# Innovation Strategy for Northern Ireland (2014-2025)

Progress Report to 31st December 2015



#### **Introduction**

This report provides a progress update against the actions and progress on delivery of the Innovation Strategy targets. In summary, at 31<sup>st</sup> December 2015, 9 of these actions (15%) have been completed, 49 are on target to deliver within the timescale specified, and 2 have commenced but progress is slower than expected. An update on each of the actions is attached.

The Innovation Strategy also outlines a number of long term goals and medium term targets. Each of these indicators provide an overview of progress on each using new data available since the Strategy was published. Progress against these targets is set out in the table below, however, in summary:

- One has already been met (R&D companies)
- **Four** have shown an improvement (knowledge economy employment, H2020 drawdown, business start-up rate, private sector turnover from innovation)
- Four have shown a decrease (total R&D expenditure, business R&D expenditure, UK innovation ranking, collaboration amongst innovative firms)

A more detailed analysis of NI Innovation performance is set out in a new Innovation Dashboard. This covers a wider range of indicators across the innovation spectrum. This can be found at the following link: www.detini

**Latest Position on DETI Innovation Strategy Targets** 

Long Term Goals	Baseline	Year	Latest Position	Year	Milestone (2020)	Goal (2025)
European Innovation Scoreboard Ranking	Innovation Follower	2014*	(data anticipated summer 2016)	-	Innovation follower	Innovation leader
UK Regional Innovation Ranking	11 (of 12)	2008-10	12	2010-12	Top 6	Top 4
Employment in the Knowledge Economy	33,370	2011	37,599	2013	45,000	54,000
Total R&D Expenditure	£616m	2012	£602.3m	2014	£950m	£1.2bn
Medium Term Targets	Baseline	Year	Latest Position	Year	Target	(2020)
Drawdown from H2020	€0m	2014	€47.6m	2015	€14	ōm
Business R&D expenditure	1.4% of GVA*	2012	1.2	2014	1.8	%
Number of R&D Companies	496	2012	657	2014	65	0
Business Start Up Rate	7.0%	2012	8.7%	2013	14%	
Collaboration Amongst Innovative Firms	45%	2008-10	37%	2010-12	609	%
Private Sector Turnover from Innovation	25%	2010	26%	2012	£22	bn

<sup>\*</sup> Note: Updated European Innovation Scoreboard results are due in 2016.

<sup>\*</sup>ONS has significantly revised upwards its NI GVA estimate in 2012 from £29.4bn to £32.7bn. At the same time, NISRA has revised downwards its estimate of total R&D expenditure for 2012. This means that the baseline has been revised downwards from 1.6% of GVA to 1.4% of GVA. The implication of this is that the target is more challenging to meet.

### Innovation Strategy – Key to RAG Status delivery descriptors

RED	0	Strategy action/commitment implementation not achieved and/or not expected to be achieved or commencement of implementation has been delayed.
AMBER	2	Strategy action/commitment implementation commenced, but progress is slower than anticipated.
GREEN	58	Strategy action/commitment achieved or is on target for delivery within timescale.

### **Timescale for delivery of Actions**

Short (S) = 0-2 years

Medium (M) = 3-5 years

Long (L) = Beyond 5 years

**Note –** Invest NI updates cover the period to 30 September in line with their reporting processes.

## **Progress Update**

			CULTU	RAL CHANGE	
No.	No. Action Time		Delivery organisation	Progress to 31 December 2015	Delivery Confidence RAG Status
A1	Examine feasibility of establishing a Northern Ireland Innovation Council.	S	DETI	Action ongoing.  It has been accepted that there would be benefit in having an Innovation Council. Consideration is ongoing as to which existing organisation should undertake the functions of the Council.  The impending merger of DETI and DEL, together with the role of the Economic Advisory Group and the creation of a Chief Scientific Officer post will help inform the decision.	Amber
A2	Ensure that innovation and enterprise and the reform of the Northern Ireland public sector are central to any future Programme for Government.	S	DFP	Action ongoing.  It is planned that innovation and enterprise will be incorporated into the next draft Programme for Government. Significant work has already taken place in relation to developing an innovative culture e.g. the piloting of a Staff Innovation Scheme in DFP.  Work is ongoing with several research bodies to progress an Outcome Based Approach to reform, including:  Liaising with Centre for Effectiveness Services to identify potential projects for inclusion in an Atlantic	Green

				Philanthropies supported programme to embed systemic change and outcome based approach across the public sector.  Engagement ongoing with Carnegie Roundtable to align Wellbeing recommendations with new PfG  Engagement with Local Government and VCSE sector to learn from their work in this area	
A3	Appoint 'Innovation Champions' within Government Departments to drive and coordinate the innovation and reform agenda.	S	DFP / DETI	Action complete.  Reform/Innovation Champions have been appointed in each NICS department. They have been involved in promoting the reform initiatives being led by Public Sector Reform Division and have engaged with the OECD in the public governance review.	Green
A4	Incorporate innovation and creativity into training and development programmes for public servants and into core competencies for managers.	M	DFP	Action ongoing.  CAL is seeking to pilot a 'Creativity and Innovation' course for digital transformation teams and other NICS staff. The workshop will seek to mix the research evidence on creativity in business with practical creativity exercises and techniques. CAL will use the pilot to refine core content to make it more relevant to NICS needs. CAL is also developing a number of online resources which will be made available on the CAL intranet site.  CAL continues to work with the Digital Transformation Service (DTS) to put in place a suite of training packages to support digital awareness and agile	Green

development of services. Agile development promotes innovation through adaptive planning, evolutionary development, early delivery, continuous improvement, and encourages rapid and flexible response to change

Following initial piloting of 2 classroom based courses, Agile and Scrum Foundation and Executive Overview during Q1 of 2015/16, CAL is currently tendering for a supplier to deliver a full prospectus of agile / scrum courses, with piloting to be undertaken during Q4 of 2015/16.

CAL is also continuing to work with DTS on the development of a digital foundation classroom programme and awareness e-learning which will be made available to all staff.

