

NORTHERN IRELAND FOOD AND DRINK ASSOCIATION

Collaborative Networks Project
Skills & Sector Attractiveness Scoping Study
Produced with the support of Invest NI



Harry Hamilton 28Th February 2016



INDE	X	1	Page
A. B. C.	O ₇	xecutive Summary verview ain Report	3 7 22
		P	
	1.	Introduction with Project Aim and Targets	
	2.	Strategic Context	24
	3.	The Food and Drink Processing Sector's Workforce	26
	4.	Northern Ireland Provision of Vocational Education and Training targeted at Food and Drink Processing Sector	29
	5.	Recent Initiatives to address Skills Issues	43
	6.	Approach of Other Countries	52
	7.	Skills Requirement Matrix for medium to long term	62
	8.	Results from survey of companies and consultations	68
	9.	Survey of young people into sectoral attractiveness	73
	10.	Gaps, opportunities and Action Plan for improvement in training provision.	76
	11.	Action Plan for addressing recruitment issues, including perceptions of sector	79
	12.	Action Plan for securing stakeholder involvement	84
	13.	Action Plan Road Map and Profile of Resources requirements	85
	14.	Profile of resources	86
	15.	Project stakeholders	89
	16.	Appendices	90
	17.	Bibliography	90



EXECUTIVE SUMMARY

The NIFDA Board would like to place on record its appreciation of the financial support provided by Invest NI for this study.

NIFDA with the support of Government undertook this scoping study to address two of the major challenges facing Northern Ireland's largest industry. Skills gaps and sector attractiveness which are key issues constraining development of the sector.

Various studies * have revealed persistent skills gaps and skills shortages, which historic levels of up-skilling and recruitment have not resolved.

The lack of a comprehensive training provision means that the needs of this technically challenging and evolving sector are not being addressed.

The food and drink sector faces ongoing skills challenges which are not currently being met by the existing "offering pool" of education/training.

Recruitment and development of a highly skilled and motivated workforce is one of the goals outlined in "Going for Growth - Investing for Success", published in May 2013, which incorporates specific targets reflecting the industry's ambition to recruit an additional 15,000 people in the sector, or a 15% uplift.

NIFDA has worked collectively with key stakeholders in the industry to identify the gaps which currently exist between skills requirements and skills provision. During the course of the study NIFDA undertook two surveys, one of industry HR professionals investigating skills gaps, training and recruitment; and another of local students, investigating the "attractiveness" of the food and drink sector as an employer and exploring ways to improve industry perception amongst potential employees and those who may influence their career decisions.

Further to this, workshops were held with HR departments and careers advisors.

The scoping study covered the following areas:

- Investigation of recruitment issues related to sector attractiveness and identification of tools to influence it;
- Development of a specific skills requirement matrix for the medium to long term;
- Mapping out the current training marketplace against the needs and experiences of food and drink network members;



- Identification of gaps and opportunities for improvement in the training provision;
- Benchmark other regions such as Wales, Scotland and Republic of Ireland to draw lessons from their approach;
- Consultation with network members and stakeholders;
- Development of a roadmap and action plan to address any identified weaknesses in the current training landscape;
- Development of a roadmap and action plan to improve perceptions of the sector;
- Assessment of resources required to implement the Action Plans;

This research has provided a basis for identifying opportunities to improve the delivery of education and training to better meet the industry's needs and to increase the uptake of training amongst food and drink companies.

Employer findings**

- 80% of companies surveyed recorded an increase in employment over the last 24 months
- 47% are unable to recruit staff with the required skills
- 39% recorded engineering as the standout area where there are insufficient applicants
- Other positions highlighted as having insufficient candidates are management and skilled positions
- A significant minority of employers had vacancies and skills gaps due to deficiencies in the existing workforce
- All companies surveyed provide training for their workforce but the nature and extent of training vary considerably with compliance being the primary motivating factor
- the biggest obstacles noted are the difficulty in giving staff time off for training and the cost of training



The perception of the industry***

80% of pupils surveyed confirmed that they had decided on the next stage of their career. These decisions were made despite 56% of the pupils stating they did not know the range of opportunities available within the sector.

Company stability and the working environment were considered 'bad' by 36% and 27% of respondents respectfully.

40% of companies surveyed believe the general population has only a 'neutral' perception of the industry and 36% believe that the people, who influence potential employees, e.g., careers teachers, also have a neutral perception of the food and drink sector.

An overall lack of awareness and knowledge amongst pupils, teachers and their parents is contributing towards negative perceptions, and in some cases misconceptions, about the Northern Ireland food and drink manufacturing industry.

Scotland, Wales and R.O.I. have set up dedicated single body programmes to tackle the skills gaps and training issues within the agri-food sector.

Action Plan and Resources ****

In response to the scoping study and research carried out between August 2015 and January 2016, NIFDA has devised an action plan to address these issues.

The action plan aims to:

- Respond to the growth in demand for skilled employees
- Increase the numbers of higher qualified applicants
- Upskill the existing workforce
- Overcome the obstacles to upskilling
- Improve the knowledge and perception of the industry amongst potential employees
- Effectively engage with stakeholders
- Provide a single point of coordination for the food and drink sector

(* See Bibliography 6,7,8,9) (** See Appendix 1Employer survey) (***See Appendix 2 Student survey) (**** See Appendix 5 Action plan)



Action Plan Matrix

No	Section	Detailed specific actions	Responsible person	Resource	Timeline	Output	Costs £,000
1	Α	Coordination of actions	NIFDA	Project facilitator	36 Months	Deliver Action plan	54
2		Funding for Company Ambassador programme.		Funding	36 Months	Increase attractiveness of Sector careers	62
3	Α	Company Fellowships - Open Days	NIFDA - Industry	Co Coordinator	36 Months	Education providers - careers sector and pupils	10
4	A	Food and Drinks Road show	NIFDA	Co Coordinator - Funding	36 Months	Single unit of promotional material that encapsulates all sectors of the industry	30
5	A	Curriculum for Primary Schools campaign	NIFDA	Co Coordinator - Funding- Consultant	36 Months	Inclusion of more Food and Drink related information into the primary school curriculum material	24
6	Α	Engagement with NISCA	NIFDA	Co Coordinator	36 Months	Greater understanding between Industry and NISCA	3
7	В	Brokerage for Promotion of Training	NIFDA	Co Coordinator	36 Months	Dissemination of information in regard to training provision	34
8		Promote awareness and up-take of Apprenticeship NI	NIFDA	Co Coordinator	36 Months	Dissemination of information in regard to apprenticeship NI	11
9		Develop and deliver a new Fresh Food Supply Chain Management course.		Co Coordinator - Consultant Workshops	36 Months		10
10	В	Promote up-skilling	NIFDA	Co Coordinator	36 Months		10
11	С	Identify and promote sources of funding	NIFDA	Co Coordinator	36 Months		2

This Action Plan will require a £250,000 budget over a time frame of 36 months to fully implement



EXECUTIVE OVERVIEW

The NIFDA Board considers that the Food and Drinks sector faces on-going skills challenges that are not currently being met by the existing "offering pool" of education/training. The lack of a comprehensive training provision means that the needs of this technically challenging and evolving sector are not being addressed.

One of the key issues constraining development is the skills profile of the workforce. Various studies have revealed persistent skills gaps and skills shortages, which historic levels of up-skilling and recruitment do not address

Over recent years, initiatives by industry and Government have sought to improve knowledge and understanding and to change attitudes. Some progress has been made but much more work is required to consolidate achievements to date.

In this scoping study, NIFDA has worked collectively with the leading organisations associated with the sector to identify the gaps that currently exist between skills requirements and skills provision. The scoping study has provided a basis for identifying opportunities to improve the delivery of education and training to meet better industry's needs and to increase the uptake of training by companies.

A further aspect of the project has been to investigate the "attractiveness" of Food and Drinks sector as an employer and to identify tools that might improve perceptions of the industry by potential employees and those who may influence them.

The scoping study covered the areas of:-

- Investigating recruitment issues related to sector attractiveness and identify tools to positively influence it;
- Develop a specific skills requirement matrix for the medium to long term;
- Mapped out the current training marketplace against the needs and experiences of food and drink network members;
- Identify gaps and opportunities for improvement in the training provision;
- Benchmark other regions such as Wales, Scotland and Republic of Ireland to draw lessons from their approach;
- Consulted with network members and stakeholders;
- Developed a roadmap and action plan to address any identified weaknesses in the current training landscape;
- Developed a roadmap and action plan to improve perceptions of the sector;
- Assess the resources needed to implement the Action Plans;



Strategic Context

Recruitment and development of a highly skilled and motivated workforce are a crucial goal of "Going for Growth - Investing for Success", published in May 2013, which incorporates specific targets reflecting the industry's ambition to achieve an increased employment target of an additional 15,000 people, or a 15% uplift.

Over recent years, initiatives by industry and Government have sought to improve knowledge and understanding and to change attitudes. Some progress has been made but much more work is required to consolidate achievements to date.

All Agri-Food skills and entrepreneurship development must be the responsibility of a single dedicated group, which must match provision to requirements

However, the staffing challenge for the sector relates not only to the expansion of employment but also to the replacement of existing staff who leave the industry either for retirement or alternative employment.

The wider community in Northern Ireland often has a poor perception of the industry and lacks understanding about agriculture and food. This impacts adversely upon the industry in various ways, including its ability to attract high calibre young people into the workforce which compounds the persistent skills gaps and skills shortages.

The general perception of work in the industry is of people working on production lines in conditions that can be unpleasant or inhospitable. Production is the core of the industry and does provide jobs that do suit some people. However, the reality is that the industry also offers a vast array of different jobs, which require people with very different skills and aptitudes.

The Food and Drink Processing Sector's Workforce

Recent Growth in Employment

Food and Drinks provide employment for a workforce of around 24,000 full-time equivalents (including Agency Employees). Also, Food and Drink processing helps to sustain a much larger number of jobs, both upstream in agriculture, commercial horticulture and a wide range of ancillary businesses and downstream in transportation, wholesale and retail.



Vocational Education

In Northern Ireland the providers of vocation educational relevant to the needs of the Food and Drinks industry are:

- College of Agriculture, Food and Rural Enterprise (CAFRE)
- Queens University of Belfast
- University of Ulster
- 6 Colleges of Further and Higher Education

CAFRE provides only specialised courses in Agri-Food disciplines for people intending to enter or already working in the Agri-Food industry and the associated rural economy. Other institutions offer a small number of courses in Agri-Food disciplines but also deliver courses in other disciplines required for the Food and Drinks industry. Examples of other disciplines are Engineering, Information Technology, Business Administration and Transportation.

Up-skilling employees

ApprenticeshipsNI is a work-based programme designed around the needs of employers. It offers recognised training and qualifications at levels 2 and 3 to new and existing employees aged 16 or over.

The duration at each level will depend on a number of factors, including the pathway, the level and the ability of the Apprentice.

The framework is agreed between DEL and Improve, the Sector Skills Council for Food and Drink Manufacturing.

Within DEL's current contract period, seven organisations have contracts to deliver Apprenticeship in Food and Drink Manufacturing, incl butchery and bakery but not all of them are operating the programme

Invest NI aims to offer the Northern Ireland business community a single organisation providing high-quality services, programmes, support and expert advice. Principally it helps those companies that can make the greatest contribution to growing our economy.

Recent Initiatives to address Skills Issues

The Collaborative Networks Project follows on from various surveys and initiatives since 2006, which sought to investigate the sector's skill requirements and undertake actions to address the issues raised

The most recent studies were:-



- (i) Improve's NI Sector Skills Assessment, December 2010.
- (ii) Improve / Food and Drink Sector Skills Survey regarding Skills Issues within the NI Food and Drink Industry, October / November 2011.
- (iii) Training and Skills in the Northern Ireland Food and Drinks Sector A Briefing Document prepared by AFBI, October 2011.

Although the results of these surveys were not identical, certain key themes were identifiable in all of them. A significant minority of employers had vacancies and skills gaps due to deficiencies in the existing workforce. Some of the jobs and skills gaps were deemed 'Hard to Fill'.

The main problem areas were:-

Management -Professional and Technical Roles - Skilled Trades -Process, Plant and Machine Operatives -Sales Roles

To help the industry become more competitive in future certain common themes emerged from the research:-

Higher level of skill -Leadership, management and people skills are needed to improve at all levels within the industry

Better communication of information in a coherent strategy to improve the image of the industry as a provider of rewarding, interesting and secure employment.

Up-skilling Staff already in Employment

All companies provide training for their workforce but the nature and extent of training vary considerably with compliance being the primary motivating factor.

Future Training Priorities:-

Respondents identified all of the topics mentioned above as priorities and a similar pattern emerged. Job-related Skills, Health and Safety / First Aid and Food Safety / Quality were most commonly rated as high and moderate priorities (58.5% of respondents). Management and Supervisory Training were more highly rated than in past provision



Obstacles to Training

When companies were asked to identify the main obstacles to training, an interesting pattern emerged. By far the biggest obstacles were the difficulty in giving staff time off for training (67.6% of respondents) and the cost of training (67.6% of respondents) Factors, which are internal to companies, are likely to be much harder to resolve than external factors.

Skills Requirement Matrix

The Northern Ireland Skills Barometer, "Skills in Demand", published in November 2015 by University of Ulster Economic Policy Unit outlines the number of people at the various skill levels in all sectors of the economy. It forecasts skill requirements up to 2025 and also identifies where challenges in meeting those needs will exist at a macro level in future.

As outlined Food and Drink Manufacturing embodies a vast array of different Job Roles, which in turn require diverse skill sets.

The Skills Mix is expected to change with a trend towards fewer workers with the lowest level of competencies and more staff with the highest level skills. Average Annual Gross and Net Requirements have been calculated to reflect thus.

The following table does not make any allowance for up-skilling. As happens at present, companies will continue to satisfy part of their skills requirement by training some of their better staff to develop the expertise and qualifications to perform at the next highest level. Companies would then back-fill posts at the lower level.

Food and Drink Manufacturing is by far the largest sub-Sector of Manufacturing in employment terms. In Line with the rest of the Manufacturing sector, it is forecast to grow significantly over the next decade.

The following analysis is for Food Manufacture only, i.e., excluding drink/beverage manufacture. Up to 2025, it is forecast that it will need to recruit around 2773 workers per year.



Table 9 - Skills Mix in Food Manufacturing - 2015 and 2025

Skill Level	Skills mix in workforce 2015 (With % in brackets)	Skills mix in workforce 2025 (With % in brackets)	Gross annual requirement – from elsewhere in economy, migration and progression from education	Nett annual requirement – from migration and progression from education
Below Level 2	8172 (42%)	8727 (37%)	1377	335
Level 2	3244 (17%)	5088 (21%)	466	325
Level 3	4230 (22%)	4476 (19%)	486	196
Level 4/5	1529 (8%)	1752 (7%)	155	80
Level 6 and above	2113 (11%)	3685 (16%)	288	267
Total	19287 (100%)	23737 (100%)	2773	1203



The Skills Mix is expected to change with a trend towards fewer workers with the lowest level of skills and more staff with the highest level skills.

Recruitment to the Sector

Reflecting the recorded growth and the forecasts set out above in the agri-food industry in Northern Ireland, over 58% of the company's surveyed by NIFDA recorded an increase in employment over the last 12 months, and if the timeline is pushed out to the last 24 months, the number is increased to 80%.

One of the major findings of the NIFDA survey is the 47% who are unable to recruit staff with the required skills. Specifically the categories of management, professional, technical and engineering which are rated as "hard to fill".

The gaps in the skilled areas of management, professional, technical and engineering all registered a priority rating by over 58% of the companies in the importance for the company in filling these positions.

