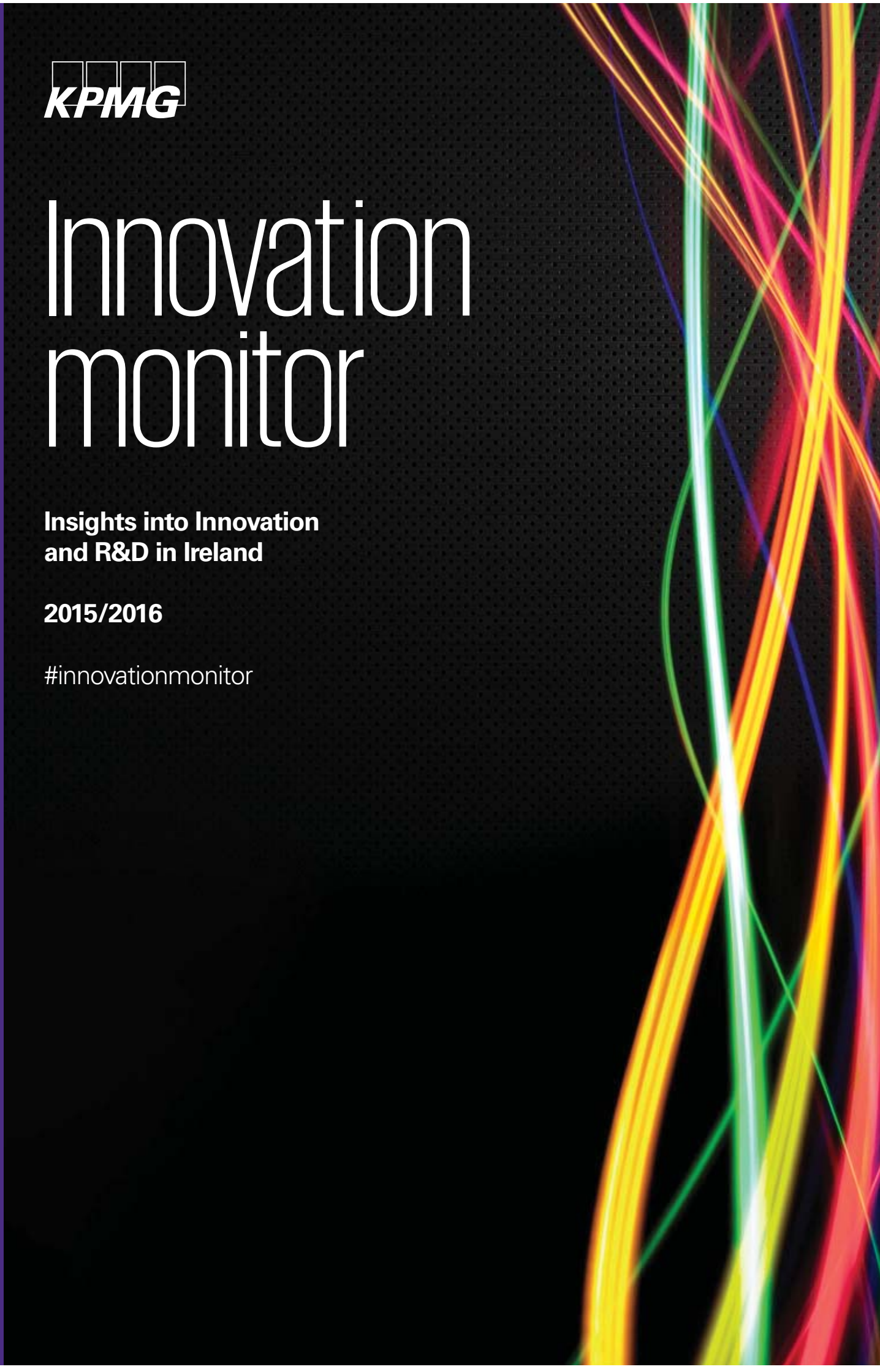
KPMG

Innovation monitor

Insights into Innovation and R&D in Ireland

2015/2016

#innovationmonitor



INNOVATION MONITOR

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INTRODUCTION

"Our objective is to promote innovation and entrepreneurship"

Business leaders in Ireland and around the world understand that innovation is a strategic imperative. However, in our most recent global research of over 1,200 chief executives, only 44 percent of CEOs believe that they have a fully developed process for innovation across their business.[i] At home and abroad the pace of change and disruption is faster than ever. For businesses focused on innovation the benefits can be significant. Conversely, those who fall behind may find that their products or even their business model becomes obsolete with obvious consequences. As the former CEO and now Executive Chairman of Cisco said recently "40 percent of businesses... unfortunately, will not exist in a meaningful way in ten years".[ii] He also noted that 70% would try to innovate but that only 30% will succeed.

It is in this context that for the fourth year KPMG has commissioned Red:C Research to help us assess attitudes to innovation in Ireland. We have also sought the views of a range of Irish business leaders on why innovation matters and what they are doing to promote innovation in the organisations they lead. This edition of *Innovation Monitor* includes interviews with Julie Sinnamon (Enterprise Ireland), Vincent Carton (Carton Bros), Suzi Jarvis (UCD), Bill Kearney (IBM) and Ken Hardy (KPMG).

The survey findings are generally positive in keeping with stronger economic performance. However, there is no room for complacency. Economic cycles are uncertain and businesses need to constantly challenge and improve what they do to secure competitive advantage. Individual countries are also refining their innovation environment to attract increasingly mobile labour and capital. To date Ireland has done well and state agencies and our third level institutions have played a key role in this. Government also recognises many of the challenges we face in incentivising and rewarding innovators and entrepreneurs. However such recognition must be translated into meaningful changes if we are to continue to improve the climate for innovation in Ireland.

At KPMG we are committed to promoting innovation and entrepreneurship and to making a positive contribution to Ireland's continued economic development. We hope that you find this edition of *Innovation Monitor* insightful and thought-provoking.

Shaun Murphy
Managing Partner, KPMG in Ireland

EXECUTIVE SUMMARY

KPMG has conducted annual research of Irish business attitudes to innovation and research and development (R&D) for the past four years. We see this research and associated commentary as essential in encouraging an informed debate about how we further develop Ireland's strengths in this area. The survey, conducted on our behalf by Red:C Research, gauges opinion amongst a representative sample of over 100 Irish business leaders.

Key Findings

The key findings include growing levels of innovation amongst Irish based business with over 4 in 5 (84%) either innovating or planning to do so. There are clear trends emerging as Ireland records significant economic growth. Coinciding with the end of recession, 76% of respondents believe that Irish business has become significantly more innovative. However, large companies tend to be more positive about the innovation environment than their smaller counterparts. For example, over a quarter (27%) of small businesses feel that despite the end of recession, Irish companies are either less innovative or static. The larger counterparts are more positive with only 16% of large companies believing innovation levels have declined or remained the same. The report also highlights the continued dominance of the United States as the world's most innovation-friendly economy (37% of respondents), whilst Ireland has moved from third to second place (13%) and the UK has moved from sixth to third place.

Meanwhile Irish companies are increasingly satisfied with government policies to support innovation; however, 35% believe they could do more, with grant aid and incentives being favoured by smaller companies whilst large companies prefer tax based initiatives.

The priorities highlighted by business and innovation leaders interviewed for this report include:

- Smaller companies innovating to secure future growth (Julie Sinnamon, Enterprise Ireland)
- Developing greater synergies between multinationals and SMEs (Bill Kearney, IBM)
- The recruitment of industry partners to work with third level students (Suzi Jarvis, UCD)
- Continued innovation collaboration amongst Irish companies (Vincent Carton, Manor Farms).

Recommendations and Conclusions

The report also highlights a continued need to refine the tax treatment of R&D and innovation. Ken Hardy of KPMG notes that only 44% of companies surveyed have claimed the R&D tax credit, with large companies almost twice as likely to claim as small (60% versus 35%). Meanwhile, KPMG colleague Damien Flanagan draws attention to the potential of the recently introduced Knowledge Development Box (KDB). Amongst the report's specific recommendations are:

- A simplified and more generous SME regime for R&D in keeping with the UK approach
- A reduction in administration and a streamlining of barriers to claiming the R&D credit
- Addressing the challenges posed by relatively high rates of income tax on average earnings

In conclusion, Ken Hardy notes that Ireland is doing very well as when it comes to innovation but warns against complacency given the highly competitive international environment. In particular he notes that many respondents highlight that Ireland does well in terms of inward investment tax policies, but there is a need to focus on an equally positive approach for indigenous and smaller businesses.

"Many respondents highlight that Ireland does well in terms of inward investment tax policies, but there is a need to focus on an equally positive approach for indigenous and smaller businesses."

AN IMPROVING ENVIRONMENT FOR INNOVATION

"The advent of the Knowledge Development Box represents an improvement to the overall climate for innovation, but KPMG research reveals that more could be done", says **Ken Hardy**, Partner and R&D Incentives Practice Leader with KPMG in Ireland.

The results of the research carried out in conjunction with Red:C Research for this year's KPMG Innovation Monitor reveal strong support for the existing government incentives for innovation but a lack of awareness of the operation of those supports among smaller companies in particular.

"Each year we conduct research with Red:C to see how effective Government policies are at encouraging R&D, as well as to assess attitudes in relation to innovation generally", explains Ken Hardy. "This year, 86 percent of respondents said they think funding is important to the completion of an innovation project. However, only a quarter think there is enough information available on funding."

Another key finding of the research is that only 44 percent of companies have claimed the R&D tax credit, with large companies almost twice as likely to claim as small (60% versus 35%). According to Hardy, this would indicate that the more resources available to a company, the more capable it is of claiming the credit.

It may also reflect some of the criticisms which have been made of the existing R&D tax credit regime as it relates to smaller companies. For example, it has been claimed that it is only of interest to firms which have developed sufficiently to be in a position to pay tax.

This is not altogether true, however, as Hardy points out. "The government has taken steps over the years to address issues such as that. Initially, the R&D tax credit was claimed against tax paid, but there was a change in 2009 when the Government introduced an encashable tax credit. This can be encashed in effect against payroll taxes. Its introduction has made a significant difference to companies not yet paying corporation tax."

That said, there is a belief that more could be done to make the scheme both more attractive and accessible to SMEs. "86% of respondents think a simplified and more generous SME regime would lead SMEs to increase R&D and innovation spend", says Hardy. "Also, when asked for suggestions on how to improve the innovation ecosystem in Ireland, over a quarter of respondents want improvements to the tax system, specifically the R&D tax credit regime – a reduction in administration and fewer barriers to claiming the credit."

This would put us more in line with our nearest neighbour. "The UK has a two tier regime for large and small companies with an enhanced benefit and a more simplified approach for smaller companies", he points out. "I believe this would lead to greater innovation in Ireland. There is considerable Government support for SMEs as it stands and the sector is acknowledged as a main driver of jobs growth. We can only hope that this will lead to changes to the R&D tax credit regime being considered in respect of SMEs."

"Eighty-six percent of respondents think a simplified and more generous SME regime would lead SMEs to increase R&D and innovation spend"

"We need to be competitive to attract investment in IP development to Ireland"

Knowledge Development Box

The Government now has a new lever at its disposal to encourage R&D and innovation. The Knowledge Development Box (KDB) was flagged well in advance and became a reality in Budget 2016.

"Based on what we have seen to date it would certainly appear to us that the KDB is more attractive to indigenous business than to FDI companies", says Hardy. "As things stand, it allows some types of income generated as a result of R&D carried out in Ireland to be taxed at a rate of 6.25 percent."

Most importantly, the scheme is the first of its kind to be fully compliant with OECD and EU rules, with the 'Modified Nexus' approach being adopted. This approach will suit Irish owned firms in particular.

"The objective of the KDB is to provide a highly attractive low effective tax rate for income generated from commercialising R&D and intellectual property", he explains. "The Modified Nexus approach has been endorsed by both the G20 and the EU. This approach limits the application of the special KDB tax rate by reference to the local country spend on R&D which gives rise to the assets that generate the income eligible for the reduced tax rate."

In other words, the amount of income eligible for the lower rate has to be proportional to the amount of R&D actually carried out in Ireland.

He hopes that the KDB could be made attractive to smaller companies not making profits in a similar way to the R&D tax credit. "In the fullness of time it would be very good if it was possible for it to have greater appeal to such companies. Currently it will only apply to tax paying companies, however."

The new regime will present certain challenges of course, including the identification of eligible income. "The definition of eligible expenditure is similar to the tax credit", Hardy notes. However, there will be issues when it comes to tracking and tracing eligible income."

He is confident that the scheme is of a high standard. "Minister Noonan had said he wanted it to be best in class. Other jurisdictions have patent boxes and we need to be competitive with them while remaining compliant with OECD rules. We need to be competitive to attract investment in IP development to Ireland or to retain it in Ireland. That also gives us a good shot of retaining the manufacturing investment that often goes with it."

Looking to the bigger picture, Hardy says that Ireland is doing very well as a country when it comes to innovation. "Ireland ranks eighth out of 141 countries in the Global Innovation Index 2015 – that's an increase of three places on last year. Also, according to the IBM 2015 Global Locations Trends report, Ireland leads the world in attracting high-value FDI projects. That's the fourth year in a row we have achieved that ranking. But we should not allow ourselves to be complacent, lots of other countries are competitive as well. We have to try to stay ahead of them and part of that means having tax policies that make sense."

He calls for a greater focus on SMEs in that context. "While we also continue to do very well in terms of FDI, we need to focus on indigenous and small business in Ireland, this was emphasised by respondents in a number of areas of our research. For example, nearly half of them think the greatest barrier to attracting and retaining talent in Ireland is the current income tax system. The government is aware of the issues relating to the marginal tax rate and are taking steps to address them."

"While we also continue to do very well in terms of FDI, we need to focus on indigenous and small business"

In the context of the recent budget, the CGT entrepreneur's relief is to be welcomed for example. However, we believe more needs to be done to reform CGT and it is to be hoped that further relief can be included in future budgets.

Finally, Hardy points to the need for all stakeholders to be aware of all the cogs in the innovation ecosystem – the tax system, grant funding, collaboration with academia and within industry. "Just over a third of companies think Ireland's innovation ecosystem is well connected", he notes. "A quarter of them want to see greater linkages, particularly between business and academia. They also want to build connections with others who have been through it – to hear the war stories and learn from them. The KPMG Innovation Monitor is designed to highlight matters like this, to ensure that all the cogs work effectively together, and hopefully to generate debate on all of the issues surrounding innovation in Ireland."

SURVEY CONTEXT – HOW DOES IRELAND SCORE?

- Ireland is placed in eighth place in the Innovation Union Scoreboard 2015 – up two places since 2013.[iii]
- 17 Irish companies are listed on the 2014 EU Industrial Investment Scoreboard, a ranking of the world's top 2,500 companies in terms of R&D investment. Ireland ranks ninth in the EU.[iv]
- Ireland ranks 16th of 61 countries in the 2015 IMD World Competitiveness Index, which measures how countries facilitate long-term value creation - down one place since 2014.[v]
- In the IMD's sister report, the World Talent Ranking 2014, Ireland ranks 6th of 60 countries. This assesses the ability to develop, attract and retain talent based on factors such as quality of life, cost of living and skilled labour.[vi]
- According to the 2013-2014 Business Expenditure on R&D survey, R&D spend by enterprises in Ireland increased by 15% between 2011 and 2013, bringing the total spend to €2bn for the first time. There has been a further 4% increase between 2013 and 2014, bringing the total business expenditure on R&D to €2.1bn.[vii]
- A Study on R&D Tax Incentives, focusing on the R&D tax regimes in the EU and selected OECD countries, ranked the Irish R&D tax credit in 6th place out of 83 countries' regimes.[viii]

GLOBAL INNOVATION INDEX 2015

Ireland ranks eighth out of 141 countries in the annual Global Innovation Index 2015, which measures the innovation performance of countries – this is three places higher than last year and represents the greatest increase in rank among the top 10 countries. Ireland's relative strengths lie in in FDI inflows and outflows, high- and medium-high-tech manufacturing, and business sophistication, specifically firms offering formal training. According to the sub-indexes, Ireland ranks seventh globally for innovation output, 14th for innovation input and 12th for innovation efficiency.[ix]

SURVEY FINDINGS AND ANALYSIS

How are we doing? Irish innovation

The Irish Government stated, in its *Action Plan for Jobs 2015*: "Innovation support makes a critical contribution to enterprise policy... through the stimulus given by innovation to high value economic activities and jobs. By encouraging the development of new economic activities, [research, development and innovation] policy measures strengthen Ireland's competitive advantage and build potential new areas of economic activity."[x] Given the importance of innovation to a growing economy, how is Ireland's innovation policy working?