Public Sector Reform Division has been working with the Centre for Applied Learning to develop a series of SCS Masterclasses on the topic of 'Public Sector Reform and Innovation'. The intention of the series is to showcase examples of successful reforms within the NI Public Sector to senior leaders across the NICS and to open a network of contacts who can then share lessons learned across the wider public sector.

Within this reporting period, two masterclasses, 'Driving customer service and efficiency within public sector constraints' and 'Enhancing operational delivery in the face of complexity and uncertainty', have been delivered. A further three classes are scheduled to be delivered in early 2016.

A5	Introduce a scheme to improve public services	S	DFP	Action ongoing.	Green
	by stimulating innovation amongst staff, service users and the wider public.			The IdeasEngine Innovation scheme trial has been extended and remains ongoing within DFP. Development of the scheme processes and procedures continues and this has resulted in the addition of an online community forum. The function of this forum is to develop capacity to innovate and begin to tackle cultural barriers to innovation by increasing the visibility of ideas and engaging a wide range of staff in the assessment and development of ideas.	
				Now that sufficient time has passed to adequately assess the scheme and a number of ideas have been implemented, the project team have engaged with DFP Finance to discuss future funding of the scheme and potential roll out to other NICS departments.	
				Planning for a "Challenge Prize" initiative is also underway. PSRD having engaged with sectoral representatives, from the third and private sectors, as well as other areas of DFP to develop proposals for a suitable challenge that can promote collaboration and stimulate innovation and creative thinking amongst staff.	
A6	Build the capability and capacity of the Public Sector Innovation Lab to address public sector policy challenges.	S	DFP / DETI	Action ongoing.  Five labs completed in 2015/16 with associated learning developed. Links with other Labs within the UK and further afield have been established with a focus on learning and knowledge sharing to refine methodologies and maximise Lab impact.	Green

				Consideration being given to Labs from different jurisdictions working collaboratively on a subject of national/international interest.  November 2015 – a further Innovation Lab project has been completed, 3 projects are in prototyping/ testing phase, 5 are planned to take place by the end of 2015/16 and a further 20 are in business development phase, of which a number will also be completed in 2015/16. The move to prototyping/testing is key to developing the Innovation Lab operating model and ensuring projects are taken through to a position where they make a real difference on the ground.  Interest in the Innovation Lab is growing, particularly from local government, with potential projects to support Community Planning and achieving recycling targets. Discussions are also underway with PSNI in relation to Policing within the Community.	
A7	Encourage companies to invest in attaining international standards such as International Office for Standardisation (ISO).	M	INVEST NI / DETI	Action ongoing.  From 1 April – 30 September 2015 a total of 24 companies have received support to attain international standards such as ISO 9001, ISO 14001, as well as Automotive (ISO 16949), Aerospace (AS 9100) and European standards such as EN 1090, EU Type Approval etc.  Seminars have also been provided on EU Type Approval and European standards that apply e.g. Global Technical Compliance & CE Marking.	Green

				Technical Development Incentive programme will continue to be the support mechanism for these projects.	
A8	Develop a new innovation communications strategy involving businesses, government, academia, and media to showcase excellence in innovation and to inspire our young people.	S	DETI	Action ongoing.  NISP Connect are leading on this on behalf of DETI. They have already undertaken a number of initiatives designed to underpin the importance of entrepreneurship, particularly among our young people, and are already supporting students to engage in innovation.  In addition, the department will be working with local authorities to support them to encourage companies, particularly SMEs to engage in open innovation.	Green
A9	Create a Chief Scientific Advisor role for Northern Ireland to provide a coordinated approach to science within the public sector.	S	DETI / DHSSPS/ DARD	Action ongoing.  A meeting with Sir Mark Walport, UK Government Chief Scientific Advisor, took place in November 15. As a result of this meeting, and to reflect changing departmental structure, a paper outlining options for the creation of the Chief Scientific Advisor post has been prepared and will be shared with key stakeholders in early 2016  Northern Ireland continues to receive papers for the UK Chief Scientific Adviser's Committee and will continue to engage in this important area.	Green
A10	Introduce a range of new leadership programmes and also		INVEST NI	Action ongoing.  The new Invest NI Leadership Team programme	Green
	develop a management			commenced in September 2014. The programme,	

strand within Invest NI's	aimed at SME senior teams, includes Executive
Skills Growth	Education delivered by Dublin City University and
Programme.	Business Coaching. 27 participants, across 9
	companies, commenced the programme.
	The first cohort concluded with a presentation of their company vision of business growth in June 2015. In addition, an alumni has been formed to facilitate the ongoing connections between previous participants. Over 40 companies signed up to the event in December 2015.
	Feedback has been very positive with outputs including new markets identified and achieved, improved innovation, increase in sales and reduced costs.
	The second cohort commenced the programme in September 2015 with 12 companies represented by 36 senior managers.
	In addition, Invest NI's Leader Programme continues to be delivered with 20 participants on the current programme. The programme, which involves a mix of business mentoring, leadership coaching and peer networking, has just been evaluated and the economic appraisal confirms the need for Invest NI to continue to support companies in this space.
	Through Invest NI's Skills Growth Programme, Invest NI has proactively promoted investment in developing leadership and management capability within companies.

				1	1
				Over the period of the corporate plan (2011/12 to 2015/16), Invest NI per annum financial assistance for leadership and management has increased by 100%, with a consequent 6 fold increase in company investment in developing leadership and management capability.  Invest NI leadership support now secures circa £10m investment in leadership and management within Invest NI account managed customers.	
A11	Conduct a pilot Innovation Survey for Micro Businesses.	S	DETI	Action complete.  A pilot Innovation Survey for Micro Businesses has been carried out and a report outlining the results was published in December 2014. The ETI Committee has received a copy.	Green
A12	Develop a new social innovation working group, to identify and report on future opportunities and promote the concept of social innovation.	S	DSD	Action ongoing.  The working group has met on a further two occasions. Work has been done to produce a Social Innovation Manifesto in order to bring focus to the groups work. This has been complemented by a number of developments:  - Building Change Trust plan to establish an umbrella group, Social Innovation NI - this would act as a one stop shop for social innovation in Northern Ireland. This is in its early stages and the group will continue to be consulted and if appropriate become involved with the project.  - The group have fed into a DSD commissioned	Green