Engineering is the single standout area where there are insufficient applicants for these posts, with over 39% of the response's highlighting this. Other positions that were highlighted as having insufficient candidates are management and skilled.

Attractiveness of Sector for Employment

The perception of the industry is essential to attracting the correct calibre of staff and in sufficient numbers. Unfortunately, 40% of the companies believe the general population has only a neutral perception of the industry and 36% believe that the people, who influence potential employee's, e.g., the careers teachers, are also neutral in their views on the Food and Drink sector.

An overall lack of awareness and knowledge amongst pupils, teachers and their parents is contributing towards negative perceptions and in some cases misconceptions about the Northern Ireland Food and Drink Manufacturing Industry.

The two key issues are;

- A) A perception that most work in food processing is unattractive, unskilled work on a production line.
- B) A confusion between employment in food processing and unskilled work in hospitality and catering, particularly in fast food outlets.

A number of projects aimed at addressing the negative view of the industry have been noted. These include;



• Awareness programmes

The Food and Drink Sector Skills collaborated with CAFRE and the industry to develop and deliver an enhanced suite of 'Awareness' programmes.

These seek to enhance the knowledge and understanding of teachers, pupils, careers advisers

• <u>Tasty Careers</u> - an initiative delivered by the Food and Drink Sector Skills / Improve, supported by CAFRE and local food companies and funded by DEL, Is an excellent example of active collaboration and is now in its 5th Year.

The four main elements are:-

- a) Ambassadors employed by food companies, coordinated by FDSS/Improve, visited 70+ grammar and secondary schools per year to give presentations on the industry
- b) Case studies of young people in a broad range of job roles in the food processing industry and supply chain
- c) Food careers route-map published on-line and in poster format
- d) Briefings for careers teachers and DEL Careers Advisers.
- NISCA Conference since 2010 NIFDA, supported by Food and Drink Sector Skills has sponsored the annual Conference of the NI Schools and Colleges Careers Association (NISCA) and gave presentations on the Northern Ireland food and drinks industry and the varied careers it offers.

As part of the research face to face interviews were carried out to evaluate the views held by students when making their careers choices, and to highlight the views of young people into the Food and Drink sectoral attractiveness.

A survey was carried out at two school open days. Methody College Belfast and Magherafelt High School. In addition to this an online survey was conducted during Oct 2015 to Jan 2016.

The age group of pupils was 17 and 18 and the questionnaire completed during face to face interviews on school open days .

The survey began by asking if the students had made their mind up on the career areas they were attracted too. 80% of the pupils confirmed that they had decided on the next stage of their career. These decisions were made despite 56% of the pupils stating they did not know the range of opportunities available within the Food and Drink sector and 60% were unaware the Agri-Food industry was the biggest employer in Northern Ireland.



The key perceptions of the pupils towards the industry are influenced by four key topics areas. The issues that achieved the highest negative score by the students were Company stability (36%) and the working environment (27%).

Pay scales (56%) and career opportunities (53%) were found to be positively viewed.

Parents (27%) and career teachers (26%) are the main source of information and influence in this decision-making process and are likely to provide the main gateway in providing information and influence to potential employees.

Background research and the Skills Barometer completed by Ulster University suggest that Food and Drink Manufacturing will face challenges in satisfying its future skill requirements. It is forecast that employers are going to demand higher levels of skill than in the past in order to improve competitiveness and will need to recruit more workers than in the past, both for replacement of employees who are leaving and to support any expansion of their businesses.

Manufacturing is forecast to expand while Demographic trends are downwards and there will be a shortage of people qualified in some key disciplines graduating from educational institutions. As a consequence employers will face even stiffer competition for trained staff than in the past.

Accordingly there will be increasing onus upon employers to become more proactive in developing the knowledge and skills they require from within their workforce. Consequentially this will place more emphasis than hitherto upon securing sufficient external support.

A logical extension of this is a need for closer industry engagement with local schools, academies and colleges to work in partnership to communicate the broad range of roles and career paths that are available, and to build with the education providers a pipeline of skilled employees'.

There was strong support for Stakeholder engagement in particularly in the context of running an effective action plan which will require the input from a range of different organisations. Working together on a campaign to improve the image of the industry was supported by 91% of respondents to the NIFDA employer survey, who believe this would benefit recruitment and 65% would be prepared to work with others in the sector to address these issues.



Review of initiatives and skills development activity in:

Wales, Scotland and Republic of Ireland;

The Welsh Government has published an Action Plan, which details 48 actions to deliver sustainable growth to the Welsh Food and Drink Sector.

This Action Plan is aimed at developing a skilled and capable workforce through developing key partnerships in the 'skills supply chain' by engagement in schools through to Higher Education and linking them with the food industry.

The Welsh Food & Drink Skills Project found that 45% of food businesses reported technical skills gaps which needed filling in their workforce. The research identified skills gaps in all sectors.

The Welsh Government has concluded there is a need for coordinated communications and promotional campaign across Wales to 'sell' the opportunities that careers in food have to offer to young people.

The Scottish Government has clearly recognised the market need for assistance and support, particularly in the areas of recruitment and training.

Through their Scotland Food and Drink Skills Academy Network, the SFDSA is offering industry businesses and their workforces a single source gateway to both 'off-the-shelf' and bespoke training geared to individual business needs.

Scotland Food and Drink further co-ordinate regional assessments, by dividing the Industry into sub-sectors of, Fresh Meat, Seafood, Bakery or craft brewing. An action plan is then drawn up addressing specific issues or needs for that sub-sector.

The Scotland Food and Drink Skills Academy have recognised that early engagement with school pupils in raising their awareness of the world of work and the diversity of opportunities available will be central to overcoming narrow thinking about what makes a good career plan.

In the Republic of Ireland, there is recognition at the highest level that it must invest in knowledge and skills and recognise new opportunities for collaboration across the food supply chain.

They believe that over the coming decade, smart growth will depend on improved productivity, increased scale, targeted research, and enhanced skills and organisational capabilities. Improving the skills set, training & education are seen as critical across all food and drink sectors to enable businesses to improve scale and returns.



However, Like Northern Ireland, the companies have also recorded difficulties recruiting technical staff. As a result these needs were identified as areas of concern in the Food & Beverages current & future skills report.

The range of actions that are common across the three regions is set out below.

- 1. Develop a skilled and capable workforce through developing key partnerships in the 'skills supply chain' by engagement with Secondary and Higher Education, manufacturing businesses and stakeholders interests
- 2. Address skills the gap across the Food Supply Chain through a training and skills programme.
- 3. Develop valued qualifications which include 'skills passports' and apprenticeship routes to training.
- 4. Develop a communications plan and 'roadshow' to publicise the opportunities that the food industry can offer young people across a range of skills and qualifications levels.
- 5. Scope the Establishment of Food Career Ambassadors to promote careers in the industry
- 6. Scope all opportunities for more food industry apprenticeships including the Food & Drink Federation's 'Taste Success'.
- 7. Investigate the benefits of talent tracking and its management, building on the Agri-Academy initiative in farming, to develop future leaders in the food Industry.
- 8. Develop 'bite-size' on-line training modules.



- 9. Develop a knowledge transfer approach throughout the Food & Drink Supply Chains.
- 10. Scope the potential for micro-businesses to fully engage in 'Investors in People'.
- 11. Develop an on-line 'Food Education Hub.'
- 12. Encourage more food businesses to prioritise training and continued professional development
- 13. A training needs analysis and training plan should be a pre-requisite from businesses before expansion and growth plans receive grant support

Action Plan

In response to the scoping study and research carried out between August 2015 and January 2016 NIFDA have agreed to an action plan to address these issues.

Growth in demand for skilled employees

Increase the numbers of higher qualified applicants

Upskilling existing workforce

Overcoming the obstacles to up skilling

Knowledge and perception of the Industry by potential employees

Stakeholder engagement

Providing a Single point of coordination of the Food and Drink Sector needs

The Action points are designed to reflect and address the two main issues of;

- (A) Enhancing Image of the Industry and Recruitment.
- (B) Resources for Industry Development to reduce the skills gaps.



Actio	n Plan							
	ted By rork - Team	Northern Ireland Food and Drink Association NIFDA;Board, management team, Members, FDSS, NISCA,						
		Responsible		,				
No	Detailed specific actions	person	Resource	Timeline	Output			
1	Lead management of all actions	NIFDA	Project facilitato	36 Months	Deliver Action plan			
	Complete project management							
	Coordination of actions				Coordinate stakeholder			
	Administration		Administrator					
	Budget and cost control		Financial		engagement			
	Claim		Administrator					
2	Funding for Company Ambassador programme.		Funding	36 Months	Increase enrolment in food related courses at 3rd level. Increase attractiveness of Sector careers			
3	Company Fellowships - Open Days	NIFDA - FDSS - Industry	Co Coordinator	36 Months	Establish greater understanding between Industry- Education providers - careers sector and pupils			
No	Detailed specific actions	Responsible person	Resource	Timeline	Output			
4	Food and Drinks Road show The development and deployment of mobile display materials which will be used to support visits to schools, county agricultural shows and other appropriate events.	NIFDA	Co Coordinator -Funding	36 Months	Greater understanding between Industry- Education sector and pupils - Single unit of promotional material that encapsulates all sectors of the industry			
5	Curriculum for Primary Schools campaign to achieve greater prominence for Agri-food in the Primary School Curriculum (as per Going for Growth Recommendation).	NIFDA	Co Coordinator -Funding- Consultant	36 Months	Inclusion of more Food and Drink related information into the primary school curriculum - set up group to explore and produce suitable educational material			
6	Engagement with NISCA Workshop at conference and ongoing	NIFDA	Co Coordinator	36 Months	Greater understanding between Industry and NISCA Detailed info pack for Career			
	group presentations				teachers			



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Action points background

To increase understanding of our position we have included further elaboration on some of the action points below;

- (2) Enhancing the Image of the Industry and Recruitment is focused on providing early intervention and a greater understanding of the Food and Drink Industry. Funding for key influencers from food manufacturing businesses to be included in an Ambassador programme were young people from successful Food and Drink companies go along to schools to engage with the children.
- (3) Company Fellowships Open Days for Careers Teachers, students, parents and are aimed at developing long-term partnerships.
- (4) Food and Drinks Roadshow The development and deployment of mobile display materials which will be used to support visits to schools, county agricultural shows and other appropriate events.
- (5)Curriculum for Primary Schools Specific liaison to achieve greater prominence for Agri-food in the Primary School Curriculum. In line with the "Going for Growth Recommendation).
- (6) NIFDA will co-ordinate Engagement with NISCA and have presence at the NISCA Conference.
- (9,10,11) Resources for Industry Development this section is aimed at identifying support for the industry in areas of up-skilling and promoting the sector to potential employees.

Profile of Action plan resource requirements

There are 11 actions in this Plan. Each action specifies areas which have been identified as crucial in increasing the skills provision and the attractiveness of the Food and drink Sector on Northern Ireland.

The action plan requires a range of resources, from the administration and project management to education providers and international food processing companies.

In this section, we have set out the detail of this resource requirement.

Project Management - Facilitator - Administration - Financial Management

Stakeholders - NIFDA Board - NIFDA membership

Food and Drink manufacturing processors - Queens University - Ulster University

CAFRE - DEL - DARD - FE colleges - Primary schools - NISCA - Careers service

Food and Drink Sector Skills - Education Consultants - Company ambassadors





NORTHERN IRELAND FOOD AND DRINK ASSOCIATION

Skills & Sector Attractiveness Scoping Study
Produced with the support of Invest NI



FULL REPORT

Harry Hamilton 28Th February 2016



1. Introduction with Project Aim and Targets

"Going for Growth - Investing for Success" indicated that a well-trained workforce is a fundamental requirement for companies in the Food and Drinks sector to maximise their efficiency and effectiveness to achieve sustained growth.

The NIFDA Board considers that the Food and Drinks industry faces on-going skills challenges that are not currently being met by the existing "offering pool" of education/training. The lack of a holistic training provision means that the needs of this technically challenging and evolving sector are not being addressed.

In this scoping study, NIFDA will work collectively with the leading organisations associated with the industry to identify the gaps that currently exist between skills requirements and skills provision. This will provide a basis for identifying opportunities to improve the delivery of education and training to better meet industry's needs and to increase the uptake of training by companies.

A further aspect of the project will be to investigate the "attractiveness" of Food and Drinks sector as an employer and to identify tools that might improve perceptions of the industry by potential employees and those who may influence them.

The scoping study aims to:-

- Investigate recruitment issues related to sector attractiveness and identify tools to influence it;
- Develop a detailed skills requirement matrix for the medium to long term;
- Map out the current training marketplace / landscape against the needs and experiences of food and drink network members;
- Identify gaps and opportunities for improvement in the training provision;
- Benchmark other regions such as Wales, Scotland and Republic of Ireland to draw lessons from their approach;
- Consult with network members and stakeholders to secure an enhanced level of engagement;
- Develop a roadmap and action plan to address any identified weaknesses in the current training landscape;
- Develop a roadmap and action plan to improve perceptions of the sector;
- Assess the resources needed to implement the Action Plans;
- Propose options and preferred solutions for approval by network members and stakeholders.



2. Strategic Context

The Agri-Food Industry has performed well during the recent economic downturn. It has the potential to make an, even more, significant contribution towards achieving increased prosperity for the province in the future.

One of the key issues constraining development is the skills profile of the workforce. Various studies have revealed persistent skills gaps and skills shortages, which historic levels of up-skilling (training of those already in employment) and recruitment do not address.

The wider community in Northern Ireland often has a poor perception of the industry and lacks understanding about agriculture and food. This impacts adversely upon the industry in various ways, for example, in its ability to attract high calibre young people into the workforce.

Over recent years, initiatives by industry and Government have sought to improve knowledge and understanding and to change attitudes. Some progress has been made but much more work is required to consolidate achievements to date and further enhance the image and reputation of the industry. This has been highlighted in the industry's strategic plan for the period up to 2020 -"Going for Growth - Investing for Success".

"Going for Growth - Investing for Success", published in May 2013, incorporates specific targets, which reflect the industry ambition to achieve increased sales, job creation and greater prosperity up to 2020 and beyond. With 2010 as the base year, the headline growth targets for 2020 are:-

Turnover - +60% (to £7,000 million)

Value Added - +60% (to £1,025 million)

External Sales - +75% (to £4,500 million sold outside NI)

Employment - +15% (Additional 15,000 people)

Going for Growth incorporates 118 recommendations to guide the actions required to achieve the ambitious Growth targets. Industry is expected to take lead action on approximately 40 recommendations, some of which provide the rationale for further interventions on skills development,

Recruitment and development of a highly skilled and motivated workforce are a crucial goal of Going for Growth. Specific Recommendations are published under the theme of Innovation, Entrepreneurship and Skills (Going for Growth, Pages 36-39)



Key Challenges on Skills highlighted in Going for Growth are:-

- A poor perception of the industry lacks understanding of agriculture and food production, lack of awareness of career options, and difficulty in recruiting graduates, particularly those with scientific and technical skills.
 We must position ourselves as an attractive career option - from semi-skilled to technical to business management, with opportunities for graduate talent;
- Management and leadership training must be enhanced and industry must increase its uptake of the support on offer;
- There is a need for business skills in the industry, both at primary and processing levels - cost analysis, commercial viability, and application of technical skills;
- A lack of marketing skills and failure to appreciate the need to meet or exceed customer expectations, throughout the supply chain; and
- The need to better harness the fresh talent at Further Education Colleges, Universities and CAFRE through apprenticeship opportunities, both on-farm, in the factory and skilled occupations such as the bakery sector.

