CEO Pulse 2017

Opportunities amidst uncertainty

What Irish CEOs are saying…

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Contents

Launching the PwC 2017 CEO Pulse Survey are Frances Fitzgerald, Tánaiste and Minister for Enterprise and Innovation and Feargal O'Rourke, Managing Partner, PwC.

Key Facts 2017

66% are confident about business outlook

75% expect revenue growth

49% expect to increase headcount

28% will increase exports by more than 20%

89% concerned about the impact of Brexit

88% concerned about rising wage costs

86% concerned about cyber threats

96% confirm their FDI investment in Ireland is a success

Just **24%** will focus on future leadership pipeline

96% say 'emotional intelligence' is an important skill

73% promote diversity

61% say it's harder for businesses to gain trust

40% are not seriously addressing impact of cyber security breaches

76% say technology will significantly change competition in the next five years

Foreword

Foreword

Feargal O'Rourke
Managing Partner, PwC

I am delighted to present the PwC 2017 Irish CEO Pulse survey, the 12th year we have gathered the view of Irish business leaders. Designed to benchmark confidence levels, it reflects the views of over 200 local and multinational business leaders on a range of key areas critical to the Irish business environment.

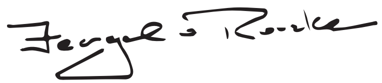
The majority of CEOs continue to be upbeat about the economy and their businesses. The confidence level is down slightly on last year, but this is hardly surprising given concerns relating to Brexit and other geopolitical factors. Issues such as the impact of cyber threats, shortage of affordable housing and rising wage costs also feature prominently in the concerns mentioned by Irish CEOs.

Hand in hand with uncertainty comes opportunity and many Irish CEOs do see opportunities arising. Growth remains firmly on the agenda with three three-quarters anticipating revenue growth in the year ahead. Not surprisingly there is a strong focus on export markets, with one in four companies planning to significantly grow exports. Emerging technologies are also seen as an opportunity not only to get closer to customers but also to improve financial effectiveness and reduce costs. Irish CEOs also see data analytics and a company's capability to access the right data as an opportunity that can pay huge dividends.

This year the survey also had a number of specific Brexit related questions. The message from Irish CEOs is clear, a coordinated national strategy to deal with Brexit needs to be the Government's top priority right now.

Concerns around the lack of key skills in Ireland has been very high for the last five years with the majority of Irish CEOs seeing this as a bigger threat to business growth compared to global peers. The survey shows that the most valued skills are shifting towards the 'soft' human capabilities such as adaptability, creativity, innovation and emotional intelligence. At the same time, nearly a third of respondents are considering the impact of automation and robotics on the future skills needs of their organisations. Getting talent management strategies right in an increasingly digitised and automated world, where humans and machines work alongside each other, will represent a significant challenge for business leaders.

Overall, in weighing up the opportunities and uncertainties, Irish CEOs are slightly more cautious in their outlook compared to last year, with a consequent impact on the pace of investment decisions. Nevertheless, they remain focused on the growth potential of their businesses. As ever, PwC will be there to help.



Feargal O'Rourke
Managing Partner, PwC

Economy and growth

Economy and growth

CEOs slightly less upbeat than last year

The majority of Irish CEOs continue to be upbeat about the economy and their businesses. The confidence level is down slightly on last year, but that is hardly surprising given concerns relating to Brexit and other Geopolitical factors.

Given all of the uncertainties over the last year, it is not surprising to see that Irish business leaders feel slightly less confident about the economy and their businesses. Uncertainty makes for more difficult business and investment decisions and, while growth is very definitely on the agenda, business leaders are more cautious in their outlook.

The IMD 2017 World Competitiveness report recently scored Ireland strongly in the economic performance category, coming third overall when it came to the performance of the domestic economy, which has been the fastest growing economy in Europe for the past three years.

As a small open economy, Ireland is exposed to external threats such as the impact of Brexit, increased protectionism and a changing international political and economic environment.