				Ecosystem Review which is being undertaken by the Young Foundation and will propose areas which they believe are ripe for social innovation in Northern Ireland.  - The group invited a representative from NESTA to speak at one of its meetings to hear about their experience of social innovation elsewhere. As a result there have been early discussions about the potential for them to work here.  Actions/ targets for 15/16 are: By 30 June 2015 phase 1 Social Innovation Action Plan to be in place – Target met By 31 March 2016 to have implemented Phase 1 of Social Innovation Action Plan – On track	
A13	Establish accelerator programmes to act as key catalysts for social innovators in Northern Ireland.	S	BCT/Social Indigo	Action ongoing.  DSD has awarded a contract to Young Foundation to deliver a further accelerator programme between 1 October 15 and 31 March 16. This will focus on a number of niches identified and agreed with the Social Innovation Working Group and will support 15 existing social innovations to scale up their operations.	Green

		KNOW	LEDGE GEN	ERATION	
No.	Action	Timeframe	Delivery organisation	Progress to 31 December 2015	Delivery Confide nce RAG Status
B1	Investigate the potential to introduce innovation audits within companies linked to the provision of intensive mentoring.	S	INVEST NI / InterTrade Ireland	Action ongoing.  Innovation Audits have been introduced to the Fusion Programme. In addition, consideration is being given to the development of an online Design Diagnostic Tool to assist identification of the required business innovation support.  DETI and Invest NI are working with one of our local councils to support the introduction of a pilot in this area.	Green
B2	Incentivise research performers to engage in networking/ mentoring to increase the technological activities and capabilities of enterprises.	S	DETI / INVEST NI	Action ongoing.  Business case currently underway to increase Technology Transfer Programmes such as Innovation Vouchers, Knowledge Transfer Partnerships and Fusion. In addition NISP Connect has increased the number of Springboard graduates.	Green
B3	Run competitions to support innovation in key areas where there is potential for NI companies to	S	DETI	Action ongoing.  Through a partnership of DFP, DETI, Invest NI	Green

D4	compete on a global basis.		INIV/FOT NI	and CultureTech ran its first open data competition. This competition sought ideas for commercial exploitation of open public data.  A further competition, run in partnership with UK Space Agency and Invest NI, is planned for 2016.  DETI and InvestNI continue to work with partners in across the NI Executive and also UK to scope potential competitions in areas including environmental issues and use of analytics to improve public services and the exploitation of down-stream satellite data.	
B4	Increase efforts to encourage companies to invest in R&D.	S	INVEST NI	Action ongoing.  Recent Research & Development expenditure statistics show that record numbers of companies are from new entry into R&D. Invest NI continues to support companies to engage in R&D.  In the period under review, Invest NI have supported 88 businesses to engage in R&D activities. The scale of R&D projects undertaken has ranged from £3k (project definitions) to large c£1.7m projects. During this period Invest NI supported 41 companies that were new to R&D.  The agency also reviewed its approach to encouraging collaborative R&D. Invest NI has	Green

				worked closely with both Innovate UK and with colleagues in NI to promote opportunities for businesses to engage in collaborative R&D competitions on a national and European basis.  Delivery of R&D support is highly dependent on ERDF funds. This secures availability of budget for an increasing pipeline of projects. However, a number of future projects of significant scale will require additional budget allocation.	
B5	Encourage companies to deepen their R&D capabilities and develop their Technology Management capabilities.	S	INVEST NI	In the period under review Invest NI assisted 88 businesses to undertake R&D projects. This support ranged from small near market R&D projects to large industrial R&D projects.  Invest NI has offered 22 businesses project definition support to help them plan activities in advance of proceeding with a full R&D project. The majority of R&D costs supported in R&D projects are linked to labour costs which result in enhanced levels of technical expertise within the businesses supported.  Project definition support also encourages an increased focus by businesses on collaborative R&D activity and progressing into open innovation activities that will result in greater levels of R&D forming the foundation of future growth plans in overseas markets.	Green

				As part of the focus on account development plans (ADPs) there is an emphasis on encouraging businesses to adopt a more strategic and planned approach to their R&D activities.	
B6	Undertake new research and technology capabilities study across the public and private sector.	S	MATRIX	Action ongoing.  This work is being undertaken on a sector by sector basis.  An analysis of the Life & Health Sciences sector has been completed and included in the MATRIX Life & Health Sciences Foresight report which was published in February 2015.  An ICT/Digital foresight study has been completed and is expected to be published in 2016. Work is also well advanced on an Advanced Manufacturing, Materials and Engineering Foresight study with an expected completion date of 31 March 2016.	Green
B7	Focus funding and support for research and innovation in both our education and company base in priority areas	M	INVEST NI / DEL	Action ongoing.  In the 6 months to September 2015, approximately 70% of support to businesses has been in priority areas. In that period, £1.7m of support went to businesses and to the HE / FE base in support of enhanced levels of commercialised R&D through collaborative R&D projects, all of which are in the Health & Life Sciences sector.	Green

				The third phase of the Proof of Concept programme is currently under development and should be launched in the next quarter.	
B8	Develop a Foresight programme to identify new and emerging technologies and key future markets for NI companies.	M	MATRIX / DETI	Action ongoing.  A foresight programme has been developed and will be delivered on behalf of the Department by the MATRIX panel.  A Life and Health Sciences Foresight Report was produced in 2015 and this has formed the basis for the development of a new Life and Health Sciences Strategy.  An ICT/Digital foresight study is expected to be published in early 2016. Work is also well advanced on an Advanced Manufacturing, Materials and Engineering Foresight study with an expected completion date of 31 March 2016.	Green
В9	Develop further research excellence in sectors with high growth potential and also double the number of funded postgraduate places to 1000 by 2020, with these additional PhD places focussing on areas of economic relevance.	M	DEL	Action ongoing.  In the academic year 2015/16, DEL provided a total of £44.5m in Quality-related Research (QR) funding to the universities. This includes funding for mainstream QR, the QR Premium Pot (for STEM subjects and areas of economic relevance), the supervision costs of postgraduate awards, and support for charitable research. This money provides the underpinning infrastructure which enables our universities to not only perform research of the highest calibre, but also to access money from	Green

other funding streams.