Going for Growth Recommendations are:-

- All Agri-Food skills and entrepreneurship development must be the responsibility of a single dedicated group, which must match provision to requirements.
- Agri-Food must be introduced into the curriculum at the pre-school, primary and secondary level to enhance the understanding of agriculture and food. The scope for development of primary and secondary curriculum based on agriculture and food to GCSE exam level must be examined.
- There should be a significant increase in training places in Agri-food at all levels. We will commit to:
 - a. Provide placements for all industry trainees including farm apprenticeships/farm management development opportunities for those currently being trained in CAFRE as an integral part of their development; and
 - b. Provide training to career staff on Agri-Food training opportunities.
- Resource and expedite implementation of the Food and Drink Future Skills Action Group (FSAG) Action Plan.



The initial Food Skills Action Group's Action Plan (2012/13 to 2014/15) was published in May 2012. Its content and impact are summarised in Section 5: Recent Initiatives to address Skills Issues; Subsection (vi) Food Skills Action Plan.

3. The Food and Drink Processing Sector's Workforce

Contribution to Economy

Food and Drinks are the largest sectors in the province's manufacturing industry. It contributed £717.7 million of Value Added to the economy (Table 1A) in 2013. The most important sub-sector was Poultry followed by Beef and Sheep and then Drinks. Together these sub-sectors contributed £402.9 million of Value Added - 59% of the Total Value Added for Food and Drink.

Recent Growth in Employment

Food and Drinks provide employment for a work force of around 24,000 full-time equivalents (including Agency Employees). Also Food and Drink, processing helps to sustain a much larger number of jobs, both upstream in agriculture, commercial horticulture and a full range of ancillary businesses and downstream in transportation, wholesale and retail.

Employment in Food and Drink Processing grew slowly from 2000 to 2009, adding 589 full-time equivalent jobs (3% increase) over that period (Table 1B). However, that represents a relatively stable performance compared to most other sectors of the economy, which performed less well during the severe economic downturn of 2008 and 2009.

From 2010 to 2014 the industry developed more vigorously than before, as confirmed by various economic indicators, including employment (Table 1). During this period, the sector added 2319 full-time equivalent jobs, an increase of 12%. The largest sub-sector was Poultry followed by Beef and Sheep and then Bakery. Together these sub-sectors contributed 13,724 jobs - 63% of total direct employment for Food and Drink.

Future Employment

This encouraging performance was reflected in the "Going for Growth" strategic plan, which anticipates an additional 15,000 jobs (15% growth in employment) in agriculture, food and related businesses up to 2020 if the plan can be implemented.

These other jobs need to be filled by high calibre people who are well trained. However, the staffing challenge for the sector relates not only to the expansion of employment but also to the replacement of existing staff who leave the industry either for retirement or alternative employment. The Skills Barometer prepared recently by the University of Ulster Economic Policy Centre forecasts that



Manufacturing generally will have a gross requirement of 2000 new staff per year to replace people that are leaving and will also require an additional 1200 new employees per year to expand, i.e., Total of 3200 new employees per year. (See also Section 7 - Skills Requirement Matrix, which projects employment for Food Manufacture only, i.e., excluding agriculture, beverage manufacture and ancillary businesses)

A. Total Value, Added by sub-sector, 2013 (£million)

B. Direct full-time employee equivalents, by sub-sector, for 2000, 2009 and 2014 (with total agency workers for 2014)

Employees -	2000	% change	2009	% change	2014	Value
Full-time		2000 to		2009 to	provis-	Added
equivalents		2009		2014	ional	2013
						(£m)
Animal By-	264	-52	123	-2	120	9.1
Products						
Bakeries	3331	+2	3408	-1	3377	96.9
Beef and	2803	+25	3494	+31	4594	131.4
Sheep						
Drinks	1763	-31	1184	+17	1782	100.9
Eggs	192	+7	206	+45	298	17.4
Fish	992	-43	563	-11	502	15.0
Fruit and Veg	1433	+25	1793	+20	2144	61.0
Milk and Milk	2383	-7	2225	+2	2258	82.8
Products						



Pigmeat	1510	-8	1390	-2	1358	33.2
Poultrymeat	4205	+21	5081	+13	5753	170.1
Total Direct	18875	+3%	19464	+12%	21783	
Employees						
Agency	Not		Not		2132	
Employees	known		known			
Total	-		-		23915	
Employment						
Total Value						717.7
Added						

Source – DARD: Size and Performance of the Northern Ireland Food and Drinks Processing Sector – Statistical Reports published 16 November 2015.

Diversity of Employment

The general perception of work in the industry is of people working on production lines in conditions that can be unpleasant or inhospitable. Production is the core of the industry and does provide jobs that do suit some people. However, the reality is that the industry also offers a vast array of different jobs, which require people with very different skills and aptitudes.

While work has been carried out to identify the different roles or jobs types in the industry, there does not appear to have been any work to quantify the number of people employed in each if the job roles in the industry.

Job Roles can be grouped into the following categories or disciplines:-

New Product Development Technical and Quality

Information Technology Production Operations

Distribution Operations Supply Chain and Logistics



Buying Human Resource Management

Finance Research

Public Relations Marketing

Sales Packaging

Health and Safety Engineering

Source: Tasty Careers: Careers Map - National Skills Academy for Food and Drink, 2015.

All of these disciplines require people with a high level of skill, knowledge and understanding to perform at the optimum level.

Ideally, people should secure an appropriately recognised qualification before entering the industry - particularly if they aspire to progress in management, supervisory, professional or technical roles. Alternatively, people should be able to develop themselves through a structured training programme, e.g., Apprenticeship in the early years after taking up employment, as happens in other sectors of the economy, including agriculture. Such opportunities are still relatively rare in the Food and Drinks Processing Sector.

4. NORTHERN IRELAND PROVISION OF VOCATIONAL EDUCATION AND TRAINING TARGETED AT FOOD AND DRINK SECTOR

4.1 Vocational Education

In Northern Ireland the providers of vocation educational relevant to the needs of the Food and Drinks industry are:

- College of Agriculture, Food and Rural Enterprise (CAFRE)
- Queens University of Belfast
- University of Ulster
- 6 Colleges of Further and Higher Education

CAFRE provides only specialised courses in Agri-Food disciplines for people intending to enter or already working in the Agri-Food industry and the associated rural economy. Other institutions offer a small number of courses in Agri-Food disciplines but also deliver courses in other disciplines required in the Food and Drinks industry. Examples of other disciplines are Engineering, Information Technology, Business Administration and Transportation



4.1.1 College of Agriculture, Food and Rural Enterprise

CAFRE is part of the Department of Agriculture and Rural Development. It delivers courses leading to qualifications up to Masters level in Business Management, up to Honours Degree level in Food and Equine Studies and up to Foundation Degree level in Agriculture and Horticulture. Full details of duration, content, accreditation, etc. of these courses are provided in CAFRE's website www.cafre.ac.uk

Food Programmes

Food courses at Loughry Campus, CAFRE have been developed to meet the needs of employers in the food industry. Coupled with access to state-of-the-art food facilities, this means that Loughry students can develop the competencies and skills required by the food industry and have proven job success.

Currently, courses provided lead to the following qualifications:-

BSc (Honours) in Food Business Management (full-time and part-time)

BSc (Honours) in Food Design and Nutrition (full-time and part-time)

BSc (Honours) in Food Technology (full-time and part-time)

FdSc (Foundation Degree) in Food Manufacture (full-time and part-time)

FdSc (Foundation Degree) in Food, Nutrition and Health (full-time and part-time)

National Diploma in Food Technology (full-time and part-time)

National Diploma in Food, Nutrition and Health (full-time and part-time)

National Certificate Food Technology (full-time)

National Certificate in Food, Nutrition and Health (full-time)

Diploma in Packaging (part-time)

Certificate in Packaging (part-time)

The BSc and FdSc programmes have recently been revised and re-accredited by the University of Ulster. A primary objective of the exercise was to incorporate more science-based technical knowledge in the degree programmes as requested by the Food and Drinks industry.

CAFRE Food programme enrolments and outturns will be covered within Section 5 - Recent Initiatives to address Skills Issues.

Business Management Programmes (formerly known as Communication programmes)



Following a significant development and rebranding exercise, the Business courses currently on offer on both a full and part-time basis lead to the following qualifications:-

MSc in Business for Agri-Food and Rural Enterprise (with options in Innovation Management, Rural Enterprise Development or Business Communication).

Postgraduate Diploma in Business for Agri-Food and Rural Enterprise (with options in Innovation Management, Rural Enterprise Development or Business Communication)

Postgraduate Certificate in Business for Agri-Food and Rural Enterprise

Graduate Certificate in Business Communication for Rural Enterprise

The Graduate Certificate in Business Communication for Rural Enterprise allows individuals with no formal qualifications but relevant work experience a route to gain entry into the postgraduate programmes at Certificate, Diploma and MSc levels.

Overall enrolment in the Communication / Business programmes has been fairly consistent at 100 students (+ or - 10%) for many years. This matches the College resources available to deliver the programmes.

4.1.2 Queens University of Belfast

Three 'food' degree courses offered by QUB are:-

a. Undergraduate - MSc (Honours) Food Science and Food Security (new course) - 3 or 4 year

This course combines BSc and Masters-level study and allows students to develop a scientific understanding of food, such as its properties and composition, production and manufacture, testing and regulation, interaction with the human body, and the current and future challenges for its safety and supply.

b. Undergraduate - BSc (Honours) Food Quality, Safety and Nutrition - 3 or 4 year

This course, which can be taken with or without Professional Studies, develops knowledge and understanding of three critical areas concerning food production and consumption. Food Quality ('fitness for purpose' of our food); Food Safety (physical, microbiological and chemical aspects of our food) and Nutrition (nutrient supply from foods necessary to support the human body).



c. Postgraduate - MSc in Advanced Food Safety (new course)

This course will focus on new and emerging issues within the field of food safety, concentrating on developments in analytical approaches to monitor and regulate food safety, authenticity and security.

QUB Food programme enrolments and outturns will be covered within Section 5 - Recent Initiatives to address Skills Issues.

Queens University also delivers a broad range of other courses that develop skills required in Food and Drink Manufacturing. A few examples are:-

Undergraduate BSc Microbiology

BSc Biochemistry

BSc Biological Sciences

BSc Economics (with Finance or Accounting)

BSc Business Economics

BSc Business Management

M Eng Electrical and Electronic Engineering

M Eng Mechanical Engineering

M Eng Software Engineering

Postgraduate courses are also available for some of the above disciplines.

Full details of all courses are available on the University's website: www.qub.ac.uk.

4.1.3 University of Ulster

Traditionally the University of Ulster's primary focus in relation to food has been on Dietetics and Nutrition but in recent years, the range of courses at both undergraduate and postgraduate level has broadened considerably. Examples of courses currently offered by the Faculty of Life and Health Sciences include:-

Undergraduate

BSc in Food and Nutrition

BSc in Consumer Management and Food Innovation

BSc in Biotechnology

BSc in Environmental Health



BSc in Dietetics

BSc in Human Nutrition

Postgraduate MSc in Food and Nutrition

PG Food Regulatory Affairs

MSc in Human Nutrition

MSc in Nutraceuticals, Functional Foods and Supplements

Some of these courses will be directly relevant to employment in technical or scientific positions in Food and Drink Manufacture while others will have a high level of transferable skills.

The University of Ulster also delivers a broad range of courses that develop skills required in Manufacturing generally, for example in Engineering and Computing:-

Undergraduate

B & MEng in Engineering Management

B & M.Eng in Electronic Engineering

B & M.Eng in Mechatronic Engineering

B & M Eng in Mechanical Engineering

B & M. Eng in Renewable Energy Engineering

B & M Eng in Computer Engineering

B & M.Eng in Software Engineering

B & M.Eng in Mechanical and Manufacturing Eng.

BSc in Computer Science

BSc in Information Technology

Masters programmes re-delivered in all of the above subjects and, also, there is a Masters programme in Manufacturing Management.

On the business side, the university offers undergraduate and postgraduate courses in Business Studies, Business Economics, Marketing, Accounting International Business, Management and other disciplines directly relevant to employment in Food and Drink Manufacturing.

Further information on all courses can be accessed on the University of Ulster website: www.ulster.ac.uk.



4.1.4 Colleges of Further and Higher Education

The 6 Colleges of Further and Higher Education offer full-time and part-time vocational courses in a wide range of disciplines, normally up Foundation Degree level but up to BSc in a few instances. Many of these courses are focused on the development of skills required by the economy, including the Food and Drinks Sector. Colleges were invited to identify courses which were relevant to employment in the sector and following lists some of the courses mentioned:-

Foundation Degree Level 5 Software Engineering

Foundation Degree Level 5 Mechanical and Electronic Engineering

Foundation Degree Level 5 in Building Services and Renewable Energy

HLA Level 5 Mechanical Engineering

Level 3 General Engineering

BTEC Level 3 Extended Diploma in Engineering / Manufacturing Engineering / Electronic Engineering

Foundation Degree in Computing

HLA Level 5 Software Development

BTEC Level 3 Extended Diploma in IT

BSc Hons in Business Studies

Foundation Degree Level 5 Business and Enterprise

OCR Administration Level 3

BTEC Level 3 Extended Diploma in Business

HLA Level 5 in Accountancy

BTEC Level 3 Extended Diploma in Applied Science

C&G Levels 2 and 3 NVQ Diplomas in Professional Cookery

Units of Food and Drink Qualifications Levels 2 and 3

4.1.5 Providers of Higher Education in Great Britain and the Republic of Ireland

Up to one-third of Northern Ireland students who progress from school to Higher Education study at universities and other institutions in Great Britain and the Republic of Ireland. Some of these students will return to take up employment in Northern Ireland.



The Scoping Study has no information on the subjects that these students take outside Northern Ireland but a small number may be in agri-food or other topics relevant to the Northern Ireland Food and Drink industry. One example is Harper Adams University College, which offers agriculture, food and related themes and has an established tradition of attracting some NI students. The measures proposed in this study to improve the attractiveness of the industry will also apply to these students.

4.2. Providers of Training to assist company's up-skill existing staff

4.2.1 College of Agriculture Food and Rural Enterprise

CAFRE's portfolio of short courses has been developed in consultation with employers to meet the needs of the industry. Courses can be delivered at Loughry Campus or employers' premises or other venues across the province. They are targeted at managers, supervisors, technicians and professionals, i.e., those responsible for driving the industry forward. CAFRE does not deliver lower level courses, e.g., in Food Safety / Hygiene, which can be delivered by non-specialist providers or in-company.

CAFRE offers approximately 100 courses over eight disciplines

- Technology (31courses)
- Innovation (7 courses)
- Safety and Quality (14 courses)
- Packaging (7 courses)
- Science and Nutrition (13 courses)
- Business Improvement (10 courses)**
- Energy and Waste (5 courses)
- Professional Development (11 courses)**



^{**} Because of resource constraints at CAFRE and the availability of similar courses from other providers, these courses are not actively promoted by industry.

Full details of duration, content, accreditation, etc. of these courses are provided in CAFRE's website www.cafre.ac.uk in the 'Industry' section. CAFRE also organises food seminars and conferences on topical issues.

Demand for training in recent years has been overwhelmingly for Quality & Safety and Technology. Over the last two years, courses in other disciplines have not attracted sufficient applicants to justify running the courses.

Table 2

Training delivered by CAFRE 2011/12 to 2015/16

Year	2011/12	2012/13	2013/14	2014/15	2015/16
					Apr to
					December
					only
Number of Trainees	920	1430	1347	1647	1600
Number of Training	1466	1555	2329	2733	1500
Days Delivered					
Number of Courses	100	125	117	121	88
Quality & Safety	72	90	89	87	70
Technology	26	27	22	34	18
Energy & Waste	1	4	3	0	0
Innovation	0	3	3	0	0
Science	1	1	0	0	0

4.2.2 Queen University of Belfast

The Queens Management School provides part-time programmes leading to MSc degrees in Finance, Risk and Investment Management and Human Management as well as two programmes leading to an MBA (Masters in Business Management) It also provides CPD modules on Risk and Investment and Trading and Investment.