Recession: the other side

In previous years, our research showed that the significant majority of respondents believed the recession had made Irish companies more innovative. As Ireland returns to growth, it would seem these high levels of innovation are being maintained, with three-quarters of this year's respondents believing that Irish companies have become more innovative since the emergence from recession, with an additional 22% feeling innovation levels have remained the same.

As with previous years, smaller companies seem to have a less positive outlook – 27% believe Irish companies are either less innovative or the same, compared to 16% of large companies.

Since Ireland's emergence from recession, Irish companies have become:

Base: All businesses – 200

Who is getting it right?

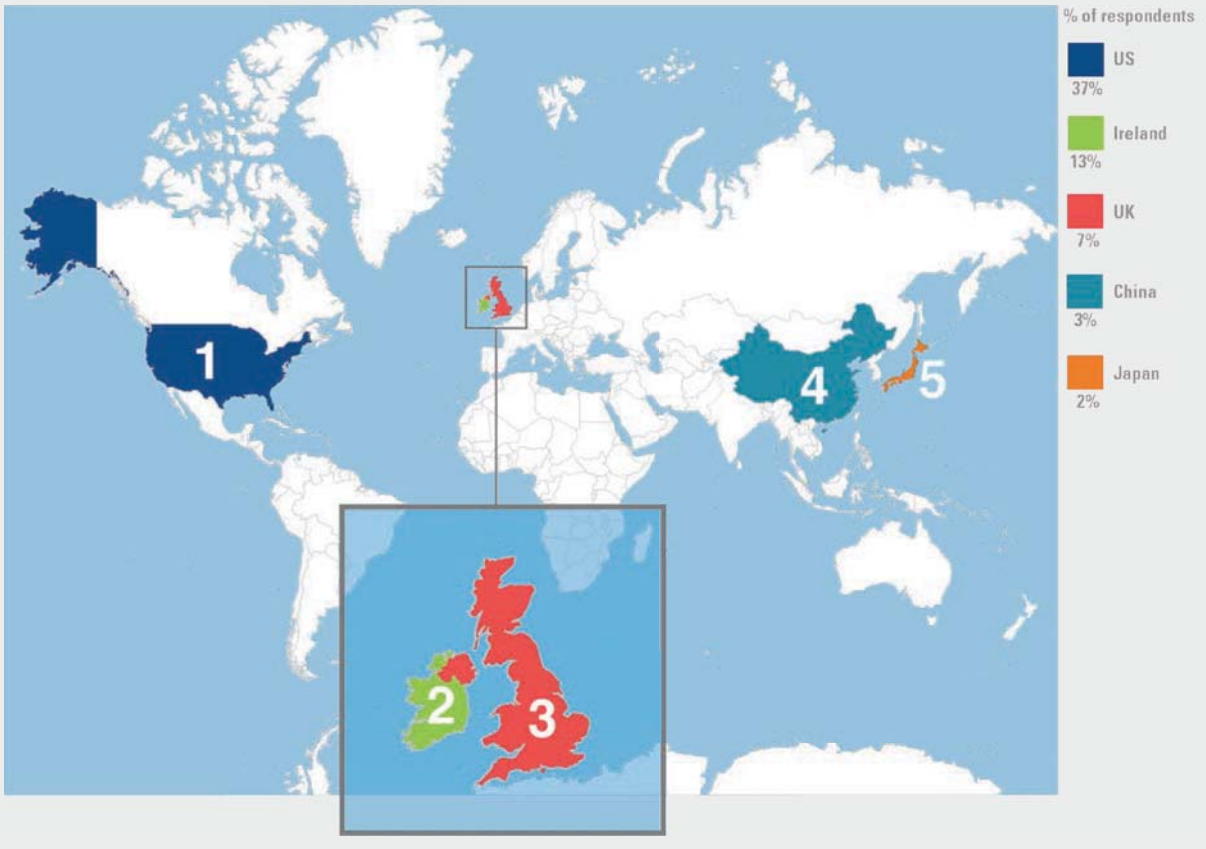
According to over a third of our respondents (37%), the most innovation-friendly country in the world continues to be the USA, though this is down from 44% in 2014/15. Ireland has moved from third place to second, with 13% of companies thinking we are the world's most innovation-friendly country compared to 10% last year. The UK is listed in third this year, with 7% of respondents thinking it is the most innovation-friendly – this is an increase on sixth place and 3% of responses last year.

Germany, which consistently ranked in second place over the previous three years, with 12% of respondents noting it as the most innovation-friendly, has dropped significantly to joint sixth place (with Sweden and South Korea) and only 2% of responses. Overall European countries have dropped in ranking, with 25% of respondents listing a European country compared to 33% last year.

While our survey assesses the perceived innovation-friendliness of a country by companies in Ireland, the results sometimes differ widely to global innovation performance reports. For example, while the top three countries listed by our respondents also feature in the *Global Innovation Index 2015* (GII) top 10 (though the UK ranks second globally in the GII, above both the USA (5th) and Ireland (8th)), the fourth and fifth countries in our report, China and Japan, are ranked only 29th and 19th respectively in the GII. Similarly, three of the GII top 10 countries – Switzerland (1st), The Netherlands (4th) and Luxembourg (9th) – do not feature at all in our ranking of innovation-friendliness, while a further four countries in the GII top 10 – Sweden, Finland, Singapore and Denmark – were listed by only 2% of *Innovation Monitor* respondents or fewer.[xi]

In the four years of *Innovation Monitor*, the USA has consistently topped the list of the most innovation-friendly countries in the world. The USA accounted for 72% of inward investments to Ireland in 2014[xii], so it is unsurprising that the USA is so predominant in Irish companies' minds. Furthermore, given the regular influx of innovation-related investment by American companies, it is arguable that innovation in American companies is often more widely publicised in Ireland than innovation in companies originating from any other country.

The five most innovation-friendly countries



Base: All businesses – 200

Ireland's innovation ecosystem

"An innovation ecosystem is a set of ideas, institutions, policies, and regulations that will determine the direction, outcome, productivity and degree of competitiveness from innovations. An innovation ecosystem will ensure our innovations are successful in a global context."[xiii]

How connected are we?

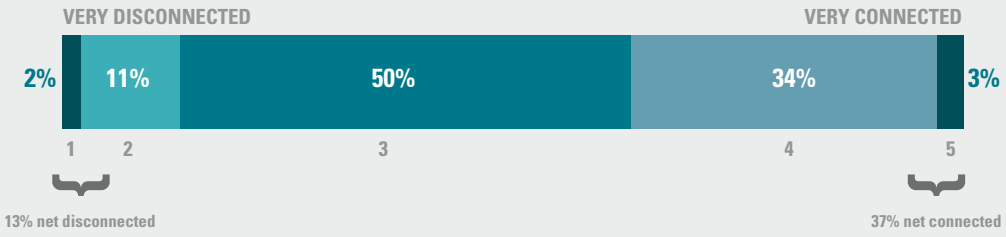
Almost two in three (37%) companies believe Ireland's innovation ecosystem is well connected, while the majority of companies (50%) rated it in the middle at three out of five. Large companies are 50% more likely than SMEs to rate the ecosystem highly, at 48% compared to 32%.

The American Chamber of Commerce Ireland notes that a "recognisable and robust ecosystem" is "the greatest gap in Ireland's RDI system".[xiv] According to the Chamber, foreign direct investment seeks out innovation ecosystems as these environments tend to act as magnets to other firms and research communities, creating hotbeds of innovation, collaboration, and creativity. In Ireland, however, the Chamber asserts that not enough is being done by stakeholders to create this environment effectively.

➔ See opposite for our respondents' recommendations for improving Ireland's innovation ecosystem.

"Foreign direct investment seeks out innovation ecosystems as these environments tend to act as magnets to other firms and research communities"

How well connected do you think Ireland's innovation ecosystem is?



Base: All businesses – 200

How can we improve our innovation ecosystem?

Over a quarter of respondents (28%) want to see improved linkages within the innovation ecosystem, particularly between business and academia. Many suggested an increase in Government agency-supported networking events and workshops to raise awareness of the programmes and supports available. It is also apparent that companies want to work with one another and learn from each other's experiences, both in their own sectors and others – as one respondent said, "it's not just about money, it's about access to people who have been through it". However, there is clearly a lack of awareness among our respondents around the avenues they can take to engage collaboratively with companies.

Equally as important are improvements to the tax system, with suggestions for fewer barriers to claiming the R&D tax credit and a reduction in the administrative elements of claiming the credit (see page 21 for an exploration of the R&D tax credit regime). In keeping with the finance theme, expanding access to capital is also high on the list of suggested enhancements to the innovation ecosystem. Improvements to the availability and administration of grants and banks are also called out as areas of focus, with a perceived difficulty in accessing finance for innovation projects, particularly among smaller companies.

The need for improvements to the education system is highlighted by 11% of respondents, with most noting a need for changes to both secondary and third-level education. Students, according to our respondents, need to be introduced to the concept of innovation at an earlier stage and focus on a smaller number of specialised subjects in the Leaving Certificate examinations.

Other suggestions include an increased focus on start-ups and entrepreneurs, improved broadband infrastructure, a reduction in red tape and bureaucracy, more employment schemes, cuts to employment costs, and improving companies' ability to attract and retain talent (see page 16 for a discussion of Ireland's performance in attracting and retaining talent).

Do you have any suggestions for improving Ireland's innovation ecosystem?

Base: All businesses – 200
Respondents were invited to give multiple answers

Room for improvement?

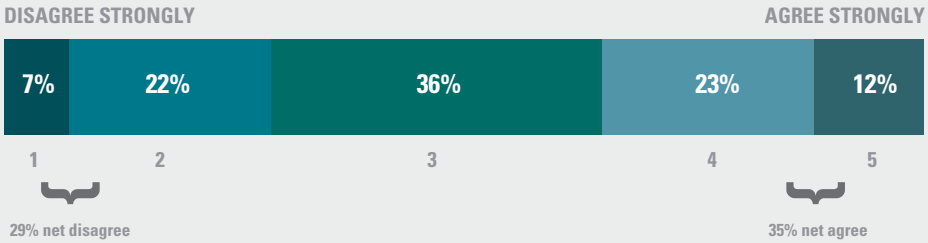
Innovation and the Irish Government

Irish companies are increasingly satisfied with the Government's policies to help and nurture innovation in Irish companies, with a consistent annual drop in the number of companies that believe more could be done, from 55% in 2012/13 to 35% in 2015/16.

However, there is a notable difference between the attitudes of small and large companies – 42% of smaller firms believe the Government is not doing enough, compared to 25% of large companies. The sentiment among small companies was also much stronger, with opinion evenly distributed between those who agreed strongly that enough is not being done ('5' on a 5-point scale – 21%) and those who agreed slightly ('4' – 21%). Among large firms, on the other hand, only 2% agreed strongly with the statement.

➔ See opposite page for suggestions of actions Government should take to support innovation in Irish companies.

"The Irish Government is not doing enough to help and nurture innovation in Irish companies"



Base: All businesses – 200

What more can be done?

When asked for suggestions of what Government could do more of to support innovation in Irish companies, the overwhelming majority of responses related to finance issues, with companies calling for more financial incentives and grants (45%), and for taxation issues to be addressed (28%) (both suggestions topped the list in all previous *Innovation Monitor* reports). The call for more financial incentives and grants is slightly greater from SMEs, with 47% or respondents listing it compared to 40% of large companies. Large companies, on the other hand, are more likely than SMEs to call for taxation issues to be addressed (33% compared to 25%).

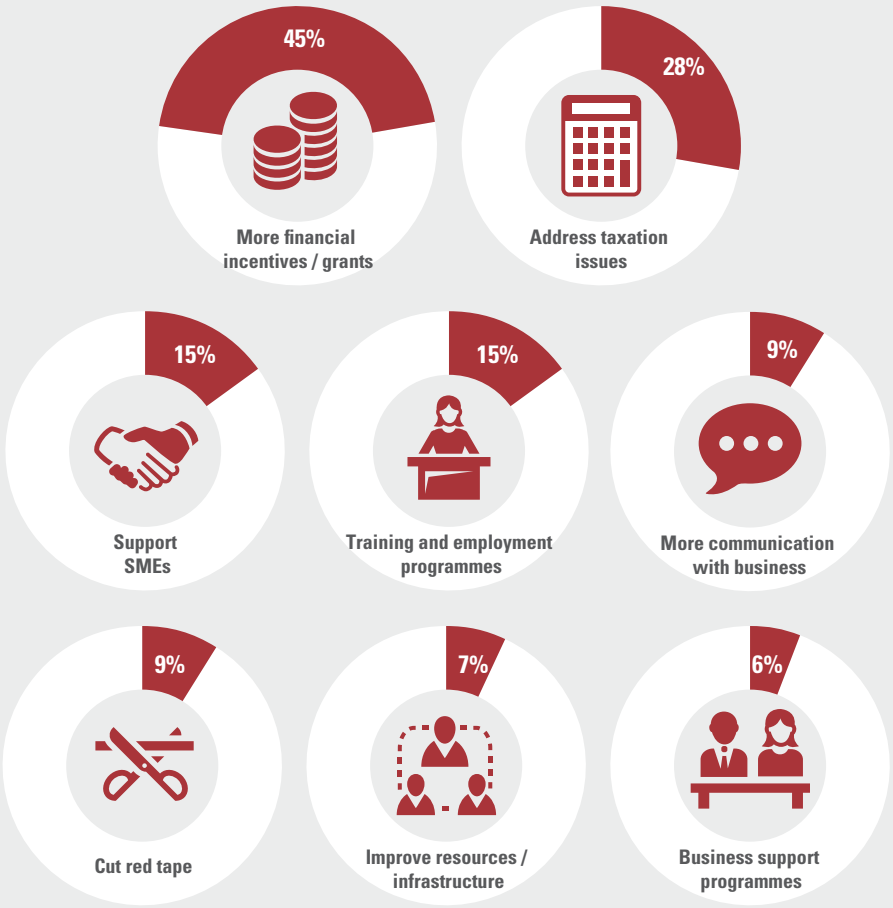
For financial incentives and grants, most respondents would like to see more grants made available, particularly for smaller companies, and for the application process to be more user-friendly. Many noted there is too much paper-work, often making regimes difficult to access. With regard to tax issues, the majority of respondents want to see improvements to the R&D tax credit regime, specifically reducing uncertainty, simplifying the claim process, and reducing the period of repayment, with one respondent noting that there is "no benefit to a company waiting three years for money".

Showing a five-fold increase, 15% of companies want the Government to do more to support SMEs (up from 3% in 2014/15) – this is evenly spread across small, medium and large companies. While relatively few companies called for a reduction in red tape and improved resources/infrastructure, these companies were more likely to be small (12% of small companies vs. 4% of large, and 9% vs. 4% respectively) – a continuation of results in previous years.