The success of this funding was highlighted by our universities' performance in the recent UK-wide Research Excellence Framework. The universities displayed significant improvement since the last research assessment exercise. In each of the 30 areas our universities submitted, at least half of the research was assessed as world leading (4\*) or internationally excellent (3\*). In many cases, the percentage assessed as 3\* and 4\* was much higher than 50%. This clearly highlights the success of the above funding in ensuring that the universities improve in terms of excellence in research.

The Department funds a baseline of 495 postgraduate awards (PGAs) and an additional 234 PGAs. The Department will continue to fund these 729 awards. The commitment to fund 1000 postgraduate places by 2020 remains realistic and achievable.

#### **Targets for 2015/16**

Continue to provide sufficient QR funding to develop and sustain an internationally excellent and world leading Higher Education research sector in Northern Ireland that can hold a strong position within the UK and beyond. Funding has now been secured to maintain levels of PGA funding at 729 awards in academic year 2015/16.

B10	Establish Competence Centres in strategically important areas.	M	INVEST NI	Action ongoing.  The economic strategy target of 4 Competence Centres (CCs) has been delivered with the approval in March 2015 of the Agri-Food Competence Centre.  The Centres are aligned with the priority sectors identified through MATRIX and prioritised in the current NI Economic Strategy. The other CCs are in Connected Health, Sustainable Energy and Advanced Engineering.  The focus in the coming year will be on the establishment and effective operation of these CCs with a view to delivering industry led collaborative research agendas. Mid-term evaluations of the Connected Health and Sustainable Energy Centres are planned for	Green
B11	Lead efforts to have the UK Catapult in Precision Medicine located in Northern Ireland	S	DETI / INVEST NI	Action complete.  In Oct 2015, the Precision Medicine Catapult, the UK's innovation centre for precision medicine, chose Belfast, along with Cardiff, Glasgow, Leeds, Manchester and Oxford, as one of the initial locations for its regional centres of excellence network.  Each centre will act as a hub for regional precision medicine activities within the UK-wide network, co-ordinated from the Cambridge	Green

				headquarters. The centres of excellence in Belfast will work on locally driven programmes and use the Precision Medicine Catapult network to harness the breadth of UK expertise, developing innovative technologies and solutions for broader use across the UK's healthcare sector.	
B12	Increase the capacity of Creative Learning Centres.	S	DCAL	Strategic coordination of the Creative Learning Centres (Nerve Centre in Derry~Londonderry; Nerve Belfast; Amma Centre in Armagh) has further developed their key role in providing inspirational learning experiences which support the curriculum and the STEAM (Science, Technology, Engineering, Arts, Maths) agenda, and which add value to teachers, students and lifelong learners.  Strategic linkages with other programmes supporting NI Executive priorities have also demonstrated the potential for the Creative Learning Centres (CLCs) to stimulate more creative and innovative approaches to tackling social and economic challenges.  Throughout 2015/16 Nerve Belfast have	Green
				continued to work with DCAL in the delivery of cross-community youth sports programme developed as part of the Together: Building a United Community Strategy. The Department	

				will continue to scope further opportunities to include creativity, digital technology and innovation throughout programme roll out.  Moving forward the Department will continue to work with NI Screen to further increase the capacity of the CLCs during the remainder of 2015/16 financial year with regard to key initiatives such as "Creativity Month" in March 2016.	
B13	Develop a Creative Northern Ireland Framework to nurture a culture of creativity across the public, private and third sector.	M	DCAL	Action ongoing.  The DCAL Minister has convened a Ministerial Action Group to support industry led approaches and partnerships in support of the creative industries.  DCAL, DETI, DE and DEL Ministers met collectively with the Action Group in order to identify strategic themes to stimulate collaboration and effective approaches across government, industry, education and the wider community and voluntary sectors. The development of a framework is key to the discussions with regard to the next Programme for Government.	Green
				Throughout 2015/16, DCAL, in collaboration with key sectoral organisations, have developed a number of initiatives to stimulate collaboration and the generation and sharing of new ideas	

				and novel approaches.  These interventions will culminate with DCAL's last Creativity Month in March 2016 which will provide an overarching promotional framework for multiple organisations to showcase their work in tackling economic and social challenges.  Publicity for the initiative will again be supported by the Nerve Centre and its Creativity NI website.	
B14	Encourage more companies to incorporate design into their business planning processes.	S	INVEST NI	Action ongoing.  Since September 2014 Invest NI has continued to provide a strategic Design Service (DS) to encourage more companies to incorporate design into their business planning processes. A recently completed independent DS Evaluation of the operating period 2008 to 2014 demonstrated that impacts of the service have been significant with a positive ROI (Return on Investment), net £20.1m in sales revenues generated and just under £8.4m in exports generated. Based on the Economic Appraisal (EA) findings, the relevant casework was prepared and approval secured (subject to budget availability) to continue to provide Design support for Invest NI customers.  Based on the EA findings, the format of support is being refined to provide support for: Design planning	Green