Various schools may also deliver short courses or seminars on an occasional basis. Full details of all courses are available on the University's website: www.qub.ac.uk.

4.2.3 University of Ulster

The University of Ulster's Faculty of Life and Health Sciences offers a range of short 'food' courses, which are relevant to Food and Drink Manufacturing. Many of these courses are directly or indirectly concerned with legislation:-

EU Food Law for Processed Foods

EU Food Law for Eggs and Egg Products

EU Food Law for Milk and Milk Products

EU Food Law for Foods of Plant Origin

Food Law and Food Regulation

Food Labeling

Consumer Use and Understanding of Food Labeling

Hazards of Food Supply

Food Safety - Risk Assessment and Management

Implementation and enforcement of legislation on food safety

Other Departments in the University provide relevant part-time or short courses, e.g., the Business School offers Strategic Management and Strategic Marketing.

Further information on part-time and short courses can be accessed at the University of Ulster website www.ulster.ac.UK

4.2.4 Colleges of Further and Higher Education

Skills Focus is a DEL programme being introduced currently by the 6 Colleges. It is still in the pilot stage in some disciplines. It is open to companies with fewer than 250 employees. The College will provide skills analysis for the business and deliver accredited training at Level 2 and above, with 75% of the cost of training is



covered by DEL with the remaining 25% covered by the employer. Delivery is flexible and can be on or off the employers' site.

Some courses are unique to the Food and Drink industry, e.g., the following courses accredited by City and Guilds:-

Food Manufacturing Excellence Butchery Skills

Fish and Shellfish Skills Bakery Skills

Managing Allergens in Workplace Food Technology

Others have wider applicability:-

Leadership and Management Energy & Waste Management

Supervision and Team Leadership PLC and Pneumatic Control of Production Lines

Food Safety and Quality HACCP

NEBOSH / Health and Safety Maintenance

Refrigeration ICT

Some courses can be tailored or contextualised to meet the needs of a particular employer.

4.2.5 Private Providers

Food and Drink Manufacturers use a wide array of Private Sector Training Providers to deliver training to their workforce. While it is not an exhaustive list, the following providers were identified by companies during the consultation process and from DEL and Invest NI websites:-

- Ashridge University
- Beckinridge
- BRC Partnership
- CCM
- CMD Consulting
- Development Ireland
- Hanley University
- In Step UK
- Jenkinson Consulting
- LP Associates



- Linkubator
- Maguire Training
- Matrix
- McCallum Health and Safety
- Next Level Management
- Parity Solutions
- People 1st
- SA Parker
- St Johns Ambulance
- Thinkpeople Consulting
- Time Associates
- Training Solutions NI
- UKAS

Most of the above providers specialise in Leadership and Management (incl HR and change management) but others specialise in disciplines of interest to Food and Drink Manufacturers, e.g., Food Safety and Quality (incl HACCP) or Health and Safety (incl NEBOSH). They appear to be most widely utilised by the bigger companies, often with the support of Invest NI funding.

4.3. Providers of Financial and other Support for In-Company Training

4.3.1 Invest NI

Invest NI, part of the Department of Enterprise, Trade and Investment, is the regional business development agency for Northern Ireland. Its role is to grow the local economy and it does this by helping new and existing businesses to compete internationally, and by attracting new investment to Northern Ireland.

Invest NI aims to offer the Northern Ireland business community a single organisation providing high-quality services, programmes, support and expert advice. Principally it helps those companies that can make the greatest contribution to growing our economy. These are businesses that have the ability to develop and drive productivity in the economy and are keen to export their goods and services outside Northern Ireland.



Food and Drink Manufacture is a priority area for Invest NI and since 2011 to 2015 it offered training grants totalling £7.243m to food and drink companies based in Northern Ireland (excludes Leadership and Management Programme). These grants assist companies to develop and deliver skills development plans within their businesses. Much of the funding is used to engage specialist consultants to provide the training.

One key programme area is the development of owners, directors and senior managers. Some of the elements of the Leadership and Management Programme are:-

Leader Programme - this connects an owner /director /manager with a broad network of other similar leaders while also providing business mentoring, leadership coaching, etc.

Leadership Team Programme - this focuses on developing the skills and relationships of the top team to achieve business growth.

Leadership Space - this is a series of events for the alumni of leaders who have completed our leadership programmes.

Information on all Invest NI programmes is available on the website: www.investni.com

4.3.2 Department of Employment and Learning

DEL is responsible for developing policy and delivering programmes to develop the knowledge and skills needed in the Northern Ireland economy and to assist people into employment. It is responsible for Further and Higher Education, primarily delivered via the two Universities and six Further Education Colleges, and the province's Employment Service. While DEL delivers most of its programmes through these bodies, it does deliver some programmes directly.

Some examples are:-

Bridge to Employment for Jobseekers - this is a pre-employment training programme to help people find a job if they are unemployed, whatever their experience of work.

INTRO Graduate Programme - this is an entry-into-management level initiative, delivered by Parity Resources Ltd designed to speed the development of graduate managers.

Management and Leadership Development Programme - MLDP offers accredited training options to help employers meet the specific development needs of their managers and leaders at all levels.



Information on all DELNI programmes is available on the websites: www.delni.gov.uk and on: www.nibusinessinfo.co.uk.

4.3.3 Department of Agriculture and Rural Development

DARD promotes and supports the development of skills in the Food and Drink Processing Sector through the delivery of vocational education and training and technical business development services via the College of Agriculture, Food and Rural Enterprise, Loughry Campus. The courses provided by Loughry have already been reported in Section 4, Sub-sections A and B above.

Historically DARD has occasionally provided grant support, either directly or through an EU-funded Rural Development Plan, for other initiatives aimed at skills development for the agri-food sector. At the time of writing no grant support for Food and Drink Manufacturing skills development is available.

4.4. Apprenticeship

ApprenticeshipsNI is a work-based programme designed around the needs of employers. It offers recognised training and qualifications at levels 2 and 3 to new and existing employees aged 16 or over who are:-

- in, or about to begin, full-time employment;
- working a minium of 21 hours per week;
- are over school leaving age.

For Apprentices under 25 years old, DEL pays the full cost of off-the-job training while those over 25 attract half of the cost of training. On completion of the Apprenticeship by a young person at both level 2 and Level 3, an employer incentive of £500 per trainee is paid (£250 for trainee over 25). The employer pays apprentices and National Minimum Age Regulations apply.

The duration at each level will depend on many factors, including the pathway, the level and the ability of the Apprentice. The following must be completed for achievement of the full Apprenticeship:-

- A competence based qualification relevant to the Apprentice's job;
- Essential skills in literacy and numeracy;
- A company induction with modules covering employment rights and responsibilities.



The framework is agreed between DEL and Improve, the Sector Skills Council for Food and Drink Manufacturing. Pathways include Meat and Poultry, Bakery, Dairy, Fish and Shellfish, Food Manufacturing Excellence and Fresh Produce.

Within DEL's current contract period, seven organisations have contracts to deliver Apprenticeship in Food and Drink Manufacturing, incl butchery and bakery but not all of them are operating the programme.

Table 3

Apprentices enrolled in 2015/16 by Colleges by Colleges and Training Organisations which hold DEL Contracts to deliver Apprenticeship in Food and Drink Manufacture.

Organisation	Level 2	Level 3	Total
Belfast Metropolitan College	73(1)	12(1)	85(1)
CAFRE	20	-	20
Craft Training	110	90	200
Oriel Training Services	Approx 45	-	Approx 45
Oriel Training Services	Approx 45	-	Approx 45
South Eastern Regional College	0	0	0
South West College	0	0	0
Southern Regional College	42(2)	28(2)	70(2)
Total	290	130	420

Source:- Returns provided directly by the training organisations



- Note: 1. All apprentices on Bakery programme none on Food and Drink Manufacture.
- 2. Includes 7 apprentices doing Level 2 Food Engineering, 11 apprentices doing butchery at Level 2 and 11 apprentices doing butchery at level 3.
- 3. In all cases, training providers indicated that many Level 2 trainees were about to progress to Level 3, which is target outcome for most.
- 4. Some Apprentices, particularly with Craft Training, are employed by microbusinesses such as butchers shops and home bakeries.

Employees of Food and Drink Manufacturers are participating in Apprenticeship programmes in other disciplines, e.g., general engineering, electrical engineering and information technology. Numbers are unknown.

DEL and CAFRE have begun developing a Higher Level Apprenticeship in Food and Drink Manufacture. The industry will be consulted on the structure and content, which will include new units at Foundation Degree level.

5. Recent Initiatives to address Skills Issues

The Collaborative Networks Project follows on from various surveys and initiatives since 2006, which sought to investigate the sector's skill requirements and undertake actions to address the issues raised.

A. Surveys of Industry Skill Requirements

The most recent studies were:-

- (i) Improve's NI Sector Skills Assessment, December 2010.
- (ii) Improve / Food and Drink Sector Skills Survey regarding Skills Issues within the NI Food and Drink Industry, October / November 2011.
- (iii) Training and Skills in the Northern Ireland Food and Drinks Sector A Briefing Document prepared for Policy and Economics Division, DARD by Claire Jack, Duncan Anderson and Niamh Connolly, Agricultural and Food Economics Branch, AFBI, October 2011.



Although the results of these surveys were not identical, certain key themes were identifiable in all of them. A significant minority of employers had vacancies and skills gaps due to deficiencies in the existing workforce. Some of the jobs and skills gaps were deemed 'Hard to Fill'. The main problem areas were:-

Management - demand for effective managers was outstripping supply, with a significant minority of existing managers perceived to have skills gaps, suggesting that, even among qualified managers, there was scope for improvement.

Professional and Technical Roles - a high incidence of hard to fill vacancies for Food Scientists, Technologists and Engineers and also skills gaps among many of those in post. The need for technician engineers was identified in one study as 'industry's absolute priority'.

Skilled Trades - in butchery and bakery, although some evidence of problem being alleviated by use of qualified migrant workers and some in-company initiatives.

Process, Plant and Machine Operatives - there was evidence of historical recruitment problems being alleviated by the recession - although technical, practical or job specific skills along with literacy and numeracy could still cause problems in some companies.

Sales Roles - while not achieving as high profile as the other roles identified above, professional sales expertise was perceived to be a problem area.

To help the industry become more competitive in future, certain common themes emerged in the recommendations:-

A higher level of skill will be required in all key roles within the industry - particularly in staff responsible for ensuring that the industry embraces change through adopting and deriving benefit from new technologies and improved work practices.

Leadership, management and people skills need to improve at all levels within the industry - from the board-room down to the shop floor.

Better communication of information on training and other business development support, with perhaps a single point of contact, could benefit food companies.

A coherent strategy needs to be developed and implemented to improve the image of the industry as a provider of rewarding, interesting and secure employment.



B. Measures to address Image of the Industry

Through the decade up to 2006/07 the food industry and the institutions providing food education was experiencing increasing difficulties in recruiting young people. The industry became heavily reliant on immigrant workers, and Queens University dropped its courses in Food Science and Food Technology and enrolments onto food courses at CAFRE's Loughry Campus fell to such a low level that the viability of the Campus was in question.

CAFRE implemented a Food Cadetship programme to bring graduates in non-food disciplines into the industry. The Department for Employment and Learning funded Improve (Sector Skills Council for Food and Drink) to work with CAFRE to undertake a major survey of young people, parents and teachers.

(iv) Young People's Attitudes Towards Careers in the Food and Drink Industry, June 2009.

Improve engaged Millward Brown (Ulster) to undertake a major programme of quantitative and qualitative research to enhance and develop specific knowledge of young people's and their influencer's attitudes to the food and drink industry. This knowledge would inform development of a strategy to attract more young people to meet the sector's recruitment needs and drive forward productivity.

Over 3300 pupils, teachers and parents from 30 grammar and secondary schools across Northern Ireland completed a self-complete survey. Also, there were three focus group discussions with students, 20 in-depth interviews with teachers and telephone interviews with parents.

A major finding was that "an overall lack of awareness and knowledge amongst pupils, teachers and their parents is contributing towards negative perceptions and in some cases misconceptions about the Northern Ireland Food and Drink Manufacturing Industry. In turn, this, can go someway to explaining the limited interest (3%) amongst pupils in a career in this industry ---".

Two key issues were, firstly, a perception that most work in food processing is unattractive, unskilled work on a production line and secondly, a confusion between employment in food processing and unskilled work in hospitality and catering, particularly in fast food outlets. Very few respondents had any understanding of the range of career opportunities in the processing sector and supply chain.

However the survey also revealed that a majority of pupils could be open to persuasion to consider the food processing industry if better information on the education and training, the career opportunities and remuneration after getting qualifications was presented to them in an attractive format. The Tasty Careers initiative was launched in 2010 in response to the results of this survey.



(v) Tasty Careers initiative and other recruitment activity to address recommendations from (iv).

In response to the findings and recommendations of the survey, Food and Drink Sector Skills /Improve collaborated with CAFRE and the industry to develop and deliver an enhanced suite of 'Awareness' programmes. These seek to improve the knowledge and understanding of teachers, pupils, careers advisers and occasionally the wider population so that a more positive attitude towards employment in the agri-food sector is developed in schools and the community:-

Tasty Careers - an initiative delivered by Food and Drink Sector Skills / Improve, supported by CAFRE and local food companies and funded by DEL. It is an excellent example of active collaboration and is now in its 5th Year. The four main elements are:-

- Ambassadors employed by food companies, coordinated by FDSS/Improve, visited 70+ grammar and secondary schools per year to give presentations on the industry and its employment opportunities, their company and their careers to date - over 8000 pupils have received direct presentations to date;
- Case studies of young people in a broad range of job roles in the food processing industry and supply chain, revised annually and published on a web-site and in a glossy brochure sent to Home Economics, Science and Careers teachers in all post-primary schools;
- Food careers route-map published on-line and in poster format issued to all post-primary schools along with the case study brochure;
- Briefings for careers teachers and DEL Careers Advisers.

CAFRE's Loughry Campus Syllabus Support Programme - each year, at Feed Your Mind during the 2nd week of June and other events, Loughry welcomes around 2000 Home Economics and Science students from over 40 Secondary Schools to the Campus where they receive lively presentations on aspects of the food processing and packaging.

CAFRE Schools Liaison Programme - each year CAFRE's 4 Schools Liaison Staff offer to visit all post-primary schools to give presentations on careers and courses in the land-based and food sectors. They typically visit around 80 schools per annum and attend around 70 Careers Conventions at various locations in Northern Ireland.

NISCA Conference - since 2010 NIFDA, supported by Food and Drink Sector Skills / Improve and CAFRE, has sponsored the annual Conference of the NI Schools and Colleges Careers Association (NISCA) and gave presentations on the Northern Ireland food and drinks industry and the varied careers it offers. The sponsorship



included presenting delegates with samples of high-quality NI food products which proved to be a powerful method of fostering a positive image.

