support the decision to move responsibility for Further and Higher Education to the Department of the Economy. This correctly reflects the key role Universities and Colleges are to the success of the Knowledge Economy.

Within Northern Ireland, the number of PhDs completed is falling. This is widely viewed as a threat to the growth of the Knowledge Economy, and recognised as a problem by the Executive. Fewer businesses are likely to be established with fewer doctorates ready to convert expertise into enterprise. The reasons behind the reduction need to be addressed.



The announcement on 1st March of the UK-wide Doctoral Training Partnership fund is welcome, and its impact will need to be assessed as additional assistance from Stormont may be necessary.

Additionally, opportunities to study higher-level languages have been reduced. This sends the wrong message to business.

We would:

- Consider creative funding solutions beyond the Doctoral Training Partnerships programme, so that candidates for doctorates are not discouraged from applying
- Work with Vice-Chancellors to ensure languages are agreed as a key economic competency and that courses are not reduced

### Culture

Culture is an end in itself, but the Arts budget can and should provide significant social and economic returns for its investment, and enhance our attractiveness as a place to live and work.

We would:

- Secure funding for cultural projects which can demonstrate a return on investment
- Presume favourable support for projects that enhance the overall cultural health of an area, particularly town centres and key areas for the Knowledge Economy such as the Titanic Quarter, Belfast City Centre and Londonderry
- Develop with NI Screen a 10-year Film strategy to increase production output

### **Politics and Priorities**

The greatest barrier to government assisting the Knowledge Economy is the way in which the Northern Ireland Executive currently operates. The current Executive has not spent its budget correctly.

This is in part because the Department of Finance allocates capital and revenue to each Department, which they then spend as they wish. This might be according to the narrowly-prescribed concerns of each department, or, as is often the case with capital expenditure, towards politically-motivated projects. Even DETI is content to limit itself broadly to the activities of Invest NI.

"The arrangements for executive formation... are unique because they reduce the executive effectively to a 'holding company' for a series of largely autonomous ministerial 'fiefdoms', an arrangement which it was anticipated 'may well lead to deadlock'"

-Professor Rick Wilford and Robin Wilson\*\*\*

This model is not fit for purpose. Prior to Ministers being allocated to Departments via D'Hondt, and via the Programme for Government we would:

- Ensure the new Department for the Economy shares responsibility for expenditure across all departments, agreeing key priorities in each department to grow the Knowledge Economy, and not divesting all responsibility to each department
- Across all departments establish a presumption in favour of capital expenditure for projects which can generate economic growth, over those which do not

Following this approach would break down the silo mentality evident in decision making of the current Executive. It would establish a shared goal to grow the Knowledge Economy, and encourage a genuine culture of partnership working and collective responsibility. It would increase the chance we see infrastructure projects started like the spread of low-latency fibre internet connections, establishment of co-working spaces and upgrades to our energy supply.

## Upgrading an obsolete model



The view the current Executive appears to take of its own role, from a financial perspective, is to discharge the expenditure of a budget. Power is shared out to parties via various departments, which do not communicate with one another. The Minister for Finance allocates the budget for each department, which each Minister controls according to their own needs and priorities, not overarching social or economic goals. There is little motivation to work together on areas of common good.

Overall, the current Executive is under no pressure to take fiscal responsibility to grow the economy. Our overall financial shortfall is met by London, and extra taxes raised from new business would be returned to London anyway. Hence the limits of the current Executive's economic ambitions: they do not bear the costs of their budget decisions.

The current Executive has generated a culture of low expectations, and applies policy to fit. As long as it remains content with this, we will remain an economic liability to the rest of the UK, our economy will underperform, our people will fail to achieve their potential, and the talents of another generation will be wasted. Upgrading the way in which we are governed will require a political will the current Executive has yet to demonstrate, but it is essential.

"...Economic policy has consisted of maximising the block grant from London and doling it out."xxvi

"Collective responsibility is for the most part absent and the executive has thus failed to supply the cement between otherwise mistrustful political factions...

'evidence-based policy-making' has been sacrificed to ideological considerations...ministers are basically accountable to no one."

-Professor Rick Wilford and Robin Wilson\*xvii

The latter quote is from a review of Stormont published in August 2003. Little has changed since.

# What connected government looks like

The Stormont Executive can help grow our economy by genuinely working together to grow the Knowledge Economy. It can allocate resources to where they best generate growth, and target savings across departments to free up further resources.

The Finance Minister and his Ministerial colleagues can agree shared Knowledge Economy priorities. The next Programme for Government can commit to raise productivity, employment, and increasing exports, drawing on the strengths of all departments. The Education and Economy Ministers can work together to ensure the education system produces students reaching their full potential, exposed to entrepreneurship, and demonstrating skill sets ready to deploy in the Knowledge Economy.

Ministers responsible for Infrastructure, Culture and the Economy, working with business leaders, would ensure the focus is on infrastructure, and that start-up companies have the requisite access to resources, connections and space in town centres, to generate collaboration and innovation.



This approach would help Departments achieve their overall aims, which they cannot do operating in a silo. It would help to scale up sufficient companies in size and number, so we can develop a globally-recognised Knowledge Economy hub. It would attract investment and create opportunities, boost GVA and our quality of life.

Achieving this vision is a necessity. A Government with the vision, ambition and goodwill to achieve it, is a necessity.

"Real progress is taking place in Northern Ireland...the growing success of our entrepreneurs is evident every day...something special is happening here."xxxiii

-Chris Horn, Chair, NISP CONNECT

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