At the time of writing, the Government was in the process of devising a new national strategy for science, technology and innovation to cover the period 2015 to 2020. This is part of *Action Plan for Jobs 2015*, and will continue with the same core strategic policies that underpinned the former national strategy.[xv]

Under the *Action Plan for Jobs 2015*, it is apparent that the Government intends to address a number of the items highlighted by our respondents, including increasing access to financial incentives, supporting SMEs, and training and support programmes. The Knowledge Development Box, introduced in Budget 2016, forms the basis of the Government's efforts to improve the taxation environment for innovative companies. We look forward to seeing how the actions outlined in *Action Plan for Jobs 2015* are reflected in next year's research.

What would you like to see the Government do more of to support innovation in Irish companies?



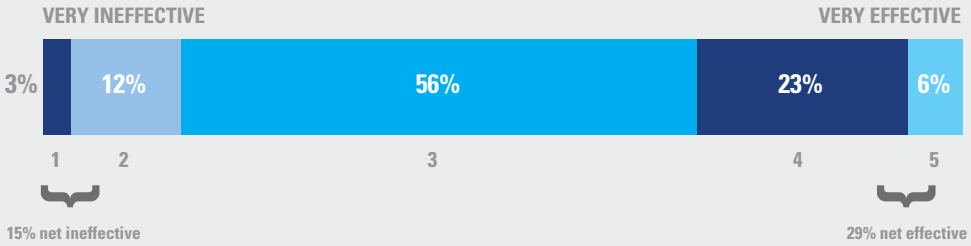
Base: All businesses – 200
Respondents were invited to give multiple answers

Attracting talent

29% of respondents believe Ireland is effective at attracting the talent required to undertake innovative projects, while 15% believe we are ineffective. The majority of companies (56%), rate the country's performance in the middle, at three out of five.

There is no difference in how small, medium and large companies rate the ability to attract talent, though there is some disparity according to industry; perhaps surprisingly, ICT companies are more likely to positively rate the ability to attract talent than engineering companies (37% vs. 24%).

How would you rate Ireland's performance in attracting the talent required to undertake innovative projects?



Base: All businesses – 200

What are the barriers to attracting talent?

When asked to name the greatest barriers to attracting and retaining the talent required for innovative projects, the tax system was noted by almost half (45%) of respondents as a significant barrier. Ireland's "punishing marginal tax rate", as one respondent noted, makes it difficult for companies to attract talent to Ireland. Despite having one the most progressive income tax systems in the world, according to the OECD,[xvi] Irish employees move to a higher rate of income tax relatively early on the earnings scale compared with many other markets. This is a concern in terms of maintaining Ireland's continued appeal as a place in which to work and do business. The Government is aware of concerns relating to the marginal tax rate – which Taoiseach Enda Kenny recently called "bad for recovery"[xvii] – and is taking steps to address it.

The cost of living was noted as a barrier to attracting talent by a quarter of respondents (24%); house prices, rental costs, and utilities such as water charges in particular were also noted as impediments that might deter potential employees from migrating to Ireland. In the *IMD World Talent Report 2014*[xviii], Ireland was ranked in joint third place (with Germany) of 60 countries for the extent to which attracting and retaining talent is a priority in the country's organisations. We were also ranked sixth in terms of the attractiveness of the business environment to foreign skilled people. However, as reflected by our respondents, the cost of living is certainly an inhibitor to attracting this foreign talent.

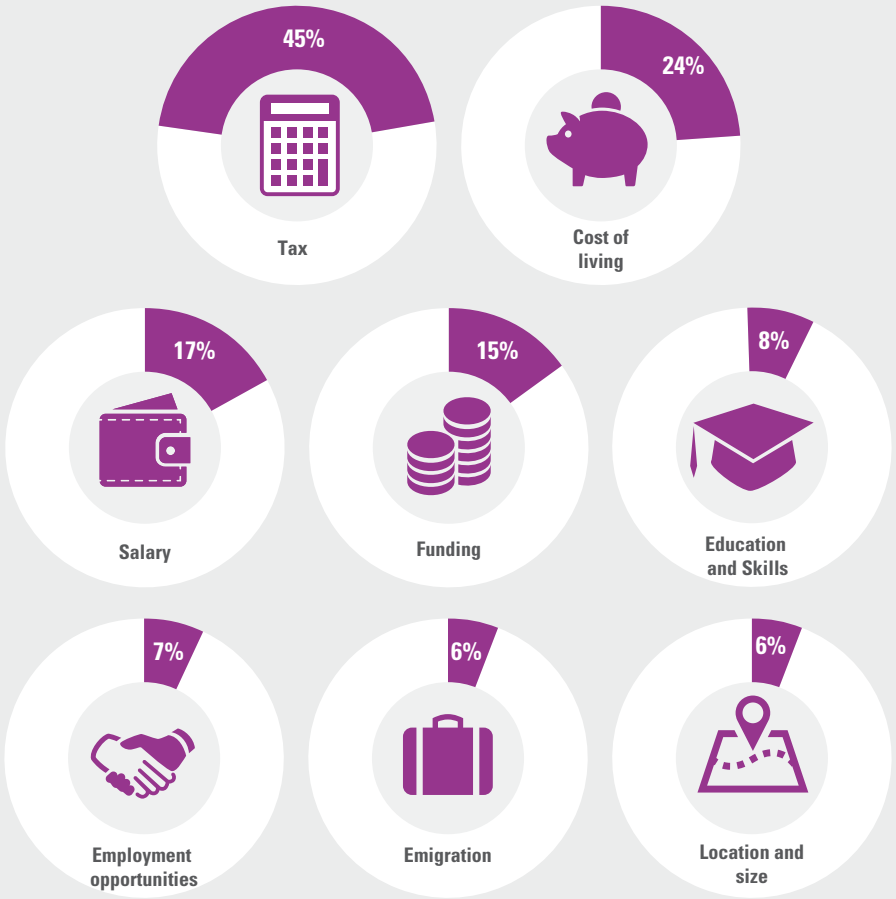
The high cost of living and marginal tax rate also inhibit the ability of respondents to offer satisfactory salary conditions (17%), which in turn is made more difficult by the challenges companies have accessing funding to support new talent (15%). Companies feel they must compensate for the marginal tax rate by offering high salaries to prospective international recruits and compete with international locations, but they cannot find the funding to do so, particularly when trying to resource innovation projects rather than the day-to-day running of the business.

A relatively inadequate standard of education and skills was listed by 8% of respondents, with some noting that there is not enough practical training for students prior to entering the workforce. Despite this, Ireland still performs highly on the international stage, ranked fifth in the *IMD World Talent Report 2014*. Once they leave the education system, employee training is also noted as a high priority in Irish companies, ranked ninth globally.

7% of respondents observed a lack of progression potential within multinational companies located in Ireland, while 6% noted the "brain drain" of highly trained young people as a result of poor employment opportunities as a barrier to retaining the talent required to resource potential innovative projects.

Other barriers to attracting and retaining talent, as highlighted by our respondents, include our relatively small island location (6%) and inadequate infrastructure (5%).

What are the greatest barriers to attracting and retaining the talent required to undertake innovative projects?



Base: All businesses – 200
Respondents were invited to give multiple answers

The innovators – who is doing it and why

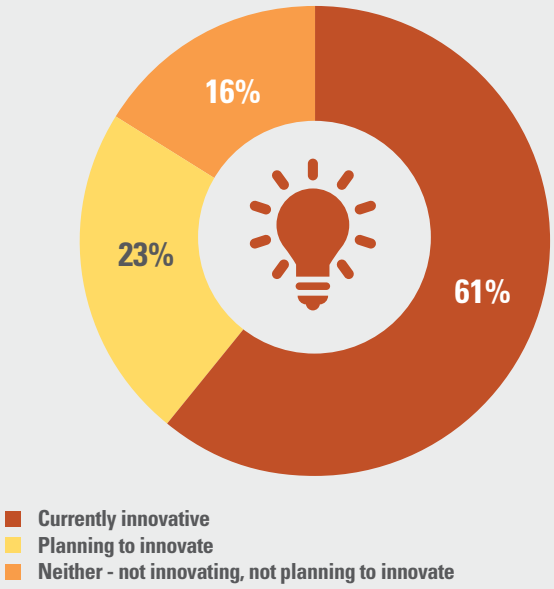
"Innovation": a significant improvement of a good or service, or of a production or delivery method.

Who is innovating?

84% of companies surveyed are either currently innovating or plan to do so in the near future. While this number is a slight drop from last year (89%), the notable difference is the increase in the number of companies planning innovative projects, from 13% to 23%, and the decrease in the levels of active innovation, from 76% to 61%. This may suggest that companies are returning to 'business as usual' after the recessionary period, during which time many companies found they had to innovative in order to survive. It would also indicate that more companies are making plans and looking to the future, as this is the highest number of companies planning innovation in the four years of *Innovation Monitor* since 2012/13 (17%, 13%, 14%, and 23% respectively); further growth in innovation levels can therefore be expected in the near future.

As we have seen in previous years, large companies are more likely than small companies to be currently innovating, while small companies are slightly more likely to be planning innovative projects than large companies.

In terms of innovation, how would you describe your company?



Base: All business – 200

Deciding to innovate

When it comes to deciding to undertake an innovation project, the order of importance of the key influencers has remained unchanged over the four years of *Innovation Monitor*.

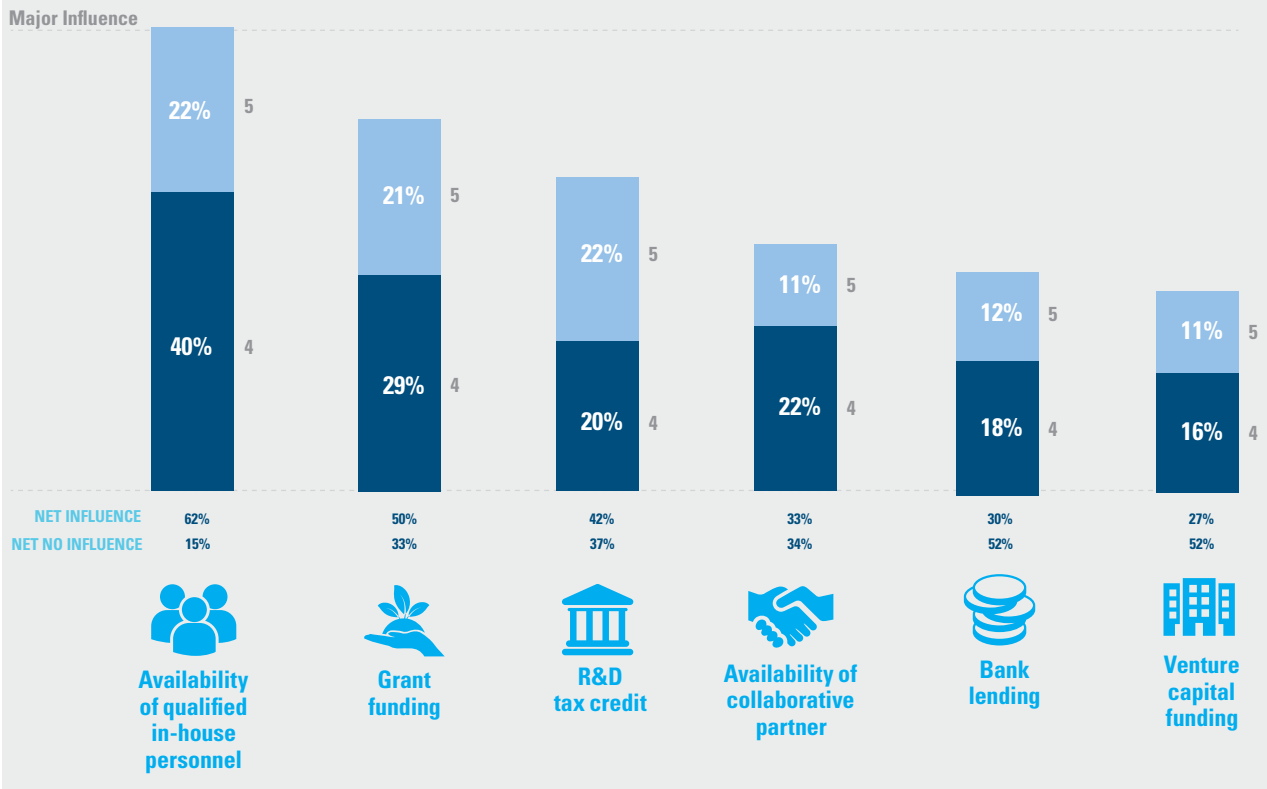
The availability of qualified personnel continues to top the list of innovation influencers, with 62% of respondents rating it as influential ('4' and '5' rating), a slight drop on 2014/15 (67%). This factor is rated highest by both SMEs and large companies, at 55% and 77% respectively.

The second most influential factor is grant funding, at 50% for all companies (52% in 2014/15), while the R&D tax credit ranks in third with 42% of all companies noting its importance. The R&D tax credit is notable as it is the only factor that has increased in overall influence since last year (38% in 2014/15). Among large companies it is also the highest rated factor with a major influence ('5' rating), with 22% of large companies saying is has a major influence. Meanwhile only 11% of large companies rank the availability of qualified personnel as a major influence. Among small companies, grant funding remains more influential in the decision-making process than the R&D tax credit.

The fourth most influential factor across all companies is the availability of a collaborative partner, at 33% net influential – this is unchanged from last year. This factor is slightly more important for large companies than SMEs, at 30% net importance versus 30%.

Following on from this, bank lending is ranked as the fifth most influential factor, ranked important by 30% of respondents. Unsurprisingly, bank lending is twice as important to SMEs in their decision-making process as to large, at 35% versus 18%. Venture capital funding, the least influential category, is also twice as important for SMEs, rated 31% compared to 16%.

What would influence your company's decision to invest in innovation projects?



Base: All business – 200

Financing innovation: grants and the R&D tax credit

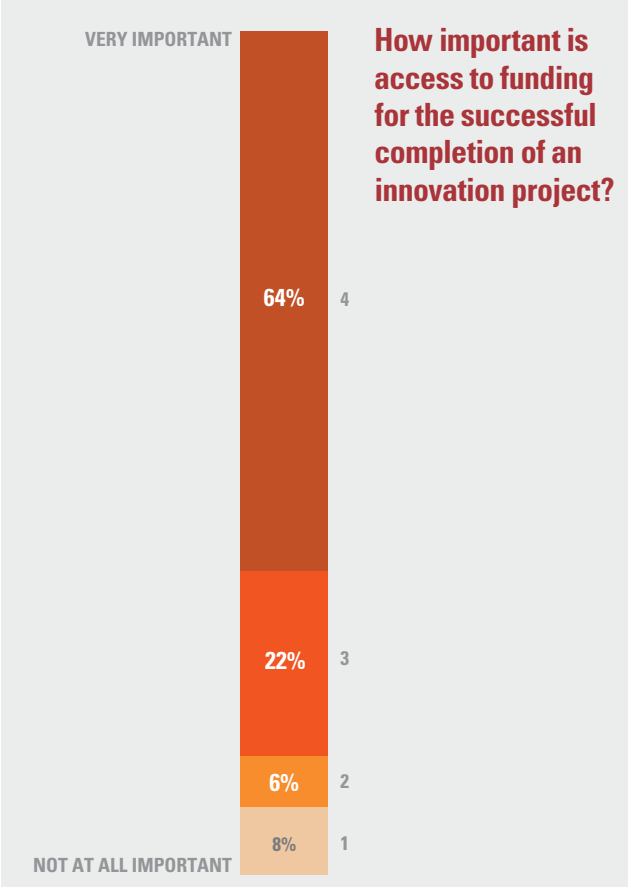
Accessing funding

A significant majority of companies – 64% – believe that access to funding is very important to the completion of an innovation project, with an additional 22% noting it as somewhat important. Only 8% of companies believe it is not at all important.

As with previous years, smaller companies are more likely to rate access to funding as very important, though the gap has closed somewhat with 66% of SMEs deeming it very important compared to 61% of large companies. Conversely, large companies are also more likely to view funding as not at all important, with 12% of respondents providing this answer compared to 7% of SMEs.