(vi) Food Skills Action Plan 2012/13 to 2014/15

The initial Food Skills Action Group's Action Plan (2012/13 to 2014/15) published in May 2012. It endorsed the range of activities that were already seeking to improve the image of the sector (Theme 2 Sector Attractiveness) and established new targets under Theme 1 (Skills Provision) and Theme 3 (Coordination and Stakeholder Engagement). Specific objectives were set for each Challenge:-

Theme 1 Skills Provision:-

- Up-skilling the current workforce
- Increase management and leadership skills
- Talent management for junior managers
- Owner Manager Programme for SME Companies
- Junior Manager Apprenticeship
- Non-Executive Directors
- Essential Skills for non-managerial staff

Addressing Skills Shortages

- Identifying new management talent for the food industry.
- Pilot Apprenticeship for Food Engineers
- Address science / technical issues in food degrees

Theme 2, Sector Attractiveness:-

- Expand upon Tasty Careers to reach more schools and target FE Colleges and Universities;
- Research and develop suite of programmes to augment Tasty Careers for delivery in key Years 7/8, Year 10 and Year 12 in Schools;



- Enhance Tasty Careers website as a source of careers information for students, teachers and parents;
- Raise awareness of food and drink manufacturing sector.
- Theme 3 Co-ordination and Stakeholder Engagement
- Coordinate information on training provision
- Disseminate training information across the sector
- Raise awareness of Action Plan

One example of a programme developed and delivered under the Action Plan was a Leadership Excellence Programme, funded by DEL. The pilot programme, 'Leaders in Industry for the Food and Drink Manufacturing Sector', featured as part of the Department's Management and Leadership Development Programme (MLDP) and was delivered at Queen's University through its William J. Clinton Leadership Institute at Riddel Hall.

The programme commenced on the 10 March 2014. Aimed at senior management level and included two days' study at Cranfield School of Management. There were 25 places available on this course with all participants gaining a Level 5 accreditation from the Institute of Leadership and Management.

(vii) Impact of Recent Initiatives

At the time of writing the Sector Skills Task Force has not completed an evaluation of the outcomes and impact of the 2012-15 Action Plan. Consequently, the results and impact of Themes 1 and three cannot be reported here. However, the independent evidence is available for the outcomes and impact of Theme 2 Sector Attractiveness.

The primary objective of Tasty Careers and the other initiatives outlined in Section (v) above was to increase the number and calibre of young people enrolling in food and related courses, particularly at degree level, at CAFRE, QUB and other institutions. In due course, these young people would graduate to become available professional, technical and managerial roles in the food and drinks industry.

There is now strong evidence that the combined initiatives are having a substantial beneficial impact on the number and calibre of young people trained for the industry:-



At CAFRE:-

The total number of students enrolled on food courses at CAFRE (excluding Apprenticeship) - Table 5) demonstrates the greater interest in and commitment to food and drink processing as a career:-

• From 2008/9 to 2015/16, 68% increase in number of students enrolled on food courses at Loughry Campus (up from 234 to 393)

All of this improvement has been achieved by attracting more young people, almost all directly from school, onto full-time courses. Recruitment of people, usually in employment, onto part-time courses has been relatively static over the same period:-

- From 2008/9 to 2015/16, 131% increase in number of students enrolled on full-time food courses at Loughry Campus (up from 125 to 289 Table 2)
- From 2008/9 to 2015/16, total students enrolled on part-time food courses averaged 110 (Range 92 to 122) with no significant sustained improvement over the period.

Table 5 - Students enrolled on food courses at CAFRE: 2008/9 to 2015/16

Year	HE Full- time	FE Full- time	Total Full- time	HE Part- time	FE Part- time	Total Part- time	Total Students
2008/9	99	26	125	27	82	109	234
2009/10	111	40	151	25	67	92	243
2010/11	145	45	190	39	69	108	298



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2011/12	161	44	205	39	82	121	326
2012/13	188	52	240	49	73	122	362
2013/14	214	56	270	50	67	117	387
2014/15	228	60	288	46	60	106	394
2015/16	227	62	289	43	61	104	393

Source: CAFRE Annual Enrolment Data provided by CAFRE Student Administration

Note: HE includes BSc and FdSc;

FE includes National Diploma / Certificate and Packaging Diploma / Certificate

Number of graduates from CAFRE (Table 6) shows a similar upward trend:-

- From 2008 to 2015, 226% increase in a number of students graduating with BSc or FdSc. (Up from 27 to 88).
- From 2008 to 2015, 100% increase in the number of students graduating with a National Diploma or National Certificate. (Up from 15 to 30).
- From 2008 to 2015, 181% increase in total number of students graduating from CAFRE with BSc, FdSc or ND/C. (Up from 42 to 118).



Table 6 - Students graduating with food qualifications from CAFRE: 2008 to 2015

Year	FdSc	BSc	Total Higher Ed (HE)	Nat Dip or Cert	Total Graduates
				(Further Ed - FE)	
2008	3	24	27	15	42
2009	9	27	36	12	48
2010	9	17	26	17	43
2011	12	28	40	29	69
2012	16	20	36	22	58
2013	15	31	46	27	73
2014	15	47	62	30	92
2015	13	75	88	30	118

Source: Communication from Student Administration, CAFRE

As well as increased student numbers, CAFRE reports that the calibre of the student, as measured by A Level and GCSE grades of students being accepted onto courses, has improved markedly over the period. These more academic students cope better with the demands of their course and are achieving higher grades in the degree programme which is externally validated and quality assured, e.g., in 2015, 17 students graduated from Loughry with BSc: First Class Honours.



At QUB:-

The only full-time food course offered by QUB since 2011 has been the BSc in Quality Safety and Nutrition (2 further courses being introduced for 2016). Numbers of enrolments and graduates for this course are as follows:-

Table 7. Enrolments and Graduates for QUB BSc Food Quality Safety and Nutrition.

Year	2010	2011	2012	2013	2014	2015
Enrolments onto 1st Year	24	31	36	39	36	41
Increase in enrolments since 2010 (%)		29	50	62	50	71
Graduates	23	46	26	28	18	28

Source: Communications from Director of Education, School of Biological Sciences, QUB.

6. Approach of Other Countries

In order to identify best practice in other countries, which may be applicable to Northern Ireland, the project team reviewed a major EU Study on Skills Development in the Food and Drink Industry and also consulted and visited industry organisations in Wales, Scotland and Republic of Ireland.

(i) Ensuring Sustainable Employment and Competitiveness in the EU Food and Drink Industry - Meeting the Challenges of the Labour Market

A Joint Initiative by the Social Partners of the EU Food and Drink Industry - produced by Food and Drink Research Network based at Improve UK, in partnership with CERES.

A pan-European task force considered around 70 reports from within the EU and consulted with policy and industry experts as well as Food and Drink businesses. Its 2013 report reveals that the Food and Drink industries in other EU countries experience employment and skills issues similar to those in Northern Ireland.



Hence, the 'best practice' identified in the report and its recommendations for future action may be of relevance to Northern Ireland.

A Global Context

The Global Productivity Review undertaken by Proudfoot Consulting (2008) revealed that the food and drink sector was least likely to invest in skills development and training of its workforce compared to all other industries. Barriers to improving productivity included staff shortages/insufficient labour pool, internal communication problems, quality of supervisors and a lack of management training.

A Low-Skilled Workforce

A key characteristic of the European FDMP industry is the low level of skills in its workforce. The future economy requires workers with higher initial vocational education levels, who remain active in lifelong learning (CEDEFOP 2009). Employers increasingly value 'soft skills', e.g., communication, problem-solving, conflict resolution, as well as "hard skills" related to a particular job (Jan Gravemaker 2006).

The lack of employees with higher education (less than half the average of all manufacturing) is a key factor. Some specific roles are particularly problematic, namely food scientists, technologists, and engineers. This hampers innovation and productivity.

Impact of Drivers of Change

For FDMP companies to compete at a global level, they must learn continuously and develop 'world class practices' in their businesses (Jain and Lyons 2009). The industry has been slower in benefiting from operational improvement initiatives, such as "lean manufacturing", than other industries, e.g., the automotive industry.

The major driver of change will be new technology. It will present challenges at all levels in the workforce, but probably most crucially for technologists, engineers and managers / supervisors. Staff will also need to have appropriate understanding and responses to a raft of other challenges: globalization, changes in legislation and regulations, cultural management issues, consumer demands, sustainability, pressures for a low carbon economy, obesity and other health issues.

Health, safety and quality will continue to be of paramount importance, following the "scandals, " e.g., the workforce will have apply more rigorous quality and traceability measures to ensure that processed foods contain the correct ingredients.



Current Skills Issues

Document review identified that most EU countries have skills and training issues, many of which are synonymous with issues in Northern Ireland. These issues were reaffirmed in direct consultation with businesses as well as policy and industry experts:-

- Image of the sector perceived, particularly by younger people, as an industry characterised by inhospitable work environments, repetitive work and relatively low pay.
- Shortages in key roles, particularly food technologists, food scientists, engineers and certain skilled craftsmen, e.g., butchers and bakers.
- Graduates sometimes ill-prepared for the world of work, particularly where Leadership, management and higher level skills needed to adopt new manufacturing and food processing techniques, which drive competitiveness, are often lacking.
- Basic skills and employability skills amongst those in production roles need to be improved to ensure that employers have the opportunity to 'grow their own' managers and supervisors.
- An aging workforce a large proportion of the workforce is due to be retire within 15-20 years and needs to be replaced by young people, including women, who are currently under-represented.
- Commercial / business acumen and the skills required to negotiate with supply chain customers, particularly large retailers, need to be better.
- Skills to grow new markets internationally must be far higher on the agenda for most European countries;
- Issues surrounding the use of migrant labour both from the perspective of management and the development of the workers, specifically including language and communication issues.
- Low levels of training, particularly in small and micro-businesses, reduce the ability to innovate and compete.
- Low / uncompetitive pay will always militate against recruitment and retention of the best workers.
- Criticisms of current skills development systems

While all countries have challenges, some appear to be much more successful at addressing their skills requirements than others. Germany, France, Austria and Switzerland were cited as having the most effective education and training systems. Problems experienced in other countries include:-



- Outdated curriculum and technology not sufficiently focused on needs of employers.
- Too much focus on theoretical and not enough on practical;
- Graduates need business acumen as well as technical knowledge and understanding.
- Potential for apprenticeship not being realised.
- Poorly developed systems for supporting in-service training / off-the-job training.
- Some employers are failing to recognise that they have a crucial role to play in promoting the industry and in recruiting and developing their workforce.
- Information asymmetry means SMEs are missing out as smaller businesses appear to be less aware of the support available to them from public authorities and educational establishments.

Examples of Best Practice

There is considerable evidence of good practice helping to satisfy FDM skills requirements in some countries:-

- Proactive engagement with education and the community it is of critical importance that businesses engage effectively with schools and the community. This may include "Young Ambassadors" visiting schools to promote employment in the industry, improving the industrial experience of educationalists, offering industry visits to schools and the community and engaging parents to inform career choices. NI Tasty Careers was cited as an example of 'best practice".
- Apprenticeships all successful mainland European agri-food countries place major emphasis on Apprenticeships to bring high calibre qualified young people into the industry - up to 30% of young people may enter industry via Apprenticeship.
- A structured approach to up-skilling or lifelong learning to address company and individual worker requirements in a mutually beneficial manner.



- Supporting basic skills acquisition in the workplace, particularly for migrant workers, can lead to wide-ranging benefits including health and safety compliance, productivity gains and company loyalty.
- Providing development opportunities for all workers, in particular, encouraging and supporting older workers.
- Redesigning jobs and facilitating job rotation to relieve the boredom issues in some job roles.
- Utilising the potential of social media to assist in industry promotion and recruitment.

Recommendations

The report has highlighted good practice in various countries, as stated above, and suggests that other countries can learn from experience elsewhere. Some of these good practices are already being implemented in Northern Ireland, but other aspects, e.g., harnessing the potential of Apprenticeships, addressing sector attractiveness, succession planning, etc. still require attention.

The report also made a series of recommendations, but most were concerned with high-level work required at EU or cross-country level and would not be appropriate for direct implementation in Northern Ireland. However, the outcomes of some of this work might, in due course, be relevant to Northern Ireland, e.g.,

- Strategies and actions to achieve effective integration of migrant workers into the workforce and to address gender stereotyping.
- Case studies to demonstrate how training and workforce development has real financial and business development benefits and will help to encourage innovation and drive growth.
- Dissemination of best practice related to sector attractiveness, specifically including actions to address the many misconceptions about work in the sector.
- EU and Governments to review how they support 'food' businesses to adopt new technology and drive up productivity.



(ii) Review of initiatives and skills development activity in Wales, Scotland and Republic of Ireland;

The approach and actions of the three bordering regions of, Wales, Scotland and the Republic of Ireland

(A) Wales

The Welsh Government has published an Action Plan, which details 48 actions to deliver sustainable growth and added value to the Welsh Food and Drink Sector.

This Action Plan is aimed at developing a skilled and capable workforce through developing key partnerships in the 'skills supply chain' by engagement in schools through to Higher Education and linking them with the food industry.

The Welsh Food & Drink Skills Project found that 45% of food businesses reported technical skills gaps which needed filling in their workforce. The research identified skills gaps in all sectors including operating and maintaining equipment, waste awareness, environmental awareness and practice, sales and merchandising, manual handling, as well as more specialist skills

The Welsh Government has concluded there is a need for coordinated communications and promotional campaign across Wales to 'sell' the opportunities that careers in food have to offer to young people.

Their specific aims are Education, Training, Skills and Innovation. These areas have been included into an action plan which includes the following targets.

Recommendations - Wales

- 1. Develop a skilled and capable workforce through developing key partnerships in the 'skills supply chain' by engagement with Secondary and Higher Education, manufacturing businesses and stakeholders interests
- 2. Address skills gaps across the Food Supply Chain through devising/revising training and skills programme. The development of food industry competencies will also be taken forward
- 3. Produce new comprehensive refined programme for food manufacturing.
- 4. Develop valued qualifications which include 'skills passports' and apprenticeship routes to training.
- 5. Develop a communications plan and 'roadshow' to publicise the opportunities that the food industry can offer young people across a range of skills and qualifications levels.



- 6. Scope the Establishment of Food Career Ambassadors to promote careers in the industry
- 7. Scope all opportunities for more food industry apprenticeships including the Food & Drink Federation's 'Taste Success.'
- 8. Investigate the benefits of talent tracking and its management, building on the Agri-Academy initiative in farming, to develop future leaders in the food Industry.
- 9. Develop 'bite-size' on-line training modules.
- 10. Develop a knowledge transfer approach throughout the Food & Drink Supply Chains.
- 11. Scope the potential for micro-businesses to fully engage in 'Investors in People'.
- 12. Develop an on-line 'Food Education Hub'.
- 13. Encourage more food businesses to prioritise training and continued professional development
- 14. Training needs analysis and training plan should be a pre-requisite from businesses before expansion and growth plans receive grant support

(B) Scotland

The Scottish Government has clearly a recognised market need for assistance and support, particularly in the areas of recruitment and training.

Their strategy sets out to offer one clear framework of support to be delivered cohesively such that companies feel they can engage with a single entity, albeit the service or support is ultimately being provided by a number of partner organisations.

Through their Scotland Food and Drink Skills Academy Network, the SFDSA is offering industry businesses and their workforces a single source gateway to both 'off-the-shelf' and bespoke training geared to individual business needs.

Scotland Food and Drink co-ordinate further regional assessments. Which are then divided into sub-sectors, i.e., Fresh Meat, Seafood, Bakery or craft brewing. An action plan is then drawn up addressing particular issues or needs for that sector.

The operational cost of the work carried out by the sub-sectors is sometimes offset with a levy; this is dependent on the targets of the group.

Scotland Food and Drink Skills Academy have recognised that early engagement with school pupils in raising their awareness of the world of work and the diversity



of opportunities available will be central to overcoming narrow thinking about what makes a good career plan.