At the same time**, PwC's most recent Global Economic Outlook predicts Ireland's economy to be the fastest growing economy in the Eurozone over the next six years to 2023.** Globally, the current political and economic climate has contributed to some of the highest levels of uncertainty seen for decades. Uncertainty has been keeping business leaders busy. CEOs have responded in several ways – from insuring against potential costs of cyber attacks, to stress-testing their operations and finances under alternative economic scenarios. According to PwC research, **30% of global CEOs expect at least one crisis to hit their business within the next year.**

The impact of uncertainty cuts across all sectors of the economy, affecting businesses, financial markets and households. For businesses, uncertainty can push businesses to cut back on production, investment and employee compensation. In particular, large capital projects which tend to have a high degree of irreversibility may be particularly sensitive to high levels of uncertainty. For financial markets, in uncertain situations, investors require a higher rate of return on their capital through higher risk premia. This means that the cost of credit could increase at times when perhaps the central bank decreases its policy rate, which is the usual action taken when the economy slows down. At times of uncertainty, capital also tends to flow from riskier to safer asset classes.

Economic stability is critical for confidence and investment. And ensuring that our economy remains as resilient as possible against future external shocks will be very important as we deal with the global uncertainties.

75% expect revenue growth

Chart 1:
Outlook for economy for next 12 months – Ireland

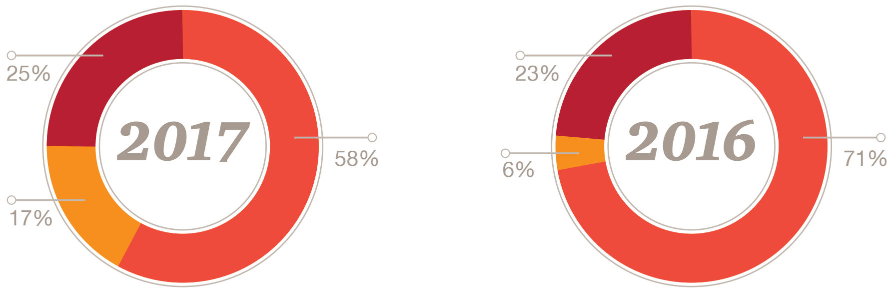
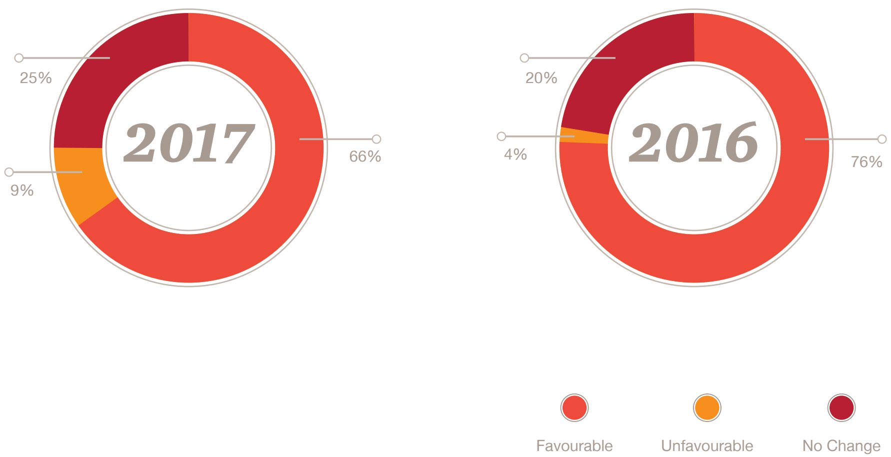
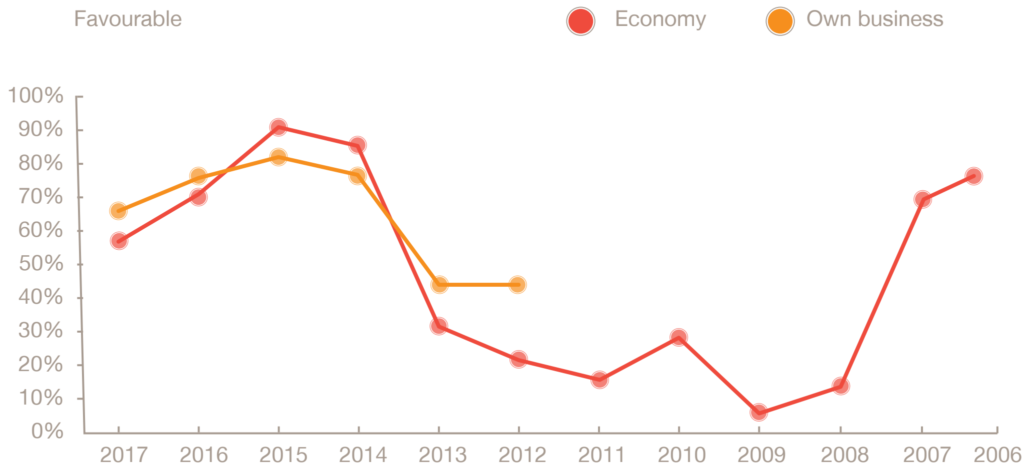