The importance of access to funding reflects the previous question, in which factors influencing the decision to innovate were explored – while financing and funding are extremely important, other factors such as the availability of qualified in-house personnel and collaborative partners could also have an impact on the success of innovation projects.

How important is access to funding for the successful completion of an innovation project?



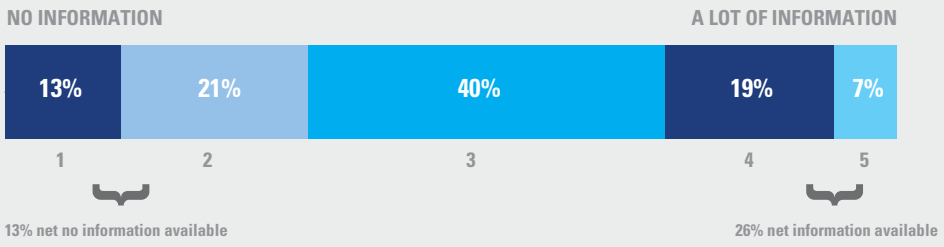
Base: All business – 200

Getting the right information

Considering the importance of funding to both the decision to innovate and the successful completion of an innovation project, it is vital that companies have access to information on R&D and innovation funding incentives. However, a third of companies (34%) believe there is insufficient information available, with small companies more likely than large companies to believe as such (39% versus 28%).

While a significant number of companies believe there is insufficient information available, a quarter (26%) think otherwise – this represents an improvement on last year's survey (16%), and is the highest rating in the four years of *Innovation Monitor*. While there are still clearly improvements to be made, it is encouraging to see that more companies are finding the information they need to identify funding opportunities for their innovation projects.

How would you rate the availability of information related to R&D and innovation funding?



Base: All business – 200

The R&D tax credit

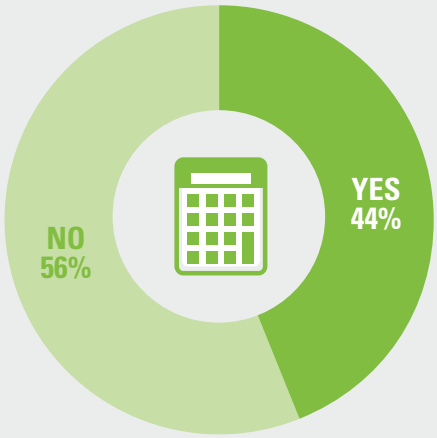
Who is claiming the R&D tax credit?

Almost half of the companies surveyed (44%) have claimed the R&D tax credit for their R&D / innovation projects. Taking only the companies that consider themselves currently innovative, 54% have claimed the credit.

Of those that have received a grant for an R&D / innovation project, 83% have also claimed the R&D tax credit. This is very encouraging, as in previous years it has been notable that a significant number of companies in receipt of grants for innovation projects failed to claim the credit for the remainder of their expenditure on the same projects (33% in 2014/15).

Once again, there is a notable difference in the responses from large and small companies, with 60% of large companies claiming the credit compared to 35% of small companies. Previous iterations of *Innovation Monitor* have found that large companies are typically more likely to be claiming the credit as small companies, though the gap appears to be reducing. In order to increase innovation levels among small companies, it is vital that they are encouraged to take advantage of incentives such as the R&D tax credit, particularly considering the importance small companies in particular place on innovation funding (66% deem it very important). While the first step must be to address the perceived lack of information regarding financing options (39% feel it is insufficient), our evidence also strongly suggests that a dedicated regime for SMEs would improve innovation levels among small firms (see page 23).

Has your company claimed the R&D tax credit?



Base: All business – 200

If they aren't claiming, why not?

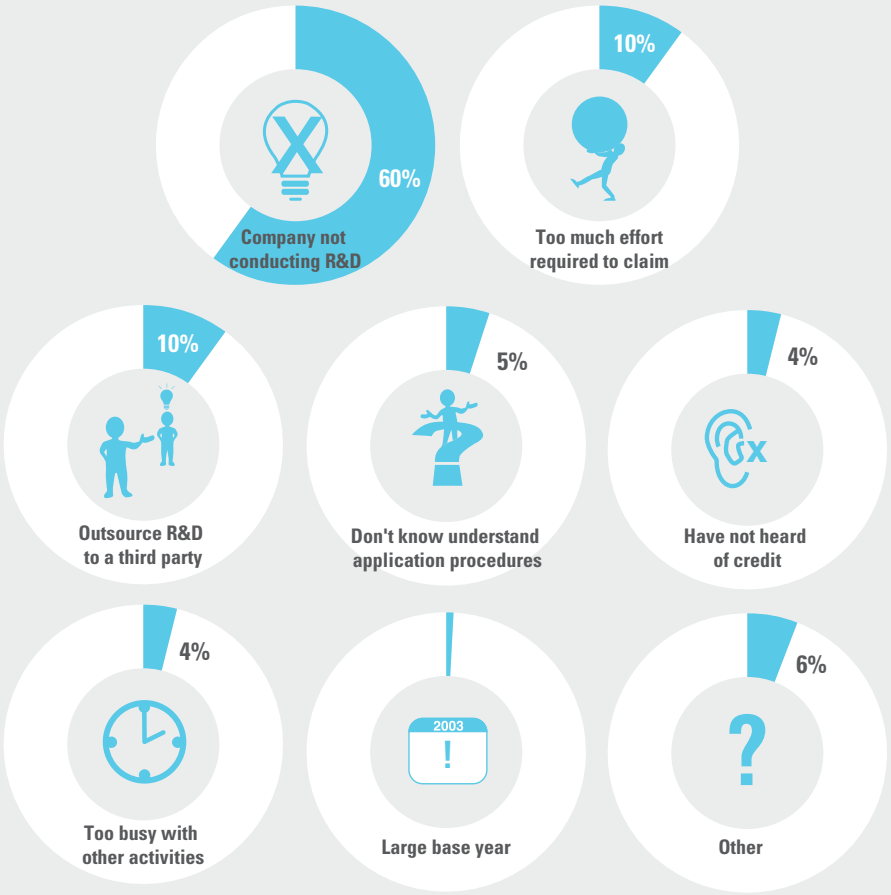
When asked why they aren't claiming the credit, the significant majority (60%) of companies advised that they believe they are not conducting R&D – among large companies this number increased to 71%, compared to 57% of SMEs. However, 48% of the companies not claiming the credit for this reason describe themselves as currently innovative according to our definition (which is closely aligned to the definition of R&D for the purposes of the R&D tax credit); this indicates that some, if not all, of these companies could in fact claim the credit if they were aware of the eligibility criteria.

As with last year's report, 10% of companies are not claiming the credit because they believe too much effort is required to do so; a further 4% are too busy with other activities. Of particular concern is our finding that SMEs are four-times as likely to avoid claiming the credit due to the burdensome administrative requirements as large companies (17% versus 4%). KPMG has proposed an enhanced R&D tax credit regime for SMEs to address, among other issues, the lack of resources preventing smaller companies from taking advantage of this incentive – see page 45 for more details.

A further 10% of companies are not claiming the credit as they outsource their activities to a third-party – SMEs were slightly more likely to provide this response. Under current R&D tax credit rules, a company can only claim for outsourced R&D activities that fall within the limit of 15% of their in-house R&D expenditure; therefore, companies that rely on third-party assistance for their R&D and innovation activities, if for instance they have inadequate internal resources, are often precluded from claiming the credit for this expenditure if their in-house activities are insufficient. Given that SMEs are more likely to have limited internal resources, we recommend increasing the outsourcing limits for SMEs.

While 9% of companies have advised that they are not claiming the credit as they either don't know or understand how to claim the credit (5%) or they haven't heard of it (4%), this is a significant drop since last year, when 23% of respondents said the same. It is encouraging to see that more companies are being made aware of the credit and how to go about claiming it.

Why have you not claimed the R&D tax credit?



Base: All who have not claimed the R&D tax credit – 112

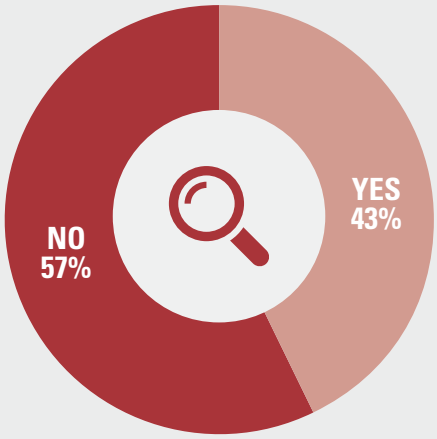
Revenue audits/queries of R&D tax credit claims

In *Innovation Monitor 2014/15*, it was found that there had been a six-fold increase in the number of R&D tax credit claimants experiencing a Revenue audit or query of their claim since 2009, from 6% in 2009/10 to 38% in 2014/15. The number of companies undergoing audits/queries of their claims has continued to rise and now stands at 43%, an increase of five percentage points on last year.

Large companies are more likely to undergo a Revenue audit/query than small companies – 54% of their claims have received Revenue attention compared to 35% of small companies' claims. This reverses the results seen in last year's report, indicating that while Revenue remains focused on the claims filed by SMEs, it is increasingly assessing the typically higher value claims filed by larger companies.

The high level of auditing of R&D tax credit claims by Revenue has been highlighted on a number of occasions, with the OECD noting that the unpredictability of Revenue's rulings acts as a disincentive for companies hoping to claim the credit.[xix] In its pre-budget submission 2016, Ibec also noted the lack of certainty as the biggest weakness to the regime.[xx] This is an area that urgently needs to be addressed by Revenue in order to maintain the incentivising impact of the R&D tax credit regime.

Have any of your R&D tax credit claims been subject to a Revenue audit or query?



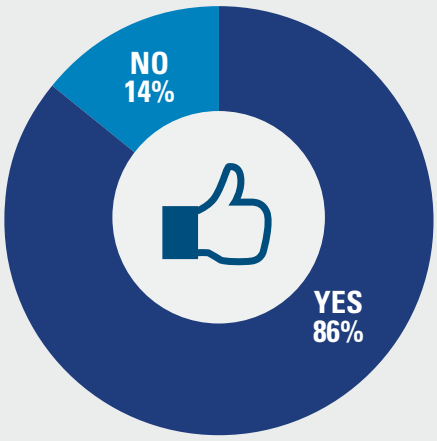
Base: All who have claimed the R&D tax credit – 88

A targeted SME R&D tax credit regime

An overwhelming 86% of respondents think a simplified and more generous R&D tax credit regime aimed specifically at SMEs would lead them to increase their levels of innovation – this is the case across the board for both SMEs and large companies. Among the SMEs that say they are planning to innovate in the near future, 94% say an enhanced SME regime would encourage them to increase their innovation levels.

As indicated by our research, access to financing is a major barrier for smaller businesses hoping to commence or continue R&D and innovative projects. In an effort to improve innovation levels among smaller firms, KPMG proposes making the R&D tax credit more accessible to smaller companies by implementing an enhanced regime for start-ups and small companies. Our proposal includes various improvements to both the value and administrative requirements of the regime, details of which can be found on page 48.

Do you think a more simplified and generous R&D tax credit regime aimed at SMEs would lead them to increase their level of innovation?



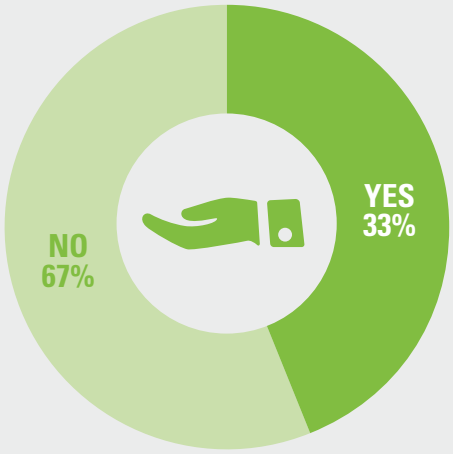
Base: All business – 200

R&D grants

A third of companies (33%) have received a grant to conduct an R&D / innovation project. Among companies who describe themselves as currently innovative, 39% have received a grant.

49% of large companies have received a grant for an innovation project, compared to only 25% of SMEs. Given that two-thirds of small companies believe access to funding is very important to the completion of an innovation project, it is concerning that small companies are half as likely to be in receipt of grant assistance as large companies. It also further highlights the need to promote funding initiatives among smaller companies, given that 39% of them feel there is insufficient information available on funding for innovation projects.

Has your company ever received a grant to conduct an R&D/innovation project?



Base: All business – 200

Collaboration for innovation

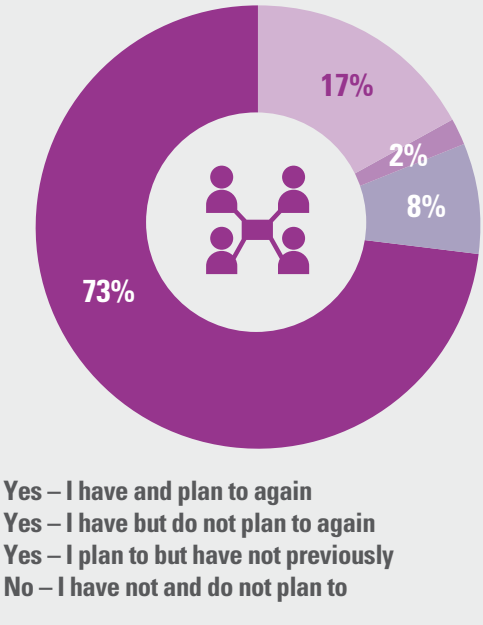
Collaborating with academia

The number of companies collaborating with academia on an innovation project remains steady, with 19% of respondents noting that they have done so (18% in 2014/15) – 17% have collaborated and plan to again, while 2% have but do not have plans to do so again. A further 8% of companies plan to collaborate for the first time, meaning a quarter of companies (17% + 8%) have plans to collaborate with a third-level institution on an innovation project in the near future. Almost three-quarters of companies (73%) have never collaborated with academia and have no plans to do so.

Large companies are over three times more likely to have collaborated with academia on an innovation project than small companies, at 33% compared to 10%. Smaller companies, on the other hand, are significantly more likely than large companies to be planning to collaborate for the first time, at 12% versus 2%. Over three-quarters (78%) of small companies have no plans to ever collaborate with academia, compared to 66% of large companies.

The division between large and small companies continues from previous years, though the gap seems to have widened slightly. Establishing and maintaining a collaborative relationship with a third-level institution requires a significant investment in time and resources, something our research indicates is in shorter supply in small companies.

Have you ever collaborated, or do you plan to collaborate on an innovation project with an academic partner?



Base: All business – 200

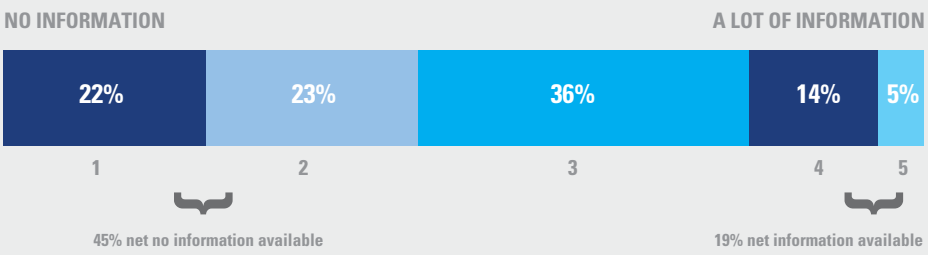
Where to go to collaborate?

With a quarter of companies revealing plans to collaborate with academia on an innovation project, it is important that they receive the right information. However, less than a fifth of respondents (19%) believe there is sufficient information available on collaboration, while 45% say there is not enough. This is a slight improvement on last year, when 12% rated the availability of information positively and 52% rated it negatively.

Among those companies planning collaborative projects, however, the number of respondents giving a poor rating reduces slightly, with 36% saying there is not enough information. While this is still concerning, given that these are the companies planning to collaborate, it does indicate that the information may be available once some initial research has taken place.