Recommendations - Scotland

- 1. Engage with employers to plan the demand for skills both now and in the future
- 2. Utilise this intelligence to influence the development and funding of education provision
- 3. Deliver targeted programmes to help Employers Bridge the gap where the supply does not meet demand in the short term.
- 4. Provide trusted advice and support to Invest in existing skills and created solid business plans that reflect long-term skills force requirements.
- Drawing on careers intelligence to help people develop career pathways,
 Management skills and Invest in programmes such as Modern Apprenticeships
- 6. Work with partners at a local level to create a joined-up pipeline of accessible skills support and skills programmes.
- 7. Developed the Certificate of Work Readiness in conjunction with employers to demonstrate that young people have the basic employability skills employers need

(C) Republic of Ireland

In the Republic of Ireland, there is recognition at the highest level that it must invest in ideas, knowledge and skills, encourage innovation and creativity, and recognise new opportunities for collaboration across the food supply chain and with other competitors.

They believe that over the coming decade, smart growth will depend on improved productivity, increased scale, targeted research, and enhanced skills and organisational capabilities

Improving the skills set, training & education are seen as critical across all food and drink sectors to enable businesses to improve scale and returns.

A key determinant of the future success of the Irish Agri-food sector will be the people who work in the sector, with an ongoing need to attract the best people



and to enhance the leadership and management skills of those working in the industry.

Overall, the knowledge base of those working in the industry will have to be continuously updated and developed at all levels. The universities, institutes for technology, Enterprise Ireland and Teagasc will play a crucial role in the development of human capital.

A key recommendation contained in the Food Harvest Strategy 2020 is to improve the knowledge infrastructure at both farm, and industry levels to reflect the focus being given to this important growth sector

The Food Harvest strategy report emphasises the importance of developing commercial and management skills to meet the future demand and that it should remain a core part of the training courses provided by Teagasc and the agricultural colleges. The report goes on to urge consideration to the establishment of an inter-agency, third level institute and industry forum, chaired by DAFF, to discuss and address the sector's ongoing skills gaps, training and development needs.

The report urges a critical examination of all training schemes and college education programmes to ensure appropriate practical/technical content and promotes a greater focus on business and project management skills.

They also suggest that skills levels in the sector should be augmented by focused technical training and boosting of management competence through the introduction of training, mentoring programmes and Graduate Placement programmes.

However, companies have recorded difficulties recruiting technical staff, and the Food & Beverages current & future skills needs were identified in the report as follows:

Food & Beverages Current & Future Skills Needs

- R&D scientists and food technologists
- International sales/marketing & languages
- Laboratory technicians-technicians working to develop new products
- Production/supervisory management, process control, software engineering & upskilling operatives & supervisory level staff.

Food companies are cognisant of the need to build competencies in relation to commercial development. While in terms of sector attractiveness the view is that not enough effort is devoted to assessing the effects on business of the undersupply of key calibre employee.



Recommendations - R.O.I.

1. Senior Management Training

Awareness campaign to promote the value of training at high level

2. Employer of Choice

IBEC, in conjunction with Teagasc and third level colleges, should initiate an image development programme for food sector communicating its attractiveness as a career opportunity. It should have a particular focus on attracting second level students.

3. Graduate Food Fast Track

The Development and promotion of a Graduate Food Fast Track Training programme, designed to provide an employee pipeline with a guaranteed level of ability and understanding.

4. National Innovation in Education Exchange

The third level sector and industry should communicate to ensure that the college curriculum development takes industry requirements more fully into account

5. General Management Undergraduate Course

Consideration should be given by third level colleges, to supplying graduate intake into the food sector possessing general management skills, covering the three main functional areas of food science, business and engineering

6. Formally Defined Work Placements

A structured formally defined programme of activities for work placements should be developed as a central, examinable element of certain undergraduate programmes.

7. Development Options - Second Level

The introduction of a programme at Applied Leaving Cert level. Focusing on basic/elementary management principles of food science and processing with a significant practical focus.

8. Third Level Development Options

The IIEE should seek to stimulate debate on the introduction programmes (cert/diploma) at IT level which would concentrate on the practical/theory/business skills associated with the sectors of the food industry



9. Expansion of "Train-the-Trainer, " Model

The existing FÁS model for in-company training and accreditation, approved by regulatory bodies and industry, and currently operating in the industrial meat sectors, should be rolled out to other food sub-sectors.

10. A national centralised data source

All accredited education and training information, including both accredited trainers and training programmes, should be established by FÁS and Enterprise Ireland, in consultation with Teagasc. FÁ

11. Food Industry Induction

An induction qualification for the food industry should be introduced, to cover such areas as employee health and safety in the workplace, food safety, hygiene, basic numeracy, etc.

While all countries have challenges, some appear to be much more successful at addressing their skills requirements than others. However, Like Northern Ireland the companies have recorded difficulties recruiting technical staff and the Food & Beverages current & future skills needs were identified as areas of concern in the report.

The common approach across all regions and throughout Europe is to work in partnership with industry to determine the gaps in skills and put in place long term action plans that focus specifically on creating a pipeline of skills for the medium and long term. With intervention from, lower school level, to retraining the existing workforce.

Scotland, Wales and R.O.I. have laid the foundation of long-term partnership within their areas, by setting up a single body to tackle the skills gaps and training issues with the Agri-Food sector. These organisations are currently implementing extensive action plans across the industry.

7. Skills Requirement Matrix for Medium to Long Term

As outlined in Section 3 (Workforce), Food and Drink Manufacturing embodies a vast array of different Job Roles, which in turn require diverse skill sets.

Northern Ireland Skills Matrix and Barometer.

Within this Scoping Study, it has not been possible to specify the skill set and qualifications necessary for each Job Role and to quantify the number of people



employed in each Job Role across the sector. Similarly, it has not been possible to quantify the number of people the industry will need to recruit for each Job Role over the next few years. Recruits will be required to fill existing posts which become vacant and to fill additional jobs which are created to fuel expansion and growth.

However, the Northern Ireland Skills Barometer, "Skills in Demand", published in November 2015 by University of Ulster Economic Policy Unit does outline the number of people at the various skill levels in all sectors of the economy. It forecasts skill requirements up to 2025 and also identifies where challenges in meeting those needs will exist at a macro level in future.

The Barometer, along with the background research (reported in Section 5A), and the results of the Scoping Study Industry Survey, does help to identify issues or concerns about meeting the future skill requirements for Food and Drink Manufacture and provide pointers towards actions required.

Forecast at Macro Level

The Barometer forecasts both the demand for and supply of skills over the next ten years and identifies where the gaps are likely to occur. The study uses the National Qualifications Framework (NQF) to categorise skills and qualifications according to level:-

Level 8	PhD (or equivalent)
Level 7	Masters (or equivalent)
Level 6	Degree (or equivalent)
Level 4-5	Foundation Degree/ HND/ HNC (or equivalent)
Level 3	A-Level (or equivalent)
Level 2	5 GCSE Grades A - C (or equivalent)
Level 1	5 GCSE Grades A - C (or equivalent)
Level 0	No qualifications.

At the macro level, demand for skills will outstrip supply, but the nature of the skills gap will vary depending on level of skill:-

Marginal undersupply at higher level skills (L6 and above)

Shortage most acute in mid-tier skills (L3 and L4-5)

Over-supply of low and no skills (L2 and below)



However, there will be significant differences at all levels depending on the discipline or subject area. At both higher and mid-tier skill levels, supply deficiencies are forecast for STEM related subject areas (Science, Technology, Engineering and Mathematics). In the short to medium term, there will be a significant oversupply in some other disciplines, most of which are not relevant to Food and Drink.

Increasingly employers are looking for employability skills, e.g., communication, team working, etc., to supplement a technical qualification. Particularly at high skill levels, some form of work experience to develop employability skills is beneficial to securing appropriate employment after graduation.

Another issue will be Demographic Trends. The number of 21-year-olds is forecast to decline from 24,000 in 2015 to 20,500 in 2025, after which the number will increase again. Most sectors of the economy are predicted to grow over the decade, and this suggests that there will be more intense competition for the ablest young people.

Impact on Manufacturing

Concerning employment, Manufacturing is one of the largest sectors of the economy with a workforce of 84,250 at present. If the forecast 11% growth is achieved up to 2025, Manufacturing will create an additional 13,769 posts. Even with baseline 5% increase, 8,191 additional jobs should be created - the highest of all sectors.

As well as satisfying the demands of expansion, recruitment also has to fill the much larger number of posts which are vacated when people leave the industry e.g., through retirement, move to work in another sector, etc. It is forecast that Manufacturing will require around 9000 recruits per year. Around 65% will be people moving from elsewhere in the economy. The remainder must come from migration or the education system -1,900 people per year for replacement and a further 1,300 per year for expansion.

Manufacturing provides opportunities across all skill levels. Many aspects, specifically including Food and Drink, will continue to have substantial demand for lower level skills, i.e., at and below Level 2, but Manufacturing is also 'degree-hungry'. Some upward movement in the balance of skills is anticipated:-



Table 8 - Approximate Balance of Skills required in Manufacturing; 2015 and 2025

		T
Skill Level	2015	2025
Below Level 2	32	26
Level 2	14	20
Level 2	14	20
Level 3	31	29
Level 4/5	8	7
Level 6+	15	18
Total	100	100
Total	100	100
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Source: The Northern Ireland Skills Barometer "Skills in Demand" published by University of Ulster Economic Policy Unit.

Manufacturing recruits people from many disciplines. At present, the biggest needs at Level 6+ are for Engineering (26%), Business/Finance (20%), Physical/Environmental, (11%) and Maths/Computing (8%).

It should be a major concern for the sector that, at Level 6+, the four Engineering disciplines, Computer Science, Information Systems and Marketing are seven of the twelve subjects anticipated to experience the most severe undersupply. In the case of Electrical/Electronic, Mechanical and General Engineering, the combined shortfall will be around 200 qualified people per year.

At levels 4 and 5, there is expected to be modest undersupply in Manufacturing Technologies, Engineering and Science - again disciplines demanded by Manufacturing. It is small compensation that there will be an oversupply of people qualified in Business Studies, Accounting and Finance at Levels 4 and 5.



Impact on Food and Drink Manufacture

Food and Drink Manufacturing is by far the largest sub-Sector of Manufacturing in employment terms. As with the rest of the Manufacturing sector, it is forecast to grow significantly over the next decade.

The following analysis is for Food Manufacture only, i.e., excluding drink/beverage manufacture. Up to 2025, it is forecast that it will need to recruit around 2773 workers per year. Approximately 1570 will come from elsewhere in the economy while approximately 1203 per year will come in via migration and educational establishments - 65% for replacement and 35% for expansion.

The Skills Mix is expected to change with a trend towards fewer workers with the lowest level of skills and more staff with the highest level skills. Average Annual Gross and Nett Requirements have been calculated to reflect thus.

The following table does not make any allowance for up-skilling. As happens at present, companies will continue to satisfy part of their skills requirement by training some of their better staff to develop the expertise and qualifications to perform at the next highest level. Companies would then back-fill posts at the lower level.

Table 9 - Skills Mix in Food Manufacturing - 2015 and 2025

Skill Level	Skills mix in workforce 2015 (With % in brackets)	Skills mix in workforce 2025 (With % in brackets)	Gross annual requirement – from elsewhere in economy, migration and progression from education	Nett annual requirement – from migration and progression from education
Below Level 2	8172 (42%)	(37%)	1377	335
Level 2	3244 (17%)	5088 (21%)	466	325



Level 3	4230 (22%)	4476 (19%)	486	196
Level 4/5	1529 (8%)	1752 (7%)	155	80
Level 6 and above	2113 (11%)	3685 (16%)	288	267
Total	19287 (100%)	(100%)	2773	1203

Source:- Communication from University of Ulster Economic Policy Unit, January 2016.

Note: UU and DARD use a different methodology for calculating the size of the workforce, and the above data excludes Manufacture of Drinks and Beverages which is included in the DARD data in Section 5.

It is forecast that there will be an ample supply of people with skills at Level 2 and below. Some of these workers may be migrants or people from elsewhere in the economy with specific or transferrable skills required for employment in Food and Drink Manufacture. Others will have no relevant skills. The onus will continue to be for companies to provide induction and on-the-job training to develop and refine the lower level skills required

Above Level 2, demographic trends will reduce the number of young people coming out of the education system. Also, a growing economy will need more qualified people. Together these factors will increase competition for trained staff in various disciplines, some of which are critical to Food and Drink Manufacturing.

At Level 3 some companies have periodically found it difficult to recruit and retain people with the specialist job skills, e.g., bakers and butchers. Apprenticeship is an ideal medium to develop skills at this level.

The same pressure is mirrored at Levels 4/5 where companies have experienced periodic difficulties in recruiting some specialists, e.g., ICT personnel, technician



engineers, scientific technicians, sales executives. The Barometer suggests that these challenges will intensify if remedial action is not taken.

There is a mixed picture at Level 6+. Since 2010, initiatives like Tasty Careers have led to a substantial increase in numbers graduating with degrees in Food Technology, Food Management and Marketing, Food Innovation and Food Safety, Nutrition and Health. This increase appears to be satisfying the industry's demands for specialists in theses areas, and the challenge will be to maintain the numbers in these disciplines.

The Barometer indicates that the biggest challenges for all Manufacturing, specifically including Food and Drink, will be to attract Engineers and ICT Specialists, both at Level 6+ and at Levels 4/5.

These issues are followed up in later Sections of this report.

8. Results from Survey of Companies and Follow-up Consultations

A total of 197 companies, all currently active within the Northern Ireland Food and Drink manufacturing and processing sector, were invited to complete the survey over the period October 2015 - January 2016. 40 responses were received - a response rate of 20.5%.

Size of Company	Proportion of Responses
No of Employees	
0-15	34%
15-50	21%
50-200	22.5%
200+	22.5%
Total	100%

However, because almost all of the largest companies in the Province in terms of employment returned questionnaires, around 64.2% of the total Food and Drink Manufacturing workforce has been covered by the survey.

The full results of the survey are published in Appendix 1.

A. Recruitment to the Sector

Employment Trends

In line with the aspirations in Going for Growth and the Skills Barometer, the survey confirmed that most companies are growing and increasing employment.



80% indicated that they had increased their level of employment over the last 2 years while 58% recorded an increase in employment over the last 12 months.

Recruiting directly from the education system remains an important pipeline for new recruits into the Industry, with 46% of the companies having employed people directly from school, college or university during the last 2 years.

Level of Vacancies

When asked to record the current number of vacancies in each job category or job role, a substantial majority of respondents indicated that they had no vacancies in many of the categories. The categories with the most vacancies were Management and Process, Plant and Machine Operatives (approx. 38% of respondents with 1 or more vacancies in each). In all other categories there were 25% or fewer respondents with 1 or more vacancies.

Of the 68 instances where respondents reported vacancies in a category, 56 of those were for between 1 and 3 vacancies in a category. A very small number of companies reported a fairly large scale of vacancies (ie 10+ or 3-10) for Process, Plant and Machine Operatives and Skilled Workers but they were bigger companies with very large numbers of workers in these categories.

When asked to prioritise which category of post it was most critical for their company to fill when they had a vacancy, Management and Professional/Technical were the most highly rated categories (ie 4 or 5 on a 5 point scale of importance) followed by Engineering, Accounts/ Admin/Clerical and Sales/Customer Service. However there were relatively minor differences between all categories.

Difficulties in Filling Posts

When asked to indicate which category of post (job role) they had greatest difficulty in recruiting and retaining the desired calibre of person, 48% of responses indicated that there had been no recruitment in the category. Where recruitment had been progressed, the most problematic categories (ie 4 or 5 on a 5 point scale of degree of difficulty) were Engineering, Management, and Professional/Technical. When extended to include moderate difficulty in recruitment (ie 3, 4 and 5 on a 5 point scale of degree of difficulty), the same categories in the same order of rating emerged.

When asked to identify why vacancies in each of the categories were difficult to fill, a mixed response emerged. A lack of suitable applicants was deemed to be a substantial problem only in the case of Engineers and a lesser problem in other categories. Applicants' not having the desired qualities was deemed to be a major reason for the difficulties in recruiting Managers, Professional/Technical, Engineers and Sales/Customer Service staff and a lesser problem in other categories.