				Design implementation Design strategy adoption  This will require tendering activities in 2016. The provision of Design Advice is still available.  The DS is one of five Invest NI schemes being supported by the European Regional Development Fund (ERDF) under the Investment for Growth and Jobs (IGJ) programme. €7.83M ERDF funding has been approved to operate this service for the period 2014-2020.  It should be noted that Invest NI support is focussed on Invest NI customers and other organisations / agencies have a role to play in relation to other NI businesses.	
B15	Increase focus of the Employer Support Programme to provide targeted support to Small, Medium Enterprises (SMEs) and Micro Businesses for the skills required to engage in innovation, R&D and entrepreneurship.	S	DEL	Action ongoing.  InnovateUs – Employer Support Programme has continued to provide small businesses with the opportunity to acquire the skills necessary to engage in innovation and R&D through engagement and participation in collaborative projects with colleges in the Further Education sector. In the period April 2015 to December 2015, colleges and businesses have completed 195 InnovateUs – Employer Support Programme projects, bringing the total to 669 since September 2014.  In the financial year 2015-2016 colleges have	Green

				been allocated a total budget of £2m to enable each to undertake up to 110 InnovateUs projects with small businesses.	
B16	Progress the implementation of the Northern Ireland Science, Technology Engineering and Maths (STEM) Strategy, 'Success through STEM'	M	DEL	Over the three years 2012-13 to 2014-15 a total of 1,419 additional undergraduate places in STEM areas were funded. 498 places went to Queen's University Belfast; 568 to Ulster University; and 353 to the FE Colleges for Higher Education in FE places.  In the 2014 – 2015 academic year funding was provided to the universities and the FE Colleges for the final 549 places of the 1,419 total.  Given past performance, it is anticipated that these places will have been delivered in 2014-15. However, statistics on student enrolments for 2014-15 will not be available until February 2016 and an update provided at that time.  Due to the 2015-16 budget position when £16.1m of funding was removed from the HEIs, no additional undergraduate STEM places were funded.	Green
B17	Invest further in clinical research careers.	S	DHSSPS	Action ongoing.  There have been 3 successful National Institute of Health Research Fellowship Programme	Green

				Awards totalling over £1.3m in Northern Ireland.  These research studies include – Social Network Enabled Interventions for Physical Activity Behaviour Change (commenced 1.1.15); Use of statins in lung ventilation following oesophagectomy (commenced 1.3.15); and Stroke prevention rehabilitation intervention (commenced 1.10.14, part time).  At this point, none of the research studies are at a stage where interim reports or publications are expected; however each of the studies is progressing as planned and there are no anticipated risks providing funding arrangements remain unaltered.  A further four HSC R&D Doctoral Fellowships Awards were offered in February 2015. These went to the strongest applicants, all working within well-established health and social care research centres in Northern Ireland and presenting high quality research proposals. The successful Fellows took up their Awards in 2015 bringing the total number of active Doctoral Fellowships to 24. A new call for Doctoral Fellowships for 2016 is	
B18	,	S	DEL / INVEST	underway.  Action ongoing.	Green
	necessary skills pipeline is in place to meet their needs.		NI / DHSSPS	The main areas of engagement with industry	

have been through the Assured Skills programme and, the Ministerial Working Groups (MWGS) established in priority sectors, namely ICT, Advanced Manufacturing and Engineering Services (AMES) and Food and Drink Processing.

Since April 2015, a total of 1,120 potential jobs have been promoted through the Assured Skills programme which, when fully realised will be worth £17.5m each year. Capacity building / academy projects resulting in 65 people obtaining employment in identified areas of skills need have also been undertaken.

From April 2015, Assured Skills introduced the 'Change Fund' as an additional strand to the Assured Skills programme. The overall objective of the fund is to improve the effectiveness of government support and to identify and address sectors where the availability of skills is impeding growth.

Since the introduction of the fund, a total of seven academies have taken place in financial services, 2D animation, Gaming, Sales and Marketing, Welding, Automative panel builder and CNC Machining.

Each of the MWGs have developed action plans to address specific needs in their sector, each placing a focus on sector attractiveness campaigns. These aim to engage directly with

				young people and their key influencers to highlight the breadth and quality of careers available. The Department also funded the recruitment and training of 24 ICT apprentices, placed with companies in September 2014, through a public/private partnership with industry.  Sector attractiveness campaigns have continued over the last six months, along with other initiatives such as scholarships in the AMES sector, a fourth cohort of the public/private ICT apprenticeship scheme, and continued liaison with business through the MWGs.  Budget pressures are the only significant risk to these continued areas of engagement with	
				business.	
B19	Examine how we can increase support offered to encourage entrepreneurial activity in schools.	Ø	DE	Action ongoing.  In 2015/16, DE has provided funding of £550k to Young Enterprise Northern Ireland (YENI) to deliver entrepreneurship and employability programmes to primary and post-primary pupils.  The latest figures available, as at 30 September 2015, show a total of 40,496 pupils had participated in YENI programmes. YENI are on track to meet their target of reaching 55,700 pupils in 2015/16.	Green

	Engaging with business stakeholders is key to the success of these initiatives and the business community has expressed its desire to engage with young people to ensure that they have the skills that the business sector requires. DE continues to encourage businesses to support schools in encouraging an entrepreneurial culture in pupils through engagement between local business and schools.
--	--

	KNOWLEDGE EXCHANGE							
No.	Action	Timeframe	Delivery organisation	Progress to 31 December 2015	Delivery Confidence RAG Status			
C1	Introduce a new Open Innovation Service to support companies engage in innovation.	S	DETI / INVEST NI	Action ongoing.  The Department, through Invest NI and other delivery partners continue to promote the concept of open innovation.  DETI is working with Armagh, Banbridge and Craigavon Council with the aim of establishing an Open Innovation pilot programme that will act as a driver for growth in the region.	Green			
C2	Increase investment in industry-led collaborative networks, particularly those focussed on market opportunities identified in the MATRIX priorities.	M	INVEST NI	Action ongoing.  Collaborative Network Programme funding was approved for 10 new industry led networks in the period September 2014 – December 2015. These were in the areas of Smart Cities, Aerospace Engineering, IT Skills, IT Skills Portal, Engineering Skills, Food Safety Technology, Future Skills Coding and Skills in the Food & Drink sector which has strong alignment with Matrix priorities. Existing networks operate in the areas of IT / Big Data Analytics, Connected Health, Advanced Materials and Capital Markets; which align with MATRIX priority areas.  Positive outcomes have been achieved at a number of levels within each Network. These	Green			