Large companies, those who are most likely to be collaborating with academia, are also the most likely to positively rate the availability of information on collaboration, with 25% feeling there is enough information compared to 16% of small companies. Conversely, more than half of small companies (54%) feel there is insufficient information, compared to a third of large companies (33%).

How would you rate the availability of information with a third-level institution on an innovation project?



Base: All business – 200

ENTERPRISE ISLAND

BRINGING NEW KNOWLEDGE AND THINKING TO IRISH BUSINESS

"Enterprise Ireland's remit is vast; it has responsibility for nurturing growth oriented Irish companies and assisting them break into international markets", says Chief Executive **Julie Sinnamon.**

Every industry sector from food to forestry falls within Enterprise Ireland's orbit and the common thread linking them all is innovation. Indeed, the first sign you notice in the organisation's headquarters tells you that this is where "innovation means business."

In effect, Enterprise Ireland is responsible for the promotion of the national innovation agenda – an agenda which chief executive Julie Sinnamon believes is absolutely critical to future economic success. She also believes the current position regarding innovative activity in Ireland is quite good but this should not be taken for granted.

"We are in quite a good place at the moment but there are challenges ahead", she says. "We have things in our favour but we have to get ready for tougher times should they come. We have to avoid complacency."

Defining innovation

"Innovation; what is it actually?" she asks. "It's quite a fluffy word. People ask what it is exactly. But what is it? It's a very open term. People very often think of it as research and development and white coats in a lab. To me, it's much wider. It's about bringing new knowledge and new thinking to business opportunities and challenges. Everything from processes for dealing with customers to new product development, to ensuring that the voice of the client is leading and directing the white coats."

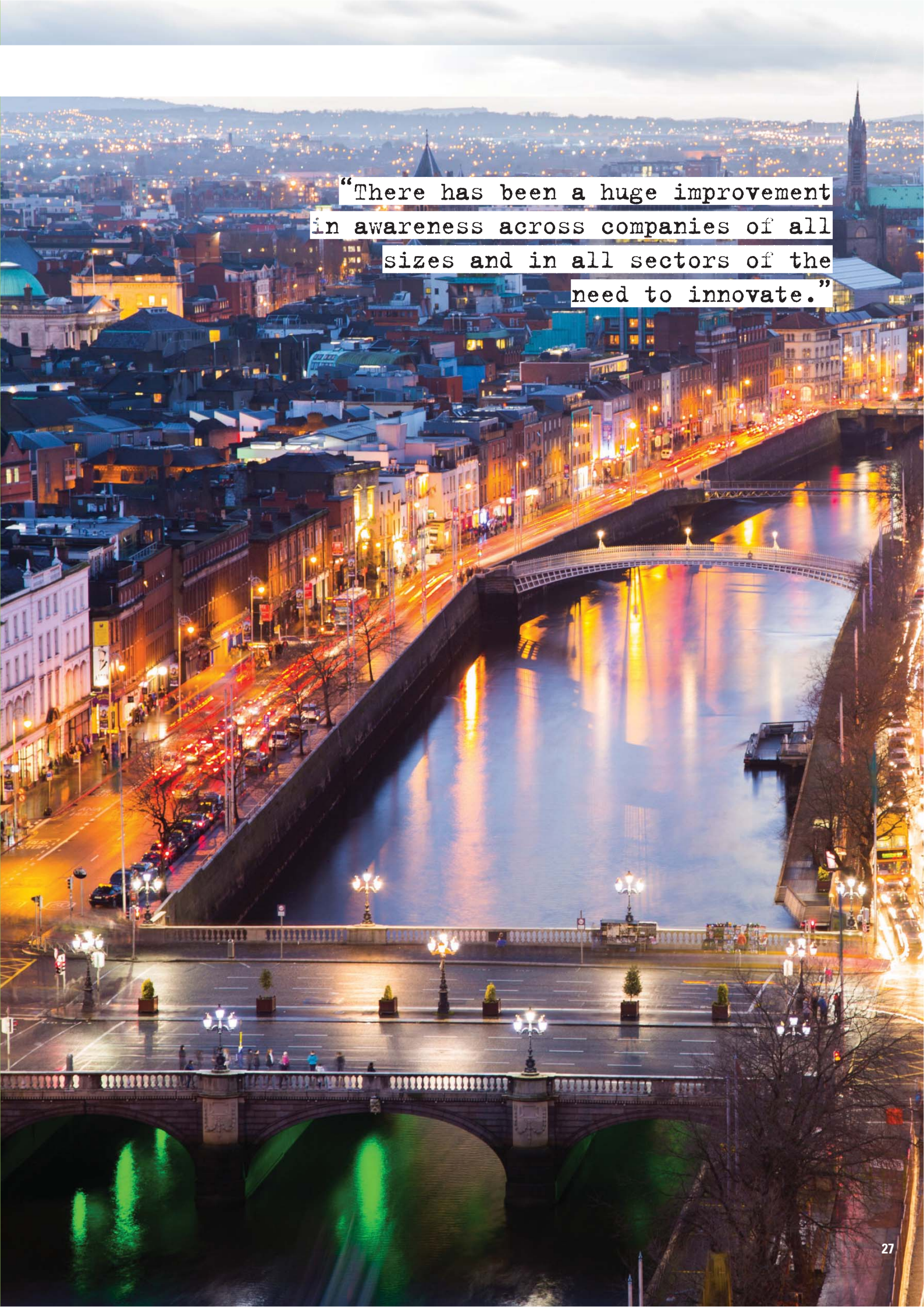
It can also be as simple as just fixing elements of a process or business which aren't working as well as they might. "Everything we do differently to make a business more productive and efficient is innovation. That needs to be understood."

Attitudes are also changing. "Companies at the top of the pyramid in terms of scale always had a strong commitment to innovation", she points out. "One of the big changes we have seen over recent years in particular is the number of companies which have started to realise innovation is essential if they are going to achieve ongoing growth."

This has translated into a change in the nature of the engagement between Enterprise Ireland and client companies. "Increasingly we find in our dialogue with companies that the innovation agenda is a normal part of their business. Ten years ago when we went to companies and mentioned it they would have told us they don't do innovation. There has been a huge improvement in awareness across companies of all sizes and in all sectors of the need to innovate."

Support and development

At least some of this change is due to the numerous support and development programmes run by Enterprise Ireland over the years. Among these is the Leadership 4 Growth Programme which aims to enhance the leadership and strategic capability of CEOs of SMEs to lead scalable, innovative companies capable of growing exports and jobs in Ireland.


“There has been a huge improvement in awareness across companies of all sizes and in all sectors of the need to innovate.”

"There is an increasing awareness among lower tech companies that technology and innovation must take centre stage"

More recently, the organisation has introduced the Innovation 4 Growth programme. Run in partnership with the Irish Management Institute, the programme is specifically designed to meet the needs of ambitious and entrepreneurial Irish companies seeking to use innovation as a way to unlock opportunities in the marketplace. It aims to fast-track companies through an end-to-end innovation learning and practice journey and support them to deliver on at least one innovation initiative.

"It isn't hard to get demand for companies to go on programmes", Sinnamon notes. "There was very strong interest. Ten years ago they might have said they were not big enough for them. They now realise that innovation is key to their survival, not an optional extra."

She points to the introduction of lean business principles into Irish enterprise as another driving force behind the overall improvement in innovation. "One of the programmes we have run that has been very effective is the Lean Business Offer. When you go and introduce lean principles into a company you look at all the processes. You take each element and look at how you can make it as effective as possible – that's innovation. Introducing lean introduces new thinking. Once you get people to think about how to do things better, that's innovation. It's not white coats."

One of the sectors that benefited greatly from the introduction of lean principles was food. "We worked with the food sector during tougher times. The introduction of continuous improvement processes and searching for better ways of doing things, including new product development, really helped."

Competing internationally

Necessity is the mother of innovation in many cases. "In tough times you have to be lean, you can't afford fat in the system", Sinnamon points out. "Ireland is not a low cost economy. If you are going to compete internationally you need leading edge processes and products. The world has changed. We live in a rapidly changing world where we are all impacted by technology. You have to be innovative if the technology isn't going to destroy your business."

This doesn't just apply to high tech companies who face challenges to their product offerings from competing technologies. Companies in all sectors have to deal with technological advances in areas such as sales, distribution and production processes which can place them behind the competitive curve. Keeping pace is a must.

"The high tech companies just do it", she notes." But there is an increasing awareness among lower tech companies that technology and innovation must take centre stage and they need a strategy for it. Many of them are taking steps. This can be anything from their online presence to taking in younger graduates. Younger people are naturally innovative and tuned into technological trends. As these people come into companies they are bringing innovative energy and creative thinking with them. We find that in Enterprise Ireland as well. The graduates we recruit bring in new skills and awareness in areas such as social media marketing and so on."

That online presence is of growing importance. "It doesn't matter if you are actually buying or selling online. These days, when potential customers see a new product or service, they Google them. That makes a company's online presence vital when marketing to new customers. If an Irish company goes into Central or Eastern Europe the first thing the buyer will do is Google them. Companies have to ask themselves is their online presence the shop window they want. It's a fast changing environment. Technology drives decision-making and businesses need to be tuned into it. It's about the application of the available technologies and maximising the upside."

Promoting innovation

When it comes to direct promotion of innovation, Sinnamon believes the Enterprise Ireland Innovation Vouchers scheme has been very important. "They are effectively cheques for up to €5,000 to cash with a university or institute of technology that allows companies access to their expertise and problem solving capability. Some more innovative companies have collaborated with others to resolve a problem and put value of vouchers together. Smaller R&D grants are a really straightforward way of doing it. Then we have innovation partnerships between third level institutes and Irish firms. There are lots of options out there."

Enterprise Ireland's network of 15 technology centres around the country also play an important role. The centres see groups of companies, both Irish and overseas, coming together to work on near-to-market problems. "The centres are driven by the sectors involved", Sinnamon explains. "It is

the group of companies which decides what to work on. The work in the centres is collaborative, with individualisation coming later. The level of collaboration within Irish industry has increased significantly. There may have been competitive issues previously but they are now realising that working together can help companies win international business."

Ultimately, innovation must come from within. "Innovative companies find ways of engaging people at all levels to influence how the business can get better and improve. Customers know what's wrong with your product. The best companies know this and make use of customer views to improve their processes and products. We have to take the mystique out of innovation. It is just part of the normal business process. We also need to show that it's about improving results. If innovation isn't delivering improvements to the bottom line then it's not effective.

"Multinational companies always talk about the flexibility of the Irish people", she concludes. "That sounds trite but Irish people are by their nature innovative. It's part of our DNA. Companies need to ensure that their structures and processes encourage innovation to flourish. That means encouraging their people to challenge and question existing processes and ways of doing things. This is vitally important to the innovation agenda and making it succeed for businesses."

"We have to take the mystique out of innovation. It is just part of the normal business process."

GETTING IT RIGHT IN PRACTICE

"Innovation is the pathway to sustainable success - but making it happen in practice is easier said than done", says **Niall Campbell**, KPMG Ireland's Head of Innovation.

Innovation – from concept to reality

We all know the saying 'the road to hell is paved with good intentions'. At a time when it seems that everybody is talking about innovation, from governments to start-ups, businesses need to ensure that they quickly move beyond the concept and into the reality - which can be scary and challenging, but is absolutely necessary to ensure long term success. The trick is being able to align the internally generated innovation effects with the constantly evolving external market opportunities and challenges. Of course, these elements need to be tailored depending on the nature of the industry, the size of the organisation and the specific challenges it is facing – there is no set formula. Therein is the challenge and the opportunity.

From mega-trends to micro-actions

A good starting point is to analyse the external forces shaping your industry, now and into the future. Posing difficult questions can produce some answers which may be either uncomfortable or welcome depending on how you are positioned, but will inevitably give clues to the right path to take. Looking for the early signals of change can be a very rewarding exercise. For example, how is my industry being disrupted by new entrants or by faster moving competitors? How is technology going to change the delivery model or alter the value chain? How are the global "mega-trends" such as climate change, changing demographics, globalisation and social change influencing the industry?

For example, evidence suggests that consumer behaviour in Ireland may not be as traditional as once thought. Creative minds are producing new solutions for Irish consumers and industries every day. Disruptive, innovative trends are opening up new opportunities while pushing us to be more efficient, competitive and creative than ever before.

Armed with a deep perspective on these external dynamics enables businesses to really start thinking differently about their response - which is the next step in the journey to harnessing internal innovation and releasing creativity.

Mastering the innovation predicament

"We see increasing evidence that innovation has risen to the top of business challenges for CEOs, C-level executives, investors and founders" explains Niall Campbell. "Thought-leaders have been building strong innovation capability in their businesses over the past two decades. The adoption curve is now shifting from certain 'early adopter' corporates, through to traditional business and on to small business and start-ups. The surge of start-ups in recent years has given prominence to the 'lean-thinking' innovation design approach and is drawing attention from larger corporates on this new way of approaching challenges".

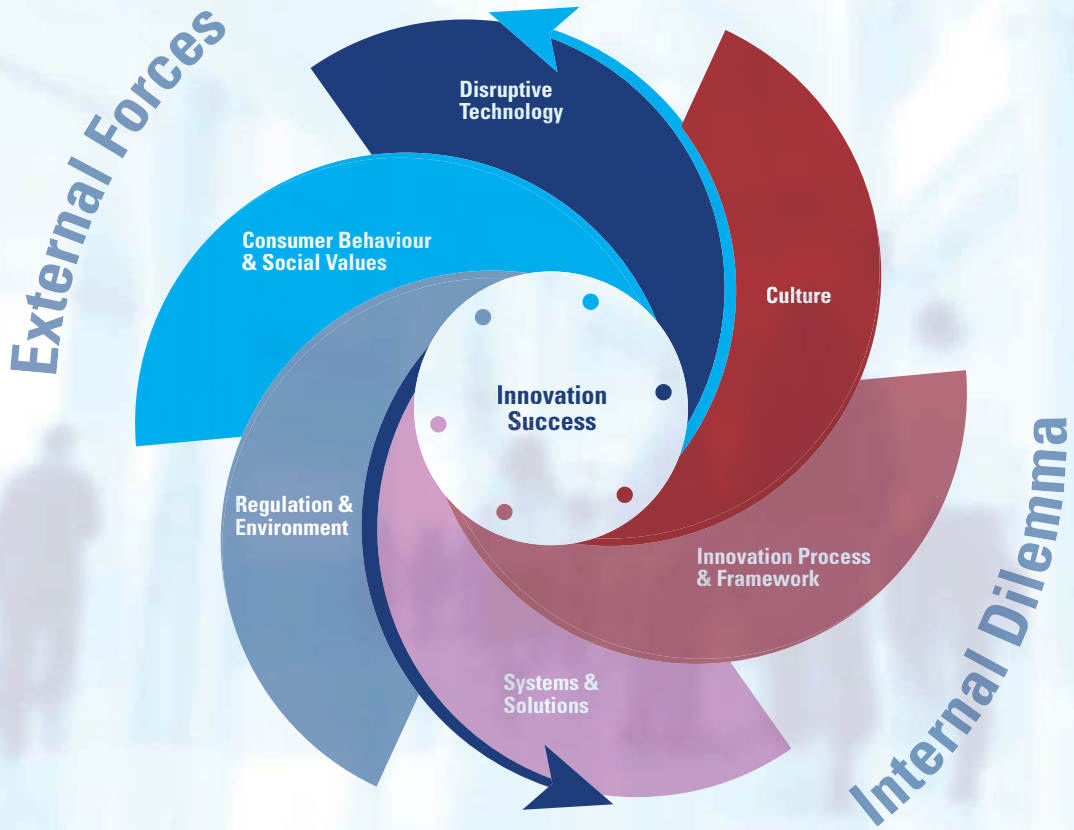
When asked about the best approach to driving successful innovation, Campbell explains "for larger organisations, it must start with culture and leadership. Only when the organisation is appropriately conditioned can innovation be successful. The next step is to build an innovation framework within the organisation which includes aspects such as embedding new innovation capability, supporting creativity and behavioural change and actively managing a portfolio of innovation initiatives. Much like baking a cake, it takes time, effort and the investment to deliver a high-quality output - experimentation with different ingredients over time is also necessary if you want to produce something new."