The characteristics were most commonly lacking in applicants were Job Specific Skills and Attitude/Work Ethic followed by Experience, Aspirations on Payment and



Management Potential. By comparison, characteristics such as Qualifications, IT Skills, Literacy/ Numeracy, Willingness to commute and Team Working Skills could still be issues but less frequently than the characteristics listed above.

(Note: the subsequent HR consultation disputed some of the survey findings - in particular, they considered that, temporarily at least, there is an adequate supply of good engineers because of company closures or down-sizing elsewhere in the manufacturing sector; also recruitment of good Professional/Technical staff had become easier since the introduction of Tasty Careers and the increased output from Loughry and QUB).

While not specifically identified in the survey, various consultations revealed a major difficulty in recruiting ICT Specialists. After graduation the higher salaries in financial services and other sectors attract most of the good young people. While they may subsequently become disillusioned and seek a career move, they tend to be unsuitable for employment in food and drink manufacture if they only have experience of a menu-driven working environment, as is commonly the case.

B. Attractiveness of Sector for Employment

The perception of the industry is crucial to attracting the correct calibre of staff in sufficient numbers. When asked for their impression of how various categories of person outside Food and Drink Manufacture view the industry, respondents considered that a minority of people in all categories had a positive or very positive view for the industry. Respondents considered that neutrality would be the most widely held view. Of particular concern was their impression that young people at school or college were more likely than other groupings to have a negative or very negative view of the industry.

There was strong support for working together on a campaign to improve the image of the industry. 91% believe this would benefit recruitment. Around 65% believe that such a campaign would offer value for money and would be prepared to work with others to achieve this goal.

C Up-skilling Staff already in Employment

All companies provide training for their workforce, but the nature and extent of training vary considerably.

Training provided in the last year:-

Over the last year, the most common area of training was Job-related Skills (81% of respondents). Almost all of this training is given by managers, supervisors or other skilled employees on the production line and focuses on the particular machinery and established work practices in the company. This is perceived to be the most effective method of up-skilling for lower level skills.



Induction Training, Health and Safety / First Aid and Food Safety and Quality, including HACCP, had each been delivered by 72% of respondents. There is often a statutory dimension to this training, but the audit requirements of supermarkets are an important driving force. While some companies provide aspects of the training internally, e.g., lower level courses on Food Safety in Manufacturing, external trainers such as CAFRE, FE Colleges and private providers are often engaged.

Training in New Technology and Supervisory Training were both provided by 41% of respondents, followed by Management Training and Team Working (both provided by 34% of respondents) and training related to BRC Accreditation (28% of respondents), which is also stimulated by supermarket demands. Training in packaging, energy and waste and other topics were lower priorities.

Future Training Priorities:-

Respondents identified all of the topics mentioned above as priorities and a similar pattern emerged. Job-related Skills, Health and Safety/First Aid and Food Safety/Quality were most commonly rated as high and moderate priorities, each by approximately 70% of respondents. Management and Supervisory Training were more highly rated than in past provision (both rated as the high or medium priority by 62% of respondents) followed by New Technology cited by 56% of respondents. All other topics were ranked as high or medium priority by fewer than half of respondents.

Obstacles to Training

When companies were asked to identify the main obstacles to training, an interesting pattern emerged. By far the biggest obstacles were the difficulty in giving staff time off for training (69% of respondents) and the cost of training (69% of respondents) followed by lack of management time to organise training (36% of respondents). All other potential obstacles, e.g., availability or quality of available courses, were mentioned by a relatively small number of respondents. Factors, which are internal to companies, are likely to be much harder to resolve than external factors.

Information on Courses and other Support for Training

As might be expected, the Internet is a commonly used source of information on training (74% of respondents), with Invest NI being widely consulted by its client companies (74% of respondents). Thereafter CAFRE Loughry Campus (47%), Private Training Providers (41%) and Department of Employment and Learning (35%) were most commonly used.

Note: Follow-up consultations indicated that the 6 FE Colleges are widely used a source of information, but they were inadvertently omitted from the questionnaire.



All other potential sources of information were used by a relatively small number of companies, i.e., fewer than 24% of respondents each.

Effectiveness of training and other support

Private training providers were the most heavily used source of training (20 respondents) followed by FE Colleges (14 respondents) and CAFRE Loughry Campus (11 respondents). Food and Drink Sector Skills and the universities were used relatively infrequently. 11 respondents availed of InvestNI support while 8 respondents had used DELNI.

QUB received the highest satisfaction rating with all respondents giving the highest 2 ratings ie 4 or 5 (Note: very small sample of only 3 respondents). CAFRE received the next best satisfaction ratings with 73% of their users giving them a 4 or 5 rating followed by the Private Providers (55% with 4 or 5 rating) and FE Colleges (35 % 4 or 5 rating). Overall, the ratings were relatively favourable - on a 5 point scale (1 lowest and five highest), 87% of ratings of those who used an external training provider were at 3 or above, and 56 % of ratings were at 4 or 5.

Assistance with sourcing information on training

93% of respondents indicated that they would welcome a single point of contact for information and advice on sources of training and other support for training. All of these respondents would welcome information on finance and other support for training while 84% would welcome information and advice on suitable external courses. 62% would value support in identifying training priorities for its staff.

D. Apprenticeship

Of the 31 companies responding to this section of the questionnaire, only 14 companies (45% of respondents) knew about Apprenticeship NI and what it could do for their company. An individual or organisation had contacted only 32% of respondents to provide information about Apprenticeship.

This disappointing response is reflected in the uptake of Apprenticeship. Over many years only 11 companies (39% of respondents) have had one or more Apprentices in Engineering or Food Engineering while 6 companies (22% of respondents) have had one or more Apprentices in Food Manufacture. (Note: some companies involved in both disciplines).

While the uptake has been poor, the response to the questionnaire by participating companies was relatively positive. The programme was well regarded in terms of the delivery model, service from external training provider and effectiveness in developing the skills required.

There was a more mixed response regarding flexibility, administration requirements and finance in the questionnaire. Finance, delivery model and administration requirements were the only adverse factors cited by companies who



had considered Apprenticeship but decided not to proceed. Both follow-up consultations were much more critical of these factors, particularly finance, than responses to the questionnaire.

9. Results from survey of young people into sectoral attractiveness

To evaluate the views held by students when making their career choices a survey was carried out at two school open days. Methody College Belfast and Magherafelt High School. In addition to this, an online survey was conducted during Oct 2015 to Jan 2016. The results from the survey highlight the views of young people on the Food and drink sectoral attractiveness.

The school questionnaire was conducted in a face to face situation when the pupils could discuss any queries around the questionnaire and its aims. The age group of pupils were 17 and 18.

Both surveys' began by asking if the student had made their mind up on the career areas they were attracted too. 80% of the pupils confirmed that they had decided on the next stage of their career.

Parents (27%) and career teachers (26%) were identified as the primary sources of information and influence in this decision-making process.

Agri-Food scored the highest on the list of sectors that attract the students with a rating of 24% with the business sector listed as second with a score of 20%.

More worryingly the 60% of the pupils did not know that the Agri-Food industry was the biggest employer in Northern Ireland or the range of opportunity available with 56% unaware of the career options within the sector.

The key perceptions of the pupils towards the industry are influenced by four key topics areas. The issues that achieved the highest negative score by the students were Company stability (36%) and the working environment (27%).

Pay scales (56%) and career opportunities (53%) were found to be positively viewed

Curriculum for Northern Ireland Schools - Farming and Food

One of the possible reasons for the minimal knowledge of, and interest in careers in the food industry is that most school pupils have negligible exposure to 'food topics' throughout their school career - from foundation (pre-school) up to Key Stage 4. The Northern Ireland Schools Curriculum and teaching support materials for use in delivery of this curriculum is published on the **NI Curriculum.org** website.

Study of this web-site reveals a relatively small amount of material in agriculture and food in Northern Ireland.



Key Stages 1&2 (Primary School)

Under the Area of Learning entitled 'The World around Us', one of the optional STEM Thematic Units is "Farming":-

Section 1 - Farms and Tractors - 5 activities on the tractor and Harry Ferguson

Section 2 - Five a Day - 6 activities on apples, carrots and packaging

Section 3 - Dairy and Beef Farming - 3 activities

Many of the activities are aimed at developing mathematical, literacy and other skills eg calculate dimensions, construct a model tractor etc although there is some development of knowledge and understanding of farming. There are links to websites as sources of additional information but most are UK web-sites not always relevant to NI.

Food features in other units but is not covered from an industry perspective eg a thematic unit entitled "Food for Thought" is primarily about the role of food in religious events and other celebrations; a unit entitled "Fair Enough" is about the Fair Trade movement, which covers some food stuffs.

Key Stage 3 (Years 1 to 3 at Secondary School)

References to agriculture and food can be found under 3 (of 9) 'Areas of Learning':-

Under 'Learning for Life and Work' a unit entitled "Food Miles - a Global Dimension" is presented under '8 Key Concepts' - Human Rights, Conflict Resolution, Global Citizenship, Interdependence, Diversity, Values and Perceptions, Social Justice and Sustainable Development. 3 of the 4 exercises relate to chocolate and cocoa.

Under 'Environment and Society', a unit entitled "Ecoworld" devotes 4 lines to farming and food.

Under 'Science and Technology', in the STEM section, one of the optional study areas is "Agri-food". There are two excellent case studies with video material on Fivemiletown Creamery (cheese making) and John Thompson and Sons (livestock feed manufacture). Otherwise the content does not develop knowledge and understanding of the wider industry, There are links to curriculum support material on other websites but again much of this is relevant to England only and/or out of date.



Key Stage 4 (Years 4 and 5 at Secondary School)

Key Stage 4 focuses on delivery of GCSE's in both Grammar and Secondary Schools. No curriculum support material on agri-food has been identified on NI Curriculum.org.

GCSE and 'A' Level

There is now a GCSE syllabus and examinations in Agriculture and Land Use offered by the Council for Curriculum, Examinations and Assessment in Northern Ireland. Uptake is modest with around 200 students taking examinations in 2014. There is no 'A' Level.

The Home Economics syllabi at both GCSE and 'A' Level have some relevant 'food' content and are taken by a considerably higher numbers of pupils than agriculture - almost all female. Home Economics and Biology are the most common science based 'A' Levels offered by students applying for degree level 'food' courses at Loughry.

Some other relevant web-sites are:-

Eat, Taste and Grow - a set of teaching support materials (Key Stage 2 and 3 level) focusing on healthy food and produced by *safefood* and the Public Health Agency. It is available on CD Rom and is promoted to schools via the NI Curriculum.org website.

Dairy Council for Northern Ireland - a range of printed and web-based learning support materials on the nutritional characteristics and benefits of milk, targeted at both schools and adults.

Livestock and Meat Commission - interactive nutritional website focusing on red meat to support teachers and pupils, primarily those studying Home Economics, and general consumers.

Conclusion

Overall it must be concluded that there is very little appropriate information on farming and food processing in the schools curriculum being delivered to most pupils. Little effective teaching support is available for schools in an easily accessible and user-friendly form, which is fit for purpose. There is negligible promotion of farming and food and little incentive for teachers to include agri-food content in their teaching. Great opportunities to influence young people are being wasted. Initial indications are that schools would be open to incorporating agri-food into teaching programmes if the right materials and effective support was available.



The situation for consumers and the general public is even worse with hardly any flow of information that will have a positive impact upon them.

10. Gaps, Opportunities and an Action Plan for improvement in training provision

Background research and the Skills Barometer suggest that Food and Drink Manufacturing is going to face challenges in satisfying its future skill requirements. It forecast that employers are going to demand higher levels of skill than in the past to improve competitiveness and will need to recruit more workers than in the past, both for replacement of employees who are leaving and for expansion of their businesses.

Manufacturing is forecast to expand. Demographic trends are downwards and there will be a shortage of people qualified in some key disciplines exiting educational institutions. Employers will face even stiffer competition for trained staff than in the past.

Some of this are not entirely apparent now for various reasons, e.g., while Engineers have traditionally been difficult to recruit and are forecast to be a critical area of shortage over the next decade, there is an ample supply at present because a few large manufacturers are either closing or down-sizing, e.g., Michelin. Releasing a lot of engineers onto the job market but is likely to be a temporary situation.

Accordingly there will be increasing onus upon employers to become more proactive in developing the knowledge and skills they require from within their workforce. In turn, will place more emphasis than hitherto upon securing adequate external support.

Gaps and Opportunities

Higher Level (6+) - pre-employment and early employment

Tasty Careers and other initiatives have had a positive impact on recruitment onto specialist 'food' courses and there is strong justification for these actions to continue, and indeed extended as recommended later. Provided current levels of recruitment are maintained; there would appear to be sufficient 'food' specialists with Honours degrees entering the job market.

At least, in the medium term, there is likely to be severe shortages of people graduating in critical disciplines such as engineering, ICT and sales / marketing. This is part of a wider problem whereby too few young people are taking STEM subjects such as physics, chemistry, additional maths and computer science at school and securing good enough grades at GSCE and 'A' Level to take subjects like engineering at University.



Food and Drink Manufacturing has no control over this situation but could seek to influence Government to be more pro-active in securing greater uptake of STEM subjects in secondary and tertiary education. Tasty Careers should continue to embrace the wider needs of the Food and Drink Manufacturing

Intermediate/Higher Level (4 and 5) - pre-employment and early employment

In Northern Ireland, the only specialist Level 4/5 'Food' course is the Foundation Degree at CAFRE. While enrolments have improved to around 20 per year, most students wish to progress to Honours rather than entering employment at Level 4/5, i.e., few come onto the job market each year.

There are Foundation Degree and equivalent provision in other disciplines through the 6 FE Colleges but it is anticipated that there will be a substantial shortfall in the outturn of qualified people. Food and Drink Manufacturers will face intense competition from the rest of the economy to recruit graduates from these courses.

The only feasible solution appears to be for the industry to work with education/training institutions to up-skill employees who are showing potential via Higher Level Apprenticeships for which DEL will cover the costs. This would apply not only to food manufacture specialists but also engineering technicians, ICT technicians and other skilled staff.

Tasty Careers could perform a useful role in promoting this alternative route, especially via Comprehensive and Secondary Schools

Medium Level (2 and 3) - pre-employment and early employment

In Northern Ireland, the only specialist Further Education Level 3 'Food' course is the BTEC National Diploma at CAFRE. While enrolments have improved to around 30 per year, many students wish to progress to Higher Education qualifications rather than entering employment at Level 3, i.e., relatively few come onto the job market each year.

However, Apprenticeship NI provides an alternative route to Level 2 and three qualifications and overall enrolment now exceeds 420. Many of the trainees are in shops and other micro-businesses outside the scope of this study.

The qualifications within the Apprenticeship framework perhaps need to be reviewed to ensure that they are meeting the needs of employers as fully as possible, as do the administrations and finance which appear to be the primary concerns of those either using the programme or considering its use

Another critical issue is the level of understanding in the industry about Apprenticeship and other training opportunities that are available. 65% of businesses had never been approached about Apprenticeship and 53% of companies did not know what Apprenticeship could do for them. This points to a clear need to



promote Apprenticeship, as well as Higher Apprenticeship when it becomes available, and to encourage businesses to avail of it.

Again Tasty Careers could perform a useful role in promoting the Apprenticeship route, especially via Comprehensive and Secondary Schools.

Low Level (below Level 2) - pre-employment and early employment

The Skills Barometer suggests that there will continue to be an ample supply of people with no or low skills in the job market. The challenge for employers will be to select those with a reasonable attitude to work and the ability to develop through work-based learning to perform the roles required by employers.

Some Government schemes, such as DEL's Bridge to Employment for Jobseekers, may help to identify some people with employment potential.