				include the submission of several collaborative Smart Cities funding applications (including two which have progressed to the second round of consideration); the securing of substantial Atlantic Philanthropies funding for Dementia related Connected Health activities; the launch of a dedicated portal promoting NI as a location of choice for IT career development; the awarding of a £900k project from Innovate UK to use US data to predict degenerative diseases and engagement at EU Ministerial level on Animal Feed testing.  The Programme has been extended to September 2016 and it is anticipated that an open call for expressions of interest in Collaborative Networks in the MATRIX areas of Life Sciences and IT will be held later in the 2015/16 financial year. A Programme Evaluation (due to complete in December 2015) is currently well underway. Future delivery options will be subject to the conclusions / recommendations from the evaluation and subsequent economic appraisal, if appropriate.	
C3	Provide increased funding for the latest rounds of the Higher Education Innovation Fund and Connected programme.	S	DEL	Action ongoing.  Increased funding for NI HEIF was secured in full from the start of Academic Year 14/15 i.e. from August 2014 and is continuing to implemented.  In the most recent academic year for which data is available (AY 14/15), NI HEIF funding enabled	Green

				the universities, <i>inter alia</i> , to undertake 1,569 knowledge exchange engagements with SMEs, lever £5.95m through consultancy projects and secure £1.35m from Intellectual Property income through the licensing to companies of new technologies and know-how.  The Connected team achieved all its key targets for year ending March 2015 (Year 1), including generating 480 enquiries from business (against a target of 120), resulting in 147 completed projects (against a target of 103) with 95 of these projects having been undertaken with companies having no previous engagement with the universities or colleges (against a target of 23). The programme is also on target to achieve its key targets for Year 2. The increase in Connected funding was originally approved by	
C4	Increase the scope of	M	INVEST NI	the Minister in April 2014 and continues to be implemented.  In terms of overall impact, the most recent data from Higher Education Statistics Agency show that Northern Ireland universities secured £93 million from business and community interaction in AY 2013/14 (representing 2.4% of the UK total). This is a strong performance considering the local economy represents only 2.2% of UK economic output or Gross Value Added and accounts for 2% of full time equivalent academics in the UK.	Amber
U4	increase the scope of	IVI	INVEST NI	Action ongoing.	Amber

	Knowledge Transfer Partnerships (KTPs).			N.I. continues to perform at the top of the national	
				KTP league with QUB the most active knowledge base with 38 live partnerships and Ulster	
				University in 6th position with 20 active	
				partnership projects out of a total of 107 knowledge bases. In the period under	
				consideration, a further 10 KTPs were approved.	
				An independent interim evaluation of the	
				programme over the period 1st October 2010 to 30th Sept 2014 is currently underway and an	
				action plan will be developed to implement the	
				recommendations from this evaluation.	
				2015 marks the 40th anniversary of the	
				establishment of KTP and this will include a "Where are they now" associate event. This and	
				other promotional events, including Client	
				Executive workshops, will help to continue to raise the KTP profile in NI.	
				Going forward, risks to maintaining the levels of	
				KTP activity lie with the potential cuts to Innovate UK's budget and the revised Project Approval	
				Process introduced by Innovate UK as a result of	
				budgetary pressures which may significantly reduce the number of NI KTP projects supported.	
C5	Strengthen engagement	S	INVEST NI	Action complete.	Green
	in Knowledge Transfer Networks (KTNs) in			As a result of outreach activities by Invest NI, NI	
	Northern Ireland.			is now firmly on the map for all key KTN events.	

				Innovate UK Invest NI and DETI officials continue to engage with Innovate UK and KTN Ltd. Regular meetings between Innovate UK and the Devolved Administrations (DAs) are also undertaken. This will provide an opportunity for Innovate UK to outline the strategic direction of Innovate UK and for the DAs to exchange information on areas of mutual interest.  Efforts continue to encourage Innovate UK to establish a permanent presence in Northern Ireland.	
C6	Seek to increase investment in the Innovation Voucher programme.	M	INVEST NI	Action ongoing.  107 vouchers have been awarded between 1 April 2015 and 30 September 2015. Further calls scheduled for October 2015 and February 2016.  Approval has been secured for 5 years with a budget of £5.45M (limited by budget constraints). Should additional monies become available then Invest NI would propose to increase activity levels in line with the additional budget available, adhering to overall programme approvals. This proposal was approved in August 2015.  The vouchers are worth up to £5,000. Applicants may continue to be awarded 3 vouchers (with reducing contribution on each application).	Green

C7	Introduce a Creative Credit Voucher.	S	DCAL	Action complete.	Green
	Credit Voucher.			A Creative Credit Voucher was introduced by DCAL. Delivered in partnership by NORIBIC, CultureTECH, C-TRIC and Digital Circle, the pilot project provided traditional businesses with vouchers between £3,000 and £10,000 to work with a creative business to revamp the organisation's image, prototype a new product or explore other creative ideas.  503 traditional businesses applied for support and 198 creative suppliers applied to facilitate service provision. Creative Vouchers were	
				provided to around 80 traditional businesses from sectors including the polymer industry, healthcare, retail and tourism.	
				By 31st March 2016, DCAL will evaluate the impact of the Creative Industries Innovation Fund (CIIF) and using the Ministerial Action Group will work with the Sector Skills Councils alongside key stakeholders to shape proposals for similar or different strategic initiatives, such as a Creative Credit Voucher scheme or CIIF in the next Programme for Government. Ownership of this target might need reconsidering following departmental restructuring.	
C8	Explore the development of a sub-regional profile/map to indicate sectoral	M	NILGA	Action completed.  NILGA worked primarily with Invest NI to develop and produce council focussed, Regional profiles	Green

	strengths across NI with local councils.			and maps providing local authorities with an overview of key metrics, from various data, to assist localised understanding of economic assets and innovation growth potential. In addition, a Northern Ireland headline statistics dashboard was created to further inform local authorities.  The regional guides and the dashboard were distributed in December 2015.	
C9	Encourage Further Education colleges to create and establish Specialist provisions for Industry using Colleges Expertise (SPICE) centres, in order to provide bespoke support for all businesses in Northern Ireland, which will help them innovate and grow.	M	DEL	Colleges are continuing to work towards a comprehensive and full introduction of the SPICE portal, which will embed the agreed business processes and test the concept with business and industry.  The Department continues to support testing of the SPICE concept and roll out of the business processes already agreed and has been engaging regularly with South Eastern Regional College, which has been taking this forward on behalf of the sector, to maintain progress and test the management information being made available by the CRM.  Up until December 2015, the CRM software and systems necessary to operate the portal had been implemented in five colleges with plans to install, test and operate the system in the remaining college while training in use of the CRM continues to be undertaken across all	Green