Leveraging the innovation ecosystem

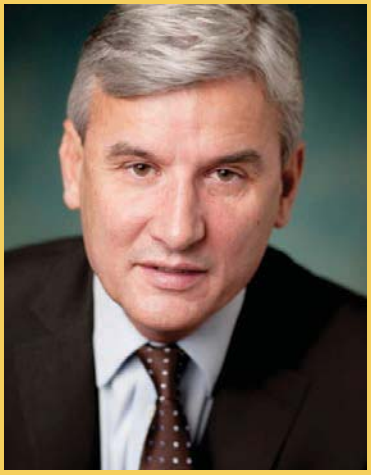
As the innovation challenge becomes more difficult, leveraging supports outside your organisation can be very valuable. There is evidence of an emerging innovation ecosystem which facilitates collaboration between businesses, producers, consumers, academia, government (local and national), investors and service providers. Tapping into this ecosystem will likely be a fruitful exercise for many businesses as the answers to the innovation challenge are not all found internally.

At KPMG, we are firmly positioned within in the innovation ecosystem in Ireland and internationally in a number of ways: working prominently within the high-tech start-up community, supporting Irish business to maximise the value of innovation investment spend through the R&D tax credit regime and via our collaboration with the Irish Times Innovation Awards and AMCHAM Innovation Awards. Most importantly, however, we work with Ireland's leading and emerging companies every day to help them solve problems and to maximise the endless opportunities which the international market presents.

Campbell adds "When it comes to our approach to innovation, we apply an 'outside-in' lens of the challenge: we look to mine the early signals of change in the market and encourage open collaboration by asking a powerful set of questions – "What if?", "So what?" and "What now?". This allows us to take on the challenge through different perspectives, define the innovation dilemma and bring the right people to table. No two solutions are the exactly same when it comes to driving innovation and building the pathway to sustainability and success - which is what makes it interesting."



CHICKEN & EGG: INNOVATION IN IRELAND'S AGRI SECTOR



"From one of the country's earliest centralised farms to market supply chains, Manor Farm's success is firmly based on continuous innovation", says **Vincent Carton** of parent company Carton Bros.

The Carton family started a poultry market for spent hens. These were hens that had finished their laying days. Owners would label the spent hens and they would be collected from farms and brought to Dublin, first by horse and cart and later by rail. This system continued from the 1790s all the way up until the 1960s.

While the supply chain may have been sophisticated for the time, with Cartons sending out collectors to farms across north Leinster, the chicken market itself was fairly simple, and unappetising for much of the year. "Spent hens were quite old and were only fit for boiling", Carton explains. "They weren't very nice to eat but were rich in protein. Once a year, spring chickens became available. These were young male chickens which were superfluous to the owners' needs. Spring chickens could be roasted and commanded a premium price."

That situation continued for the best part of two centuries. Tasty chicken dishes were more or less an annual treat. But then a revolution happened thanks to a man who Carton describes as his hero.

Joe McLean was general manager of Patton's Feed Mill in Monaghan and was a true innovator. He supplied feed to local chicken farmers and was looking for ways to improve his business and theirs. "He brought a dozen local farmers over to America to show them barn reared chickens. The system separated the breeders and the growers; the breeders supplied the chicks to the growers who finished them. This meant that you could have spring chicken all year round. With chicken the products all come down to numbers – there are two fillets and two legs in a chicken. What Joe McLean did was teach the farmers how to produce them in thousands instead of dozens."

McLean's foresight was to have a profound impact on the Cavan/Monaghan area. Today, some two thirds of chickens produced in Ireland and almost all turkey and duck come from the area. The mushroom industry is also centred there, as it utilises manure produced by the poultry industry.

Challenges

The increased supply of spring chicken all year round was not without its challenges for Manor Farm. "It was actually difficult to sell spring chicken in November. People weren't used to that and were a little suspicious. They took a bit of convincing."

There were other challenges and the firm responded by innovating. "If two farmers were selling lots of chickens into the market at the same time the price would collapse", Carton explains. "We started working with the farmers to schedule when their chickens would come to market. Around 1970 the supermarkets started opening up in Ireland and they didn't want feathers and guts – they wanted dressed birds. We went into processing back then and were processing 100,000

chickens a week in a premises off Capel Street. But it takes a lot of water to process chicken and the birds are bulky to transport so it was decided to move the processing facility up to Shercock in Co. Cavan right in the heartland of the supply."

In 1968 the company moved to address the issue of variability in chickens being produced by farmers. This was mainly due to variable quality breeding stock being used. "Birds lay eggs of different sizes which in turn produce chicks of different sizes", he points out. "The larger chicks naturally do best and if kept together you will have a wide range in sizes. We established our own hatchery and separated the smaller chicks from the larger ones and supplied different farmers with chicks of a similar size. This improved overall quality."

The next major innovative step was the establishment of a feed mill. Variability in feed was also affecting product quality and Manor Farm wanted to achieve higher and more consistent standards.

Consumer revolution

"We have a very different view of innovation. We want to give people more ways of eating chicken. We learned a lot from working with Superquinn back in the 1990s. Feargal Quinn kept asking for innovative new products."

What the firm discovered through working with Superquinn and their customers was that consumers enjoyed the innovative products they were producing but tended to buy them just once before replicating them at home. "What we found is that if a supermarket gives us six percent of the chicken shelf space for innovative new products that we can drive up the overall sales of chicken quite significantly. We do that by giving consumers new and exciting ideas on how to consume chicken."

"Every part of it is subject to constant change and improvement. In the next five years we will have to rejuvenate the whole thing again."

The next thing the firm had to do was fit in with the modern consumers' lives. "If you look at all meat products today the strongest growth is in chicken and sausages. These days if a parent has a family to feed in the evening they need to get it done fast. They want something that takes a few minutes to prepare, 15 minutes to cook, and a few more minutes to put on the table. Pasta, frozen pizzas, ready meals, and chicken fillets and sausages fit into that profile. The most important attribute is that it cooks in 15 minutes. That's five days a week. At weekends they are looking for a family experience and are willing to invest quite a lot of time in preparing a family meal. They are creating the family around the dinner table. The other big advantage of chicken is that it fits in there as well."

He contends that there is nothing as innovative as a chicken. "People more and more want breast fillets and that is the wing muscle. Northern climate chickens don't really fly so their wing muscles are not very well developed. There is a lot of innovation going on in the breeding side and we have been introducing jungle breeds which have a much bigger breast muscle. Breeding, hatching, growing, processing – the whole chain. Every part of it is subject to constant change and improvement. In the next five years we will have to rejuvenate the whole thing again."

At present the company processes 850,000 chickens a week and 70 percent of them are cut into portions. "There are now robotic systems to handle fillets which can pick them for packs according to weight and so on. The world is changing out on the farm as well. Farmers now have underfloor heating systems and the roofs of the buildings are made with solar panels."

Micro innovation

Looking at innovating generally in Ireland Carton believes we are very good at micro innovation. "The mid-sized companies who came through the recession are where the potential for growth, employment and innovation lies. Enterprise Ireland is doing a very good job of supporting innovation in these firms. We are looking at reinventing our existing products to make them more attractive to export markets. The way we do chicken in Ireland wouldn't sell in France for example. We are going through the process of finding out what the customer wants in different export markets."

Those efforts could be supported by more commercially focused research, he argues. "There is some fantastic research happening in Ireland but you might get 1,000 research papers and no new products. There needs to be a closer link to commercialisation. It would be better to have just 100 research papers and 50 new products."

Competitive advantage

Innovation in food production, particularly in terms of sustainability, can be a valuable source of competitive advantage. "Origin Green is a great programme. Every company on it has to produce a plan it's not just an audit or a status report. Last year we produced 5.43 tonnes of carbon per tonne of chicken. We plan to get this down to 1.42 in five years. That's real and reaching the target will involve every part of the chain from grain sourcing to growing. We have done a three year deal with a grain supplier to replace chemical fertiliser with chicken manure."

He also believes Ireland enjoys natural advantages in terms of the collaborative attitude to innovation shared by many firms here. "Collaboration and co-operation is the way forward", he says. "There is huge benefit to be had from collaborative innovation and the Irish are very good at this. I have spoken to food processors in France and they can't believe the way the food industry here comes together and shares its experience of problems and the solutions they have found to them. We all get better by doing this."

This has certainly worked for Manor Farm where its eight generation innovation journey has helped it grow to a €224 million turnover company with more than 820 employees, and 160 contracted farmers.

"Enterprise Ireland is doing a very good job of supporting innovation. We are looking at reinventing our existing products to make them more attractive to export markets."


"The mid-sized companies
who came through the recession
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employment and innovation lies."

TOP OF THE CLASS: EMBEDDING INNOVATION IN EDUCATION

"The UCD-based Innovation Academy has been described as an ideas factory, but that would be to suggest that there is some sort of formal idea creation process at work", says **Suzi Jarvis** Founding Director, Innovation Academy at University College Dublin.

An ideas environment would be a more accurate description – a set of conditions that encourages creativity and innovative thought to flourish which is exactly what happens at UCD Campus at Belfield.

Calling it an academy is almost a misnomer as well. While students receive Level 7 and Level 9 qualifications at the end of their programmes, the Innovation Academy bears about as much similarity to a traditional educational institution as an improvisational jazz combo does to a brass band.

However it is certainly innovative. Indeed, its establishment was very much a result of an iterative innovative process. "It started off with a blank sheet of paper and I was attracted to the role because of that," says Jarvis. "It was announced before there was any real idea of what it would be. There were no students, no space, no money, no academic structures and no plan."

Jarvis brought with her experience of innovation in universities in terms of working on spin-outs and commercialisation. She has a number of patents, had worked on Enterprise Ireland projects, and her Kodak sponsored PhD was supervised by a self-made millionaire with one of his own spin-out companies.

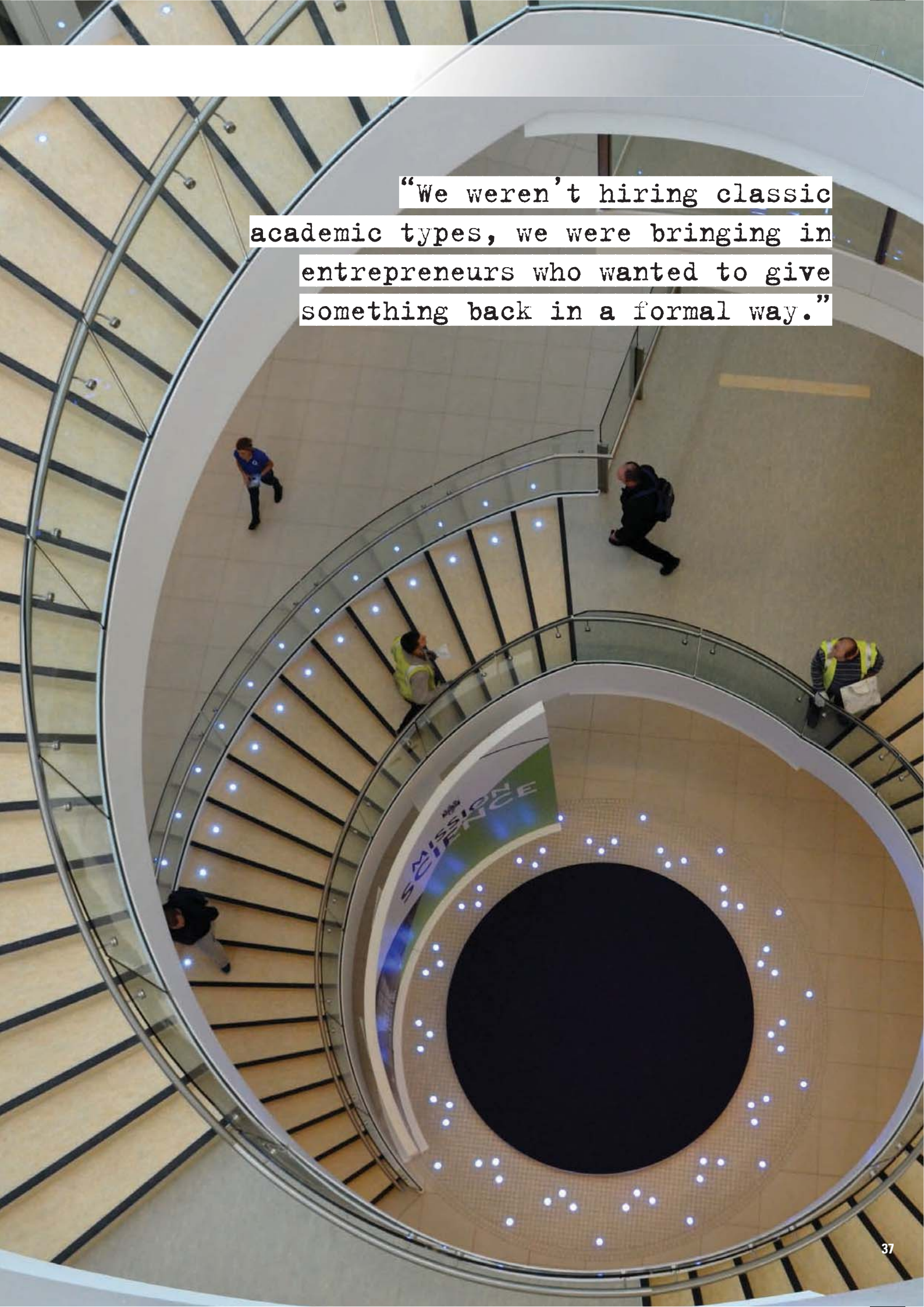
The initial focus when the Academy was established in 2010 was on UCD PhD students. "There was a recognition that most people who went into PhD programmes were aiming at academic careers but the reality was that less than 10 percent of them would achieve that goal", she explains. "We wanted to help them develop wider skills and broaden horizons to look beyond academic careers. We looked around internationally at what was being done and we collaborated with Trinity and Queen's. We developed a programme on inspiring ideas.

Commercialisation

"There was quite a lot of stuff going on around commercialisation in universities but not much around idea generation, idea selection and development. We started in 2010 with a core module on Creative Thinking and Innovation. How does it feel to be creative and entrepreneurial? How do you approach risk evaluation? How do you deal with ambiguity?"

The emphasis of the programme was highly practical. "There were no case studies. You have to experience innovation."

This led to the recruitment of industry partners for the students to work with. At the end of the programme the students took what they had learned and applied it to projects in industry and other organisations.



"We weren't hiring classic academic types, we were bringing in entrepreneurs who wanted to give something back in a formal way."

"Innovation is much more likely to happen in a group of people supporting each other... through the challenges of entrepreneurial activities."

"We have worked with hundreds of organisations over the years. We deliberately don't assign students with what might be seen as appropriate backgrounds to companies. For example, one of our first industry partners was in the biosciences area. They specifically asked for people with bioengineering backgrounds and we didn't give them any. We gave them students from humanities and other areas and it worked out very well. We also put together multi-disciplinary teams. Very often it is not the specialists who will come up with ideas in specific areas. We put people from all backgrounds together. It's very experiential – it's not about studying."

The results have certainly been impressive with many graduates saying that their time in the academy has been the most dynamic learning experience they ever encountered.

Regional focus

A very interesting aspect of the academy is how it has reached out into the regions and now runs programmes for entrepreneurs and others around the county. This came about through the Springboard Programme. The programme is an initiative in higher education which offers free courses at certificate, degree and masters level leading to qualifications in areas where there are employment opportunities in the economy. It is aimed at people who may have lost their jobs and the courses are not limited to people with third level or indeed second level qualifications as recognition for past experience is a central feature of the programme.