Up-skilling for those already in employment

The survey and follow-up consultations all indicated that there is a good supply of active external training organisations with a broad range of expertise - indeed, for management training and business development, the marketplace appears to be quite crowded.

The only gap in provision identified in the consultation process was for a Fresh Food Supply Chain Management course. There are significant numbers of staff already in and continuing to enter management, professional and technical posts who have not received training specifically in food manufacture. Consequently, there is a gap in their knowledge and understanding of fundamental aspects of producing safe, wholesome food products and of handling food along the supply chain. No existing course would appear to address the issue for the identifies the target audience and a new course is required.

Most companies indicated that they would welcome a single point of contact for information and advice on sources of training and other support for training. Most would value support in identifying training priorities for its staff. This lends support to the concept of a brokerage arrangement.

While there is no shortage of external training opportunities, it is clearly an important challenge for companies to release staff for training, either internal or external and for managers to make their time available to organise training. This is an issue that merits further investigation as companies would welcome guidance upon how up-skilling can be achieved in a pressurised production environment.

The cost of training is also a major issue. The biggest employers appear satisfied with the support they receive from Invest NI but many smaller businesses have concerns over cost and the lack of financial assistance.



The new DEL funded Skills Focus programme, which covers 75% of the cost of training delivered by FE Colleges for smaller companies (under 250 workers), may help to alleviate some cost pressures. However, there is still concern that this programme covers only training delivered by FE Colleges and not training provided by other sources. Brokerage arrangements for the Food and Drink sector might help to ensure that this area gets maximum benefit from the limited funds.

Action Plan for addressing recruitment issues, including perceptions of sector

The food and drink industry is diverse, complex and operates across rural and urban areas. Key components, such as agri-food and manufacturing, do not integrate on industry issues this leads to a lack of synergy between activities. This is particularly true with regard to improving the attractiveness of the industry to young and talented people.

It was very evident from our research that the perception of job roles in the industry is negative. There are perceptions that jobs are low paid with long working hours. Focus may be on temporary jobs and not career options highlighted in the concern over company sustainability. Additionally, the industry itself is not effective at collaborating to improve its image

There is a need for industry engagement with local schools, academies and colleges to work in partnership to communicate the full range of roles and career paths that are available.

Businesses must explore more efficient ways of attracting talent with transferable skills through their recruitment practices.

There is a need to support career paths for young people, making them better prepared for work in the industry, with improved work ethic, better numeracy and literacy skills as well as basic food hygiene qualifications.

Improving the image and profile of the industry requires raising the awareness of career opportunities in the industry along the whole food chain. Ensuring long-term sustainability by attracting young and talented people into the industry.

This can be achieved by using key influencers or "champions" from food manufacturing businesses to communicate opportunities across the food chain and in doing so provide a single focus for outreach activity. In Addition to developing links with national projects such as those delivered by Food and Drink Sector Skills.



A key role would be to raise the industry image and profile through better engagement with career advisors at schools as well as directly into NISCA.

A greater utilisation of online and offline materials will improve the visibility of local opportunities, career paths, pay and working conditions.

Action Plan - Addressing the attractiveness and perceptions of the sector.

Set out below is the action plan which has been agreed by NIFDA to tackle the

Sector attractiveness of the Food and Drink industry in Northern Ireland.

The Action points are designed to reflect and address the issues which have been highlighted by the scoping study.

This section is set out in two strands:

- (A) Enhancing Image of the Industry and Recruitment.
- (B) Resources for Industry Development

Section A Enhancing Image of the Industry and Recruitment is aimed at providing early intervention and a greater understanding of the Food and Drink Industry. A range of interactions is planned to promote greater engagement between the industry and the student population while promoting the rewards and opportunity's that exist in this sector. The output expectation would be an increase the applications of skilled and trained employees into the workforce.

Listed below are the specific planned actions,

11.1 Funding for key influencers from food manufacturing businesses to be included in an Ambassador programme were young people from successful Food and Drink companies go along to schools to talk to the children to describe their work journey and the opportunities and rewards of the industry. The development of this resource would include a training package to train young people to become School Ambassadors, and provide a resource pack to communicate food career opportunities and choices. This would be followed by a programme of visits by successful and inspirational food business leaders to schools, and schools visiting companies and would inject a sense of realism into the opportunities that exist. The programme could be developed together with universities/colleges.



11.2 Company Fellowships - Open Days - for Careers Teachers, students and parents. With the aim of developing long-term partnerships. There is a lack of industry engagement with local schools, academies and colleges that are amplified by the fact that the industry is not good at acting together to communicate the full range of roles and career paths that are available

The industry suffers from a poor image against other career choices due to the perception that jobs are related to manual work in factories and on farms, which are low paid and hours are long. Contrary to these common perceptions however, the weekly earnings of employees in the food and drink manufacturing are above those of the economy.

However, the poor knowledge of the industry means there is difficulty in attracting young and talented people. In Northern Ireland, there are skills gaps, especially in Machine Operatives and Managerial positions, and importantly, there is a significant shortage of food science/technologists and production engineers that are crucial for future innovation and industry survival. The types of activity planned to address this will include the One-day visits by school parties allowing the children to see the work that is carried out at the factory or offices. Learning about new product development, healthy food options and how the Agri Food and Drink business is an integral part of the community.

The expected output from this is,

- An increase of students who would seek to build a career in the food industry.
- To Raise the industry image and profile through better engagement with career advisors and young people at schools and colleges
- Increase project work for school, college and university students for both food and business related subject matters;
- 11.3 Food and Drinks road show The development and deployment of mobile display materials which will be used to support visits to schools, county agricultural shows and other appropriate events. This action recognises that Food and drink experiences have become increasingly important to generate engagement between the industry and potential employees.

With this in mind, a Food and Drink Road show will provide an education and learning community platform, to provide a resource to engage directly into Schools, colleges and universities.

Full of practical and engaging content the road show would showcase the best in Northern Ireland food manufacturing processors and the opportunities within these companies. Also, it would include features on innovation and new product



development. Raising interest and providing a generous offering of content with access to over 120 Food and drink companies.

The profile of the road show would cover areas such as,

- Share and discuss the NI Food and Drink industry
- Discover what is new about our food offering
- Advice on what you can do to develop a career in the sector.
- The types of employee's skills required
- The expected growth in the local Food and Drink Sector

The road show will be tailored to specific age ranges, based on up-to-date company information and the latest health and nutritional findings. Providing support for workshops with resource packs and fun promotional activities.

The presentation sessions can also be tailored to school groups, families or part of an Agri-Food or agricultural show.

11.4 Food and drink Industry section included Curriculum for Primary Schools - Specific liaison to achieve greater prominence for Agri-food in the Primary School Curriculum (as per Going for Growth Recommendation).

We believe that all children should understand the story of their food: where it comes from, how it is produced, and what it means for personal and public health. Equipping children with diet and nutrition education in the classroom will provide early engagement with the industry.

The aim will be to develop a programme introducing food into the schools curriculum at the primary level. With the aim of increasing the understanding of agriculture and the food industry. This would also cover the skills requirements of the industry along with the opportunities

Young people should be educated about food as a considerable amount of work happens to food before it reaches our homes. This work impacts on its quality and safety and technological advances have resulted in there being many more jobs in the food sector available to us than in the past. Understanding this evolving process can highlight the range and diversity of skills requirements by the industry.



11.5 NIFDA will coordinate engagement with NISCA and presence at the NISCA Conference.

There is a need to communicate and engage with university leavers and graduate placements to attract talent and better support them during their early careers. The most efficient way to achieve this outreach would be to engage in a strategic way with NISCA. The Northern Ireland Schools & Colleges Careers Association. NISCA membership is composed of teachers and managers representing schools and colleges. Membership is spread across the Education and Library Board areas throughout Northern Ireland

Providing insight on career opportunities NISCA works in schools and Regional Colleges to create a better understanding of the workplace.

Their work includes

- Provide a networking facility for careers practitioners.
- Work in partnership with key organisations involved in CEIAG.
- Promote dialogue with employers and employers' organisations.
- Exchange views and ideas and disseminate best practice among careers practitioners within Northern Ireland.

Section B: Resources for Industry Development. This section is aimed at identifying cost support for the industry in areas of up-skilling and promoting the sector to potential employees. Support in these areas is available but research and dissemination are required to allow the companies to utilise the various opportunities.

Most central government departments have funding programmes for Food and Drink organisations. The grant schemes are designed to fit the policy objectives and programme outcomes of each particular department. A great deal of central government funding is available through a wide range of associated agencies, quangos or non-departmental public bodies.

Despite some efforts, central government departments are not generally in sync with each other. The design, administration and quality of funding programmes will vary between and even within departments. Also, criteria changes from year to year to reflect changes in government policy. However, some common aspects of central government funding can help you know what to expect, and there are funding programmes which open annually on a straightforward competitive basis with a set deadline.

Devolution has meant that apart from departments with a UK-wide remit organisations should approach the relevant authorities in their country. In Northern



Ireland, most grant provision is handled by the departments within the Northern Ireland Executive.

The funding can cover such areas as,

- Innovation, research and development
- Access to knowledge
- Skills and training
- Identify and exploit sources of funding from the EU and elsewhere for the promotion of the Agri-food sector and training.
- To include resources for Revision of Publications (InfoGraphics)
- Website update
- Ambassador recruitment, training and management
- School visits
- Liaison with Careers Teachers and Advisors
- Graduate placement
- Innovation
- Up-skilling

12. Action Plan for securing appropriate levels of stakeholder involvement

During the course of this scoping study, the NIFDA board and members have provided over 700 hours of direct involvement into the Scoping study. This is a clear illustration of how industry engagement is crucial. This needs to be continued and built upon. Stakeholder engagement is of particular importance in the context of running an efficient action plan that requires the input from a range of different organizations.

Critically the organisations have to be prepared to provide feedback and share information. They must be willing to discuss in open workshops the needs and expectations of the individual business as a result of stakeholder engagement.

For the successful implementation of the Action, Plan organisations can no longer choose if they want to engage, the only decision they need to take is when and how successfully to engage.



Meaningful engagement will only occur when organizations become aware of the skills shortage currently within the employment market, and how the perception of the industry by the wider society affects recruitment performance.

NIFDA will seek to mitigate these challenges through the use of stakeholder management to identify and establish new opportunities through the use of meaningful stakeholder engagement. In line with any other business process, the process of engagement should be systematic, logical and practical, starting with planning and identifying objectives through to post monitoring and evaluation.

The process will be designed as a circle, where lessons or experience from action one, will then feed into the next stage and will then shape future planning and engagement.

The following is a 7 stage process designed to ensure an efficient stakeholder engagement.

Stage 1, Planning: Setting out the fundamental objectives, and the stakeholders need to prioritise what is critical to the action plan.

Stage 2, Understand your stakeholders: profiling the priority stakeholders.

Stage 3, Preparing internally to engage: Dedicate appropriate time and resources

Stage 4, Building trust and developing a relationship with all stakeholders.

Stage 5, Consultation with fair representation of all stakeholders

Stage 6, Respond and implement:

Stage 7, Monitors, evaluates and documents: Knowledge management

13. Action Plan with Road Map and Profile of Resources for its delivery Road Map

The Road Map will be delivered through the NIFDA organisation and with the cooperation of its board. The Board will provide oversight and ongoing industry liaison with the facilitator.



The action plan will then be introduced to the extended NIFDA membership throughout the sector.

There are 11 actions in this Plan. Each action specifies an area which has been identified as crucial to increasing the skills provision and the attractiveness of the Food and Drink Sector on Northern Ireland.

The actions are smart objectives being specific, measurable, achievable, realistic and time-limited. We have also set out the delivery responsibility, a method of monitoring and evaluation.

NIFDA will undertake and publish a mid-term review of progress in delivering the actions and achieving the outcomes. This report will be published in 2017, followed by a final report in 2019.

Separately the NIFDA Board will have the opportunity to adapt the actions, both those where The Board is already indicated as having a responsibility for the delivery and other actions where the Board feels this would be appropriate.

The Facilitator will meet with the NIFDA Board, at least, three times every year and provide an update on the progress of the action plan and any issues arising from the implementation of the Action plan.

The stakeholder groups will be invited to contribute to and comment on the interim and final report on the action plan.

14 Profile of Resources

The action plan requires a range of resources, from the administration and project management to education providers and international food processing companies.

In this section, we have set out the detail of anticipated resource requirement.

Project Management

Facilitator

Administration

Financial Management

Stakeholders

NIFDA Board

NIFDA membership

Food and Drink manufacturing processors

Queens University Belfast



Ulster University

CAFRE

Department of Education and Learning

DARD

FE colleges

Primary schools

NISCA

Careers service

Food and Drink Sector Skills

Education consultants

Company ambassadors

Project Facilitator Responsibilities

The Project Facilitator role is intended to carry out the action plan on behalf of the NIFDA board. The role will also require coordination with other stakeholders and suppliers in the delivery of the objectives of the action plan.

Criteria for this position will include prior project management experience, and the following characteristics and abilities;

- Strong communication skills
- Leadership skills
- Planning and control skills, i.e. issue/risk management, task management
- Project Insight
- Proficient in Microsoft Office
- Ability to work with the NIFDA Board to complete the action plan as set out in the Scoping study report.
- Ability to proactively identify areas of opportunity to address the skills gaps and attractiveness of the NI Food and Drink Industry.
- Ability to facilitate strategies between NIFDA and the stakeholders in proposing remedies to help resolve the issues of Skills gaps and Sector attractiveness.



- Ability to prepare project status report to NIFDA
- Ability to chair Project meetings and workshops to present project facilitation issues and receive updates/training
- Ability to provide Project Insight training
- Present project facilitation workshops
- Coordinate the stakeholder partner's activities as defined in the action plan.
- Ensure the match funding administration is completed accurately and within the allocated timeframe.
- Undertake any work about the action plan that may be deemed necessary by the NIFDA board.

Project Administrator Responsibilities;

- Providing full administrative support to Project facilitator and NIFDA Board.
- Input of relevant data on to the appropriate business system.
- Maintenance of project information.
- Updating of Project Schedules on appropriate systems.
- Dealing with stakeholder queries
- Assisting Project facilitator with invoicing
- Assisting Project Teams Claims and match funding.
 - Project financial controller Responsibilities:
- Prepare monthly financial information and analysis for the project to explain detail/predict financial performance and forecast for subsequent periods.
- Track progress of project activities and milestones to enable appropriate project financial accounting for cost recognition, billing and match funding claims.
- Work with project facilitator to prepare robust financial budgets and forecasts.
- Work with project facilitator to understand the financial implications and impact on project activities.
- The role is to implement effective financial management practices for the project.



- Support the Project facilitator and overall business management of the project with the provision of accurate and timely financial information and analysis.
- Approve supplier purchase orders for cost commitments on projects in line with project budgets and plans.
- Support project facilitator and directors in ad-hoc business planning as needed

As a key member of the finance team, responsibility will include assisting in delivering timely and meaningful financial information to enable appropriate management decision making.

15. Project Stakeholders

NIFDA Board - 10 Food and Drink Companies drawn from local Sector

NIFDA membership - 120 Food and Drink Companies drawn from local Sector

All NI Food and Drink manufacturing processors

Queens University Belfast

Ulster University

CAFRE

Department of Education and Learning

DARD

All FE colleges - 6 regions

Primary schools

NISCA

Careers service

Food and Drink Sector Skills

Education consultants

Company ambassadors- Recruited from the NI sector



16. Appendices

- Appendix 1 Full results from the Employer surveys
- Appendix 2 Full results from the student surveys
- Appendix 3 Source material for the employment estimates
- Appendix 4 List of Indicators for the purposed action plan
- Appendix 5 Action plan with budget

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