				colleges.	
C10	Encourage and incentivise clinicians and other Health and Social Care (HSC) staff to become more efficient innovators by providing routes to the implementation of new products or practices that emerge from R&D, normally undertaken jointly with academics and / or businesses.	S	DHSSPS	Action complete.  Staff from HSC Trusts are involved in enabling the flow of research into clinical practice in several Knowledge Exchange projects funded by HSC R&D Division. Two examples are:  (i) A collaborative project between South Eastern HSCT and Queen's University Belfast (QUB) has developed an online physical activity tool for people at risk of diabetes. This provides information and advice on physical activity and its role in preventing diabetes, complementing information provided in the existing community-based group intervention. It also provides a tool by which individuals can monitor their own step data and has information on key local resources. The pilot programme has successfully engaged with more than 60 people (since September 2014) across a range of locations.  (ii) A project involving QUB and Belfast and South Eastern HSCTs, aimed at improving pregnancy planning for women with diabetes, has produced a resource for women with diabetes and those who care for them. This raises awareness of the need to plan for	Green

				pregnancy and as a result, improve	
				their maternal and neonatal outcomes.	
				The online resource was launched on	
				World Diabetes Day (14 November).	
				A new call for Knowledge Exchange awards has	
				been issued, and these are currently being	
				evaluated. Successful projects will commence	
				during 2016-17 financial year.	
C11	Forge strategic partnerships with	L	DETI / INVEST NI	Action ongoing.	Green
	emerging economies in			Northern Ireland has been successful, along with	
	areas where there are			9 other regions, to participate in a three year FP7	
	alignments with			research project on Smart Specialisation.	
	Northern Ireland's				
	capabilities and future			The Smart Specialisation Framework for	
	market opportunities.			Northern Ireland was produced in May 2015 and	
				is published on DETI website at https://www.detini.gov.uk/publications/smart-	
				specialisation-framework-northern-ireland	
				<u>specialisation-framework-northern-freiand</u>	
C12	Support key research	L	DEL / INVEST	Action ongoing.	Green
	institutes to further		NI	Dath Overeit I be vereit	
	develop international			Both Queen's University and Ulster University	
	agreements.			have 'Internationalisation Strategies' in place which include the development of a growing	
				portfolio of healthy and well managed overseas	
				institutional partnerships. The strategies also	
				include an emphasis on developing international	
				partnerships within the research arena.	
				There are many wide ranging partnerships aimed	
				at increasing globalisation at institutional level.	

C13	Enhance support for researchers to engage in Horizon 2020.	S	DETI / DEL / DARD / INVEST NI	One recent high profile example is the new China Queen's College (CQC) which has been established by Queen's in the People's Republic of China through a long-standing partnership with the China Medical University, one of the foremost medical universities in China.  Another is a major strategic partnership with Bangalore-based Infosys, the world's most prominent IT organisation. The partnership enables Queen's and Infosys to share research, to develop solutions and to work together to combat cyber security threats in an increasingly digital world.  Action ongoing.  The Northern Ireland Horizon 2020 Contact Point (NICP) Network has been expanded to include new contact points in the thematic areas of Environment and Security funded by DOE and DOJ respectively.  A new interactive guide for potential applicants has also been produced and can be found on the new dedicated website <a href="https://www.H2020NI.com">www.H2020NI.com</a> . A major review of the support provided for NI applicants into Horizon 2020 is currently underway and is due to be completed in the Spring of 2016.	Green
C14	Secure at least €145m from Horizon 2020	L	DETI	Action ongoing.  Most recent EU statistics show that NI has secured £47.6m in Horizon 2020 funding.	Green

		KN	IOWLEDGE	EXPLOITATION	
No.	Action	Timeframe	Delivery organisation	Progress to 31 December 2015	Delivery Confiden ce RAG Status
D1	Identify new ways to support companies to access finance.	S	INVEST NI / DETI	Action ongoing.  Through Invest NI's Access to Finance Initiatives, 94 SMEs were provided with £9.3m of debt and equity to help them commercialise and fund their growth during the six months to September 2015.  Invest NI has presented at four Intertradelreland 'Funding for Growth' Workshops held in Londonderry, Newry and Belfast during the period.  Invest NI also recently announced plans to stimulate the development of new Grade A office accommodation through the provision of mezzanine funding / equity to private sector developers. The initial stage was for the agency to test the market through a non-binding Expressions of Interest exercise. Applications closed on 31st August 2015 and Invest NI is now carrying out due diligence on three eligible projects.	Green
D2	Encourage greater uptake of HMRC's Patent Box	S	INVEST NI / HMRC	Action ongoing.  Invest NI ensures that information on Patent Box workshops (whether hosted by Invest NI, HMRC or private companies) is made available to our clients.	Green

				Patent Box and R&D tax credits are frequently discussed during visits by prospective FDI companies that specialise in the Knowledge and ICT areas of the economy. Indeed, these financial mechanisms form an important element of the Northern Ireland proposition for such companies when selling the region internationally.  The impact of a reduced rate of Corporation Tax from 1 April 2018 will be factored into the sales propositions relating to Patent Box and R&D Tax Credits.	
D3	Fund a new world-class business accelerator to foster the growth of early stage high tech start-ups.	S	INVEST NI	Invest NI has contributed £2.6 million to establish the seed accelerator programme, branded as Start Planet NI and focused on attracting both international and indigenous businesses with technology based ideas in the Knowledge Economy sectors.  Start Planet NI is being delivered in partnership with Xcell Partners (Newry) and SOS Ventures, a venture capital company based in Cork and San Francisco that invests in technology start-ups globally and aims to connect start-ups with the most relevant mentors, investors and partners from around the world. Start Planet are investing up to £2m which will provide the equity investment in the accelerator businesses.	Green