There was an appropriate degree of serendipity attached to the Innovation Academy's involvement in the programme. "Two guys just called in and asked us if we had heard about it", Jarvis recalls. "This enabled us to expand our staff base. This was very innovative for the university at the time. We weren't hiring classic academic types, we were bringing in entrepreneurs, both young and old who had been successful and wanted to give something back in a formal way. We have had regional programmes since 2012. It was difficult to recruit participants at first but we partnered with the GAA and that has helped. The GAA has a shared interest in stabilising rural communities."

Participants in these programmes range from people who have lost their jobs to others who may have lost their businesses. "A lot of people in their 40s and 50s might have redundancy payments or may have had a business which went under during the bust and want to start something else. We brought them together in groups involving experiential learning and working on projects together to stimulate creativity. Participants receive a Post Graduate Certificate in Innovation and Entrepreneurship."

The programme is also extending its reach within UCD. "We started with PhDs and we are now expanding into the undergraduate cohort. Last year 170 undergraduates went through the first programme. This year 500 will go through."

Business model

At the Innovation Academy, Jarvis has worked to create an environment which is conducive to innovation and creativity, where students learn the difference between idea creation and selection; the importance of empathy and research; the business model canvas. "The most important thing is to build the creativity of the learners, form habits and learning that will sustain them into the future. "We want people to leave with a lifelong appetite for learning."

Innovation is not the kind of activity that most people will do alone, she adds. "Innovation is much more likely to happen in a group of people supporting each other. We try to create a community of people who will support each other through the challenges of entrepreneurial activities and help build the resilience to get through those challenges. People might come onto the courses without the courage to do something. We help them take the first actionable step, then the second. It's an incremental process. That's why people who do the courses describe the experience as transformational. It has enabled them to do something which they didn't think they could."

At a national level she believes we might be in a stronger position in relation to innovation than we were during the boom. "The boom had an effect on people's perception of effort and reward associations. If they can see a big reward from almost zero effort that sort of messes things up. People are more interested in putting in the effort now and innovating."

Culture

To help promote an overall culture of innovation Jarvis believes it is vitally important to do much more to embed innovation within the educational system.

"The education system has been fairly static for the past number of years", she notes with some understatement. "This means that some will look at disrupting it from the outside. Some already have. Minerva University has already been established out of Silicon Valley. Our approach is to change the system from within. There have been educational innovators such as Steiner and Montessori but national education systems change slowly."

She points out that the systems have not kept pace with modern understanding of the learning function. "Our understanding of neuroscience and learning has increased greatly in past 15 years. Our understanding of the brain hasn't been translated into education. We are looking at that. We are looking at what's been happening internationally. We are looking at experiential learning, we are always trying to experiment and improve the learning experience. There always tends to be the sage on the stage approach to education. There needs to be humility and an acceptance that we are all learners."

This is important for the county and for the education system itself. "Look at Kodak", she says. "They have gone into bankruptcy but it wasn't because they didn't see digital coming. They owned most of the patents. They thought they could litigate their way out of it and prevent it from happening. I see a little bit of that in third level. But we can now access knowledge in multiple ways such as online channels. Academics are used to being evaluated on the quality of their research rather than their teaching skills. But TED type evaluation is coming to education and it needs to be ready for that."

She concludes by pointing to a pressing need to initiate the discussion around innovation in education. "Where is education going to be in five years? It is not feasible to continue with the same model we have now. We need to change the current experience of the education system which is not always positive. A lot of entrepreneurs have a strained relationship with the education system and we simply can't leave the education system as the last thing to be tackled when it comes to entrepreneurship and innovation."

BOXING CLEVER

REFLECTING ON IRELAND'S KNOWLEDGE DEVELOPMENT BOX

"The wait is over! Since Minister Noonan announced in Budget 2015 that Ireland would introduce a "best-in-class" Knowledge Development Box ("KDB"), there has been a lot of speculation about 'how low would he go'.", says **Damien Flanagan** of KPMG's R&D Incentives Practice.

Budget 2016 announced that the rate of tax which will apply for income qualifying under the new KDB will be 6.25%. This was confirmed in the recent Finance Bill (published on 22nd October).

The objective of the KDB is to provide a highly attractive tax rate for income generated from commercialising R&D/intellectual property. While new to Ireland, "patent box" measures have existed for many years in other countries, with, for example, the UK having a patent box rate of 10%.

According to Minister Noonan, Ireland's KDB will be the "first OECD-compliant KDB in the world", which means that it will be in line with new international guidelines, e.g. the 'Modified Nexus Approach'. In summary, the 'Modified Nexus Approach" seeks to link the relief under the KDB to the proportion of qualifying R&D expenditure bring carried on by the company in Ireland, as a percentage of overall group expenditure including acquisition costs.

Therefore, for Irish indigenous businesses and SMEs who undertake the majority of their R&D in Ireland, the KDB could be very attractive. Perhaps less so for multinational companies where the generation of the qualifying assets is the result of R&D activity conducted in countries outside Ireland and the EU.

What intellectual property qualifies for the KDB?

The Finance Bill sets out that certain patented inventions and copyrighted software will be considered intellectual property for the purposes of the qualifying asset definition. The definition also includes plant breeders' rights, supplementary protection certificates for medicinal products and plant protection certificates. The intellectual property must be the result of R&D activities.

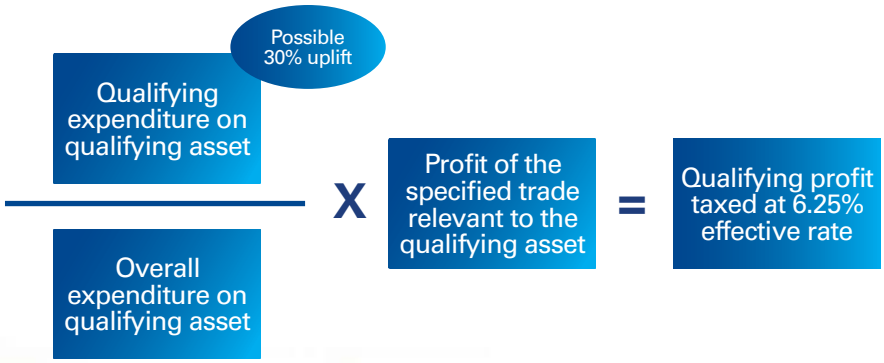
The KDB will therefore reward companies who invest the time and effort into legally protecting their IP. This is not always straightforward as many Irish businesses may not protect their IP for lots of good commercial reasons (e.g. risk of exploitation, high costs associated with registering patents, lack of effective enforcement, preference to keep knowledge as "trade secret" etc.).

In this context, of particular interest to smaller companies (defined for this purpose as companies with a turnover of less than €50m and annual income from intellectual property not in excess of €7.5m) may be the expansion of the definition of intellectual property. For those companies, intellectual property also includes inventions that are certified as being novel, non-obvious, and useful. However, the definition used in the Finance Bill appears to be a unique definition not referenced in relevant patent law, and its intention is therefore unclear at the time of writing.

Qualifying Income

In simple terms, the higher the proportion of R&D that takes place in the Irish entity, the greater the proportion of income that may qualify for the KDB rate. Only income derived directly from the qualifying asset will qualify for the reduced tax rate.

The relief is given by way of a deduction of profits equal to 50% of the qualifying profit from this separate trade to give an effective tax rate of 6.25%. The qualifying profit is determined by reference to the following formula:



What is qualifying expenditure?

For the purposes of the above formula, qualifying expenditure on the qualifying assets means expenditure incurred by a company wholly and exclusively in the carrying on by it of R&D activities, where such activities lead to the development, improvement or creation of the qualifying asset (i.e. the intellectual property as defined above). The definition of R&D mirrors the definition for the purposes of the R&D tax credit.

Specifically excluded from the definition of qualifying expenditure (but included in the definition of overall expenditure for the purposes of the formula) are any acquisition costs in relation to the qualifying asset. Payments to a related group member for the carrying on of R&D, including related-party cost-sharing arrangements ("group outsourcing costs") are also excluded from qualifying expenditure, although outsourcing payments to non-related parties are considered to be qualifying expenditure for the purposes of the relief.

It is possible to receive an up-lift in the amount of qualifying expenditure, to include the lower of:

- 30% of the amount of the qualifying expenditure, or
- the aggregate of acquisition costs and group outsourcing costs

As a consequence of the restrictions on acquisition costs and group outsourcing costs, the potential relief available will be diluted where the intellectual property has been acquired by the company (from a third party or a group company) or where the company outsources R&D activities on the intellectual property to another group company. Conversely, where an Irish company does all of the R&D work in-house, the KDB could be of significant benefit.

KDB and the R&D tax credit

The KDB is designed to complement the other innovation tax incentives in Ireland, targeting different stages of a company's intellectual property development:

- the R&D tax credit is intended to support firms at the time they are undertaking the actual R&D and reduces the net costs of undertaking this activity;
- the intangible assets relief reduces the after-tax cost to companies who are investing in and exploiting certain intangible assets and using them in respect of their Irish trade; and
- the KDB is aimed at the future income that is generated from the results of the R&D activity (namely the income arising from the intellectual property that is developed by the R&D).

The KDB will be granted only where the qualifying assets are the result of qualifying R&D activities that have been carried out by the entity claiming the tax benefit. Therefore, claiming the KDB should be a natural extension for those companies already claiming the R&D tax credit on an annual basis. The R&D tax credit already allows a 25% tax credit (available also as a cash refund for non-tax paying companies) on qualifying R&D expenditure.

The definitions of "R&D" from a KDB perspective are the same as those already used under the R&D tax credit regime. Likewise, the definition of qualifying expenditure for the KDB is the same as that used for the R&D tax credit regime. It therefore makes sense for companies to start thinking of these two incentives under the same umbrella.

At the time of writing, the Finance Bill set out that taxpayers will be obliged to 'track and trace' and provide documentary evidence of expenditure incurred, income generated from the IP assets, and activity undertaken to generate the IP assets. Obviously, larger and more sophisticated organisations are better resourced to track and trace than some SMEs. However, we would expect that SMEs should be able to leverage the information already maintained for the purposes of claiming the R&D tax credit.

It is welcoming to see that SMEs will not be required to apply transfer pricing practices when it comes to determining the market value of the intellectual property, apportioning income to the qualifying asset, apportioning R&D activities and expenditure and so on. Instead, SMEs are required to apportion income on a "just and reasonable" basis. This should reduce the administration cost of claiming the KDB for SMEs.

It is also worth noting that similar to the R&D tax credit, Revenue will be able to consult with technical experts in relation to many aspects of the KDB regime. We would expect that one area Revenue will focus on is whether or not the qualifying asset arose as a result of R&D activities, thereby effectively conducting R&D tax credit and KDB audits simultaneously.

When will this relief be available?

Relief under the KDB will be available to companies for accounting periods which commence on or after 1 January 2016 and before 1 January 2021.

A claim must be made within 12 months of the end of the relevant accounting period. The claim should be made in the corporation tax return of the claimant company for the period.

KDB Cost

The Department of Finance has determined (based on the information gathered as part of the 2013 Review of the R&D Tax Credit) that the total 2013 corporate tax liability of the companies claiming the R&D tax credit was €1.4bn.

However, further analysis has concluded that at least €1.2bn of this tax take was paid by the top 20 companies who are unlikely to be able to avail of the KDB (the reason being that, as alluded to above, the KDB may not be as attractive for many multinationals).

Much of the remaining €200m of corporation tax was paid by Irish indigenous companies and SMEs, and the Department of Finance has concluded that the annual cost of the KDB could be in the region of €50m. This is €50m that will be vitally important for local businesses. Yes, it comes with an administration burden, but aligning the KDB to your R&D tax credit claims should make the claim process more straightforward.

Summary

The KDB was first announced by Minister Noonan in Budget 2015 and the Department of Finance has consulted widely over the last 12 months to ensure that Ireland's KDB is "best in class". Ensuring a "best in class" KDB while staying within the parameters of the Modified Nexus Approach is a delicate balancing act. Time will tell if this has been achieved.

"The higher the proportion of R&D that takes place in the Irish entity, the greater the proportion of income that may qualify for the KDB rate"

IRELAND'S BIG MISSION

"There are big opportunities for Ireland; one is greater synergy between multinationals and SMEs and start-ups. That should make for better innovation", says **Bill Kearney** of IBM.

Few companies can claim to have experienced as many reinventions and transformations as IBM. The company which is synonymous with cutting edge computing technology actually predates the invention of computers, the transistor and the microchip. It has adapted and innovated its way through successive technological revolutions and is today a very different company than the one which arrived in Ireland first in 1956 or even the one which established its manufacturing campus in north Dublin in 1996.

Bill Kearney, Director of the IBM Ireland Lab, explains that the campus in Mulhuddart started out as a manufacturing site in 1996 but is now almost entirely focused on R&D activities. Today, IBM Ireland Lab is one of the company's largest R&D Labs outside of the US. The Dublin site is IBM's largest campus in Europe and home to a broad range of IBM activities. The IBM Ireland Lab employs more than 1,600 software professionals who use innovative technologies to design, build, deploy, test and support solutions for IBM's global customer base in the company's core solution areas of cloud, analytics, mobile, social and security. Some 2,500 people work on the Mulhuddart campus

"IBM has gone from being a hardware company to a software business supporting integrated business sectors such as healthcare, security, and so on", says Kearney. "Our solutions comprise hardware, software and service components. In recent years we have seen a transition towards digital and we now have a Digital Sales Centre for IBM here in Ireland."

The flagship Digital Sales Centre features all the latest cutting edge workplace technologies which allow the sales team engage with clients anywhere in the world by phone, email, web, text, instant messaging, video conferencing, and through social networks.

"If you go back to mini computers the value was in the hardware. Now it's in the software. Where we are trying to innovate now is in vertical segments like healthcare, financial services and so on. There will be differences in geographies. SEPA in Europe for example. And we are developing new analytics to help us define what will be needed in future."

Innovative culture

The innovation culture which has been nurtured in the Lab comes from a number of sources. "There is an interesting dynamic", says Kearney. "American culture is very much can-do innovative. Here in IBM we have 51 nationalities in the lab alone and 70 plus across IBM Ireland. While the American culture has an influence there are European and Irish influences as well. This can be very useful as it means that a lot of our people here can go back to their home countries to work on projects if that is required. They will bring with them an understanding of their home culture which is very important."

The young age profile of the workforce is also important. "Younger engineers are very tuned in to what is happening in the mobile world. Our target device used to be a desktop machine, now it's a mobile device. The platform is increasingly the cloud. As a Lab what we try to do is what our US Labs do. We look at the processes they used to help innovation and brought them here. We also try to get our people to look outwards. You can look internally too much. We understand that we can't do everything ourselves and that we need to work with other companies. We also try to put an emphasis on our values and that means an emphasis on innovation."

Measurement

Measuring innovation can be difficult. If it's in terms of the number of patents filed the IBM Lab is outstandingly successful, but when it comes to encouraging individuals to be innovative, it's a bit more nuanced than that. "With patents it's not so much important to get to your 11th patent as it is to get to your first. That means that you now understand the process and can do it again."

"We need to be focused on producing the right skills – not necessarily qualifications."

The company also nurtures innovation at undergraduate level through the Extreme Blue programme, which sees third and fourth year college students work as interns in the company for three months. "We break them into teams of four and give them a task with three months to achieve a result. They listen to IBMers but can go for their own solution if they wish. It's part of building an innovation culture where new ideas and experimentation are celebrated. The students are recognised regardless of whether they succeed or fail, they all qualify from the programme."

That brings Kearney to what he perceives as a weakness in the overall culture for innovation in Ireland. "In Ireland we don't reward failure", he laments. "Culturally we see it as a bad thing. But that is changing. The Leaving Cert needs to be more about learning how to use the facts you learn. What you do with the knowledge is the important thing. More experimental and experiential learning is required. The new Junior Cert is very good in that regard. The transition of the education system towards different ways of learning will improve innovation. Education is both formal and informal. Coder Dojo – coding education for kids – can be both, for example. We need to be focused on producing the right skills – not necessarily qualifications. A key skill is being able to present an idea in a few minutes. If the schools did more of that it would be great."

"We can't have multi-disciplinary working if we don't have the disciplines."

He believes that innovation has to come from a willingness to question. "The culture may not have been great but it is improving. We are moving in the right direction. It's hard to define – between what's happening at the enterprise level and in t he universities. The focus is on the need for innovation. The climate is reasonable. There is a greater realisation, even in the multinationals, that we have to innovate more. Traditionally the technical work was done elsewhere and then moved here. Now more of the technical work is being done here."

Ecosystem

Ireland has succeeded in creating an innovation ecosystem in certain areas. "The software industry and the pharma industry are examples – but each is siloed. With start-ups we haven't seen much evidence of them creating an ecosystem. We can't have multi-disciplinary working if we don't have the disciplines. There are huge opportunities to collaborate between ICT and pharma in areas like connected health and so on. There are big opportunities for Ireland. One is greater synergy between multinationals and SMEs and start-ups. That should make for better innovation."

Kearney contends that while we have done well in some sectors the country hasn't done quite as well in cross-sectoral innovation. "It's a challenge and everyone in industry should look at playing a role in meeting it. At university level there needs to be a greater emphasis on how they are collaborating with enterprise. If there was an easy way to do it then everyone would be doing it. There is no perfect formula. But we have to believe that it can be done."

Tax incentives help drive the innovation agenda. "If company is at the stage where it is paying tax and if tax influences decision-making then the tax incentives are good. Capability grants are a big incentive. They make possible R&D activity that might not happen otherwise and they reduce the risk involved. The combination of the grants and the credits serves to reduce risk."

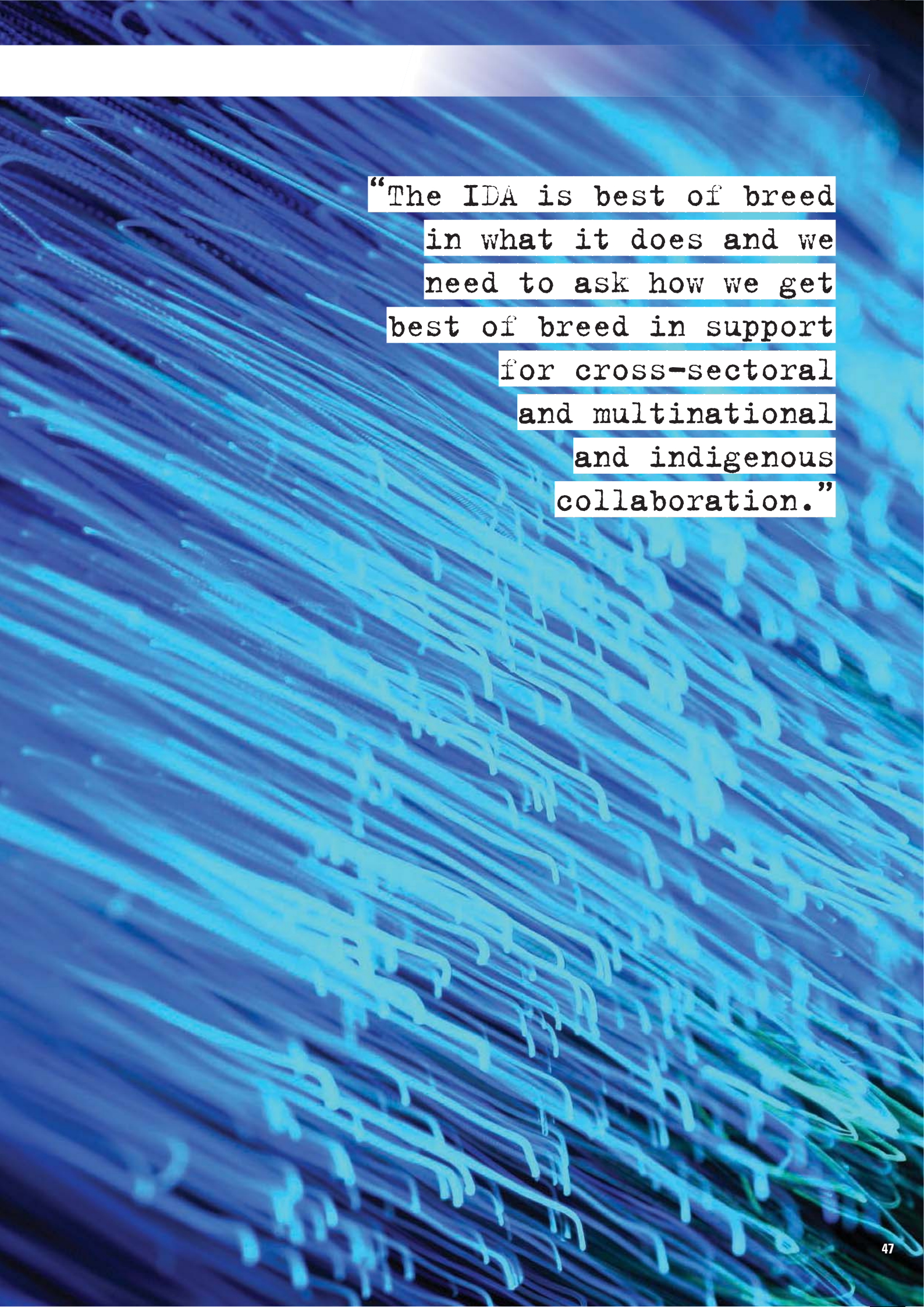
What he sees as possibly more interesting in future is how the departments and agencies involved in innovation come together to support innovation. "There are a number of strands to it and you would believe that to promote cross-sectoral activity packaging incentives in some way would help. Also, the incentives for cross-sectoral activity that involves areas such as software R&D need to be delivered quickly. The IDA is best of breed in what it does and we need to ask how we get best of breed in support for cross-sectoral and multinational and indigenous collaboration. The challenge is to be best at that."

Talent

Regardless of any incentives or supports, innovation remains critically dependent on people. The positive is that we are producing more talent", says Kearney. "The quality is good at the top end of the scale. It has always been good but we are now asking for more, we are asking graduates to lead more. We still need more people who are strong on areas like maths and analytics. It's great to see more data sciences being taught at undergraduate level. I'd like to think that the move at second level to discovery based learning will continue."

For the future Kearney points out that IBM is now very active in Horizon 2020 programmes as well as with a number of SFI supported research centres. "We try to expose our people to others with different sets of ideas. Who knows where these ideas might lead in the future? Innovation is like fly fishing, you have to cast your fly into the water and see what comes back."

"Innovation is like f ly fishing, you have to cast your f y into the water and see what comes back."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CONCLUSIONS

For a relatively small economy, Ireland performs well on the international stage – we rank eighth for innovation performance both globally in the *Global Innovation Index 2015*[xxi], and among EU member states in the *Innovation Union Scoreboard 2015*[xxii], and sixth for our R&D tax credit regime in the European Commission's *A Study on R&D Tax Incentives*.[xxiii] However, while positive international ranking is significant, it is vital we don't become complacent; efforts must be made to ensure the benefits of recent improvements to the innovation infrastructure affect Irish industry in its entirety, encompassing both small and large enterprises.

A key theme arising out of our research is the disparity between large and small companies and their attitudes to innovation. Looking at the macro innovation ecosystem in Ireland, small companies are consistently less positive than their counterparts in large companies when it comes to assessing innovation levels since the recession and the Government's support of innovation in Irish companies. At a company level, small companies are least likely to be actively innovating, in receipt of a grant, claiming the R&D tax credit, and collaborating with a third-level institution. They are also more likely to negatively rate the availability of information on innovation funding and collaboration. In an effort to address the relatively low innovation levels among small companies, KPMG recommends the introduction of an enhanced R&D tax credit regime for SMEs, as seen in other countries such as the UK (details opposite).

As noted in our research, changes are needed to address the difficulties facing innovative companies in attracting and retaining the talent required to undertake an innovative project, the most pressing of which is the tax system. The most recent budget has cut the rate of USC for low to middle incomes and has made a start to equalising the tax credit treatment of the self-employed with that of the employed. This is to be welcomed in terms of helping enhance Ireland's economic competiveness. The capital gains tax relief for entrepreneurs is also welcome, as it reduces the capital gains tax rate from 33% to 20% on up to €1 million of gains earned by qualifying entrepreneurs – however more needs to be done to reform CGT.

Ireland is projected to have some of the highest levels of economic growth in the EU and our economic prospects are very positive. However sound and sensible taxation prospects will be required for innovation and entrepreneurship to thrive and reach their full potential.

As a number of our interviewees noted, the innovation ecosystem – encompassing both the tax and funding systems and collaboration with academia and within industry – is essential to the successful continuation and growth of an innovation economy. While the benefits of collaboration to the success of innovation projects are widely accepted, further value can be found in the sharing of experiences, both positive and negative, of the innovation process in general. Many of our respondents noted the need to hear "war stories" from entrepreneurs and innovators who have gone before them. As part of a new national strategy for science, technology and innovation, currently being devised by Government, there are plans for an SME Innovation Network to encourage collaboration[xxiii]; it would be promising to see the collaborative nature of this network extended to include the mutual sharing of experiences and learnings of the overall innovative process. At the time of writing, the strategy was yet to be published; we look forward to seeing the breakdown of the action plan and how the objectives and proposed actions will be implemented in practice.

An Enhanced R&D Tax Credit Regime for SMEs

Given that smaller companies are half as likely to be claiming the R&D tax credit as large companies, and four-times more likely to eschew the credit due to the administrative requirements, KPMG proposes introducing an enhanced R&D tax credit regime for SMEs, similar to regimes in other jurisdictions, including the UK. Our proposal includes:

- increasing to the rate of relief from 25% to 30%;
- improving the refund mechanism whereby refunds are made in one payment within three months of the claim submission; and
- increasing the limits for outsourced R&D allowable in a claim, recognising that smaller companies are unlikely to have the necessary resources in-house to conduct R&D.

We also propose a number of improvements to the administration of the regime for smaller companies, including:

- reducing the audit window from four years to two, enabling small companies to re-invest their R&D tax credit without fear of a clawback;
- tailoring the documentation requirements of the regime to the size and phase of development of the business; and
- re-introducing previous tax administrative practice that allowed companies in receipt of an Enterprise Ireland R&D grant to claim the credit up to a specified limit, e.g. €50,000, without risk of audit.

HOW KPMG CAN HELP

Innovation lies at the heart of all successful businesses. Regardless of your company's size or sector, you are probably doing innovative things to secure growth or are considering doing so in the near future. Either way, KPMG can help.

Either way, KPMG can help. We understand the drivers of innovation and the benefits an innovative outlook can deliver. We also understand how difficult it can be to undertake and fund an innovation project. We have a proven record of working with ambitious businesses, from indigenous start-ups to leading multinationals, and can help you with a wide range of business and finance issues to ensure you stay focused on what matters. In particular, we have a dedicated R&D Incentives Practice who can advise you on relevant tax incentives like the R&D tax credit and the recently introduced Knowledge Development Box.

Our team of tax and finance professionals and chartered engineers have a deep understanding of the innovation process, and have filed R&D tax credit claims for businesses of every size and scale. We take an active involvement in the innovation environment in Ireland, engaging regularly with Government and industry to share views on current issues affecting innovative firms. Furthermore, we authored the only textbook on the Irish R&D tax credit regime, published by the Irish Tax Institute.

KPMG can guide you through all the issues you may need to consider during the innovation process; you'll find us approachable, efficient, and jargon-free. Get in touch with us today to find out more about how we can help your business succeed.

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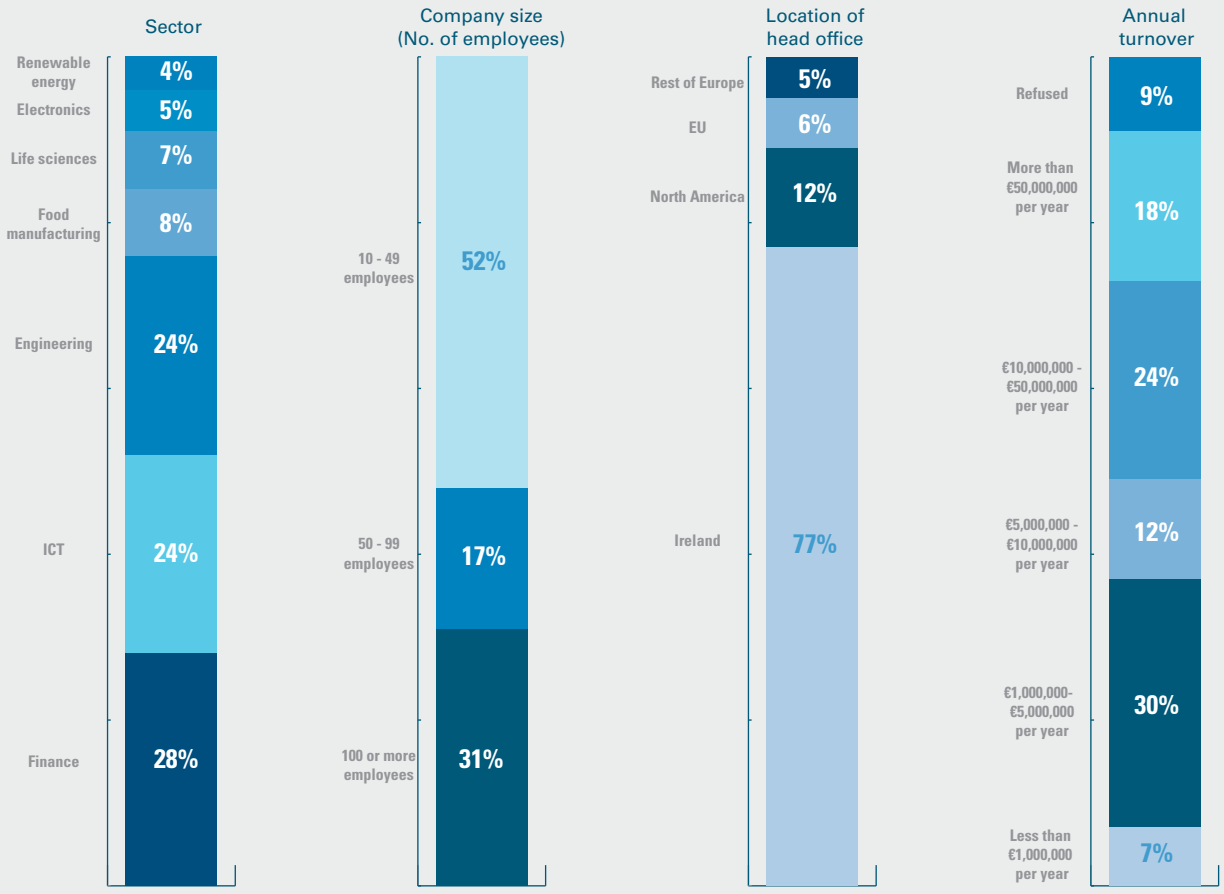
METHODOLOGY AND DEMOGRAPHICS

The research for KPMG's *Innovation Monitor* 2015/16 was conducted by Red:C Research across a representative sample of the most innovation sectors in Irish business.

- 200 telephone interviews were conducted in Autumn 2015.
- The survey was conducted among businesses with at least 10 employees; quotas were placed on company size to ensure a nationally representative sample.
- Interviews were conducted with the Finance Director or a similar director/partner in the company with responsibility for finance.

Demographics



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The Knowledge Development Box

Find out more about the potential benefits of KDB for Irish based business engaged in R&D activities

See KPMG.ie/kdb or contact
Ken Hardy +353 1 410 1645

kpmg.ie

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