				Start Planet as part of a major accelerator brand has sister accelerators in Cork, San Francisco and Shenzen, China. It is affiliated with the 'Global Accelerator Network' covering 6 continents, 59 cities and 50 accelerators. It includes Techstars, Startupbootcamp and Microsoft Ventures and aims to set one standard for entrepreneurial excellence.  Northern Ireland's newest start-up accelerator programme, Start Planet NI, received an impressive 290 applications from entrepreneurs spanning 45 countries. The first cohort of 9 High Potential Start Ups (HPSU) commenced in November 2015.  Invest NI's primary aim in establishing an NI Accelerator is driven by the need to support the creation of an ecosystem for HPSUs, especially given the under-developed enterprise culture and finance market in Northern Ireland.	
D4	Investigate the commercial exploitation o traffic data and public transport movemer data.	M	DRD	Action ongoing.  DRD has agreed in principle to make traffic data available to a project lead by Asystec and including University of Ulster as part of a bid to Innovate UK for development of a traffic congestion model. This bid was unsuccessful, but the agreement in principle to share data with any project is still current; however to date no other projects have approached the Department for data.  Translink has launched an app for mobile devices using a data feed from the BusTrak real time passenger information system.	Green

	1				
				Translink is currently working with DfP to provide the Bus Trak information and timetable information as an Open Data source. This will allow private sector app developers to develop their own apps.	
D5	Develop an Open Data Strategy and Action Plan for Northern Ireland.	S	DFP	Action Complete.  The NI Open Data Strategy and action plan was agreed by the NI Executive and Published early February 2015. Early actions from the plan are already underway and the Open Data Portal (through NIDirect) is planned for live operation August/ September 2015.	Green
D6	Examine the feasibility of establishing an Open Data Node in Northern Ireland.	S	DETI/DFP	Action Complete  In September 2015, NICVA with the support of DETI and DFP launched ODI Belfast, the first ODI Node on the Island of Ireland. The Node aims to extend to civic society, academic, private and digital sectors over the next year, driving innovation, boosting transparency and bringing about social, economic and environmental change.	Green
D7	Organise a number of open data competitions.	M	DETI / DFP	Action ongoing.  DFP and DETI officials are scoping a new open data challenge for NI which is expected to open 2016/17.	Green
D8	Conduct a study into the size and nature of the	М	MATRIX / DETI	Action ongoing.	Green

	opportunity presented by big data for NI businesses			The opportunities presented to companies in Northern Ireland through the exploitation of big data is one of the areas under consideration by the MATRIX ICT/Digital panel, whose foresight report will be published early in 2016.	
D9	Increase the number of Small Business Research Initiative (SBRI) projects.	M	DETI	Action ongoing.  Officials in DETI, InvestNI and HSC are continuing to promote SBRI across NI government. The Executive Budget for 2016/17 includes £1.1m for a pilot SBRI Challenge Fund which will be used to drive the uptake of SBRI across departments.  In addition, Horizon 2020 now includes Precommercial Procurement (PCP) calls - this is the same approach as SBRI, but operating on a transnational EU basis.  An international consortium led by the Business Services Organisation, Invest NI and Ulster University has recently be awarded a major €5m PCP award under Horizon 2020 for the MAGIC Project to develop better approaches for improving recovery for stroke patients.  This is the first H2020 PCP won in the UK and Ireland and has resulted in significant interest in potential collaborations in H2020 from other regions.	Green
D10	Investigate the potential for the establishment of a central fund, for SBRI projects.	S	DETI	Action complete.  The Executive Budget for 2016/17 includes £1.1m for a pilot SBRI Challenge Fund, as proposed in the	Green

				Innovation Strategy, which will be used to drive the uptake of SBRI across departments.	
D11	Support the expansion of the Northern Ireland Science Park.	S	DETI	Action ongoing.  In 2015, DETI has provided loan funding of up to £6.4m to the Northern Ireland Science Park for a new Concourse building. Work started in Summer 2015 and the building will open in September 2016.  A decision is also imminent on a further £6.1m loan to NISP.	Green
D12	Produce a Health and Life Sciences Strategy.	M	DETI/ DHSSPS	Action ongoing.  Development of the Life & Health Sciences Strategy will build on the recommendations of the MATRIX Life & Health Sciences Foresight Report and will be jointly led by DETI & DHSSPS, with a representative steering group of senior officials, clinicians, industrialists and academics. The Strategy will be developed through the creation of the Health Innovation & Life Sciences (HILS) Hub.	Green
D13	Work with the Agri-Food Strategy Board and other stakeholders to take forward their recommendations to expand innovation and exploit global opportunities.	S	DETI / DARD	Action ongoing.  The Executive Response to the Agri-Food Strategy Board's report "Going for Growth", a strategic action plan for the agri-food sector, was published on 16 <sup>th</sup> October 2014. Going for Growth contains seven major themes which cut across all areas of the industry, one of which is Innovation, Entrepreneurship and Skills.	Green

				The Executive response contains a comprehensive action plan setting out how Departments will take forward the actions which fall to Government to deliver.  The Government-led actions will be closely monitored by the Inter-Departmental Steering Group and Government actions have been integrated into Departmental Business Plans to ensure delivery.  Work is underway to support the development of an industry-led marketing body for the sector, to maximise export potential and inform product development through market intelligence.	
D14	Work with businesses to increase their e-capability.	Ø	INVEST NI	Action ongoing.  Between 1 April 2015 and 30 September 2015 Invest NI's ICT advisors have provided advice to – 378 businesses. 115 export focused companies have been offered a total of over £1m of funding to support £3.25m of ICT investment projects within their businesses. These projects typically support business to implement e-commerce solutions, accounts / order processing / stock control software, customer relationship management (CRM) software and other core business software. The support helps businesses improve their usage of ICT to help them be more productive, improve visibility of key business data and help them use the	Green

	internet to increase sales / exports to other markets.
	7 Seminars / awareness workshops have been delivered between April 2015 and December 2015 attracting a total of 339 attendees from a wide range of businesses. The seminars provided advice and best practice to help SMEs exploit online marketing techniques, online market places, e-commerce, online advertising, online sales conversion and analytics.
	An evaluation of the Invest NI support provided is currently underway and early indications reflect positive results.