Chart 2:
Outlook for own business in the next 12 months – Ireland



58% confident about outlook for economy, 66% confident about business outlook

Chart 3: Outlook for the next 12 months – Ireland (% favourable)
Economy and own business



Business performance

Three-quarters of Irish business leaders expect revenue growth in the year ahead and is slightly down from 84% last year. Fewer CEOs are also upbeat about expectations for profit and headcount growth.

One in five are less confident about growth in capital investment in the year ahead. While businesses may be less inclined to invest during periods of uncertainty, continuing to invest in people, technology, markets and the fabric of the business is important for future sustainability. The latest Investec Purchasing Managers' Index showed manufacturing activity in August in the Republic of Ireland to be at a 25 month high, amid stronger demand both at home and abroad and recording the rate of growth in new orders to be the fastest since January. In July, Investec noted 'very solid overall expansion in the Irish private sector in the first half of the year.'

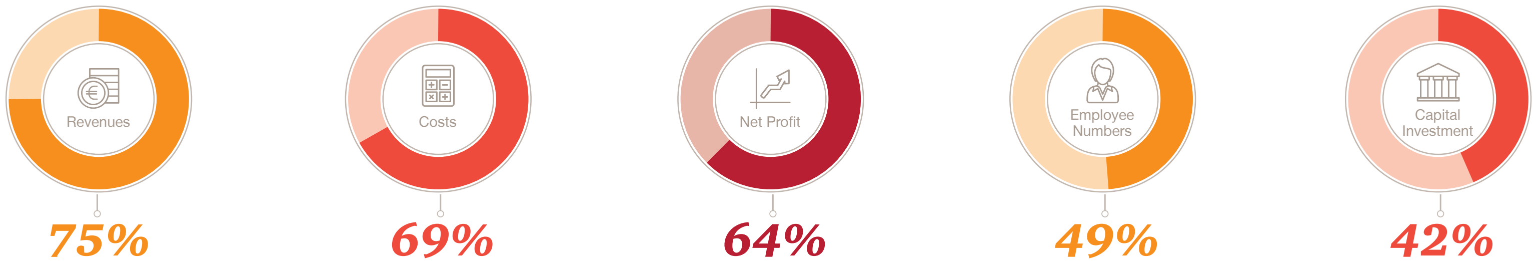
Additionally, according to the 2017 Society of Chartered Surveyors Ireland/PwC Construction Industry survey, nearly three-quarters (73%) of Ireland's construction leaders expect construction output levels to increase in the year ahead, but challenges exist such as rising construction costs, the lack of suitable skills and trades which are hampering activity.

Fewer business leaders expect costs to rise in the year ahead compared to last year, perhaps indicating that a firm eye is being kept on cost containment. It will be important that Ireland's overall competitiveness is kept in check. The 2017 IMD World Competitiveness report revealed that Ireland achieved its second highest position ever, in sixth position, linking Ireland's rise to the State's recent economic performance, the ongoing level of inward investment and a high level of business efficiency. Ireland topped the international rankings when it came to business productivity and efficiency. In terms of attractiveness, Ireland's high educational achievement and tax competitiveness were seen as the main draws.

However, according to Eurostat in June, **Ireland is the second most expensive country in Europe for consumer goods and services**, with prices across a broad cross-section of products estimated to be 125 per cent of the EU average.

Chart 4:

Anticipated growth in the performance of Irish operations in the year ahead (% of respondents who expect 'growth')



	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Revenues	84%	81%	77%	56%	59%	54%	53%	29%	71%	86%	87%
Costs	77%	69%	62%	46%	43%	30%	23%	25%	83%	89%	87%
Net Profit	74%	71%	69%	53%	54%	49%	57%	23%	60%	72%	77%
Employment	62%	59%	58%	34%	40%	33%	34%	19%	36%	47%	48%
Capital investment	62%	62%	49%	43%	33%	32%	39%	18%	54%	61%	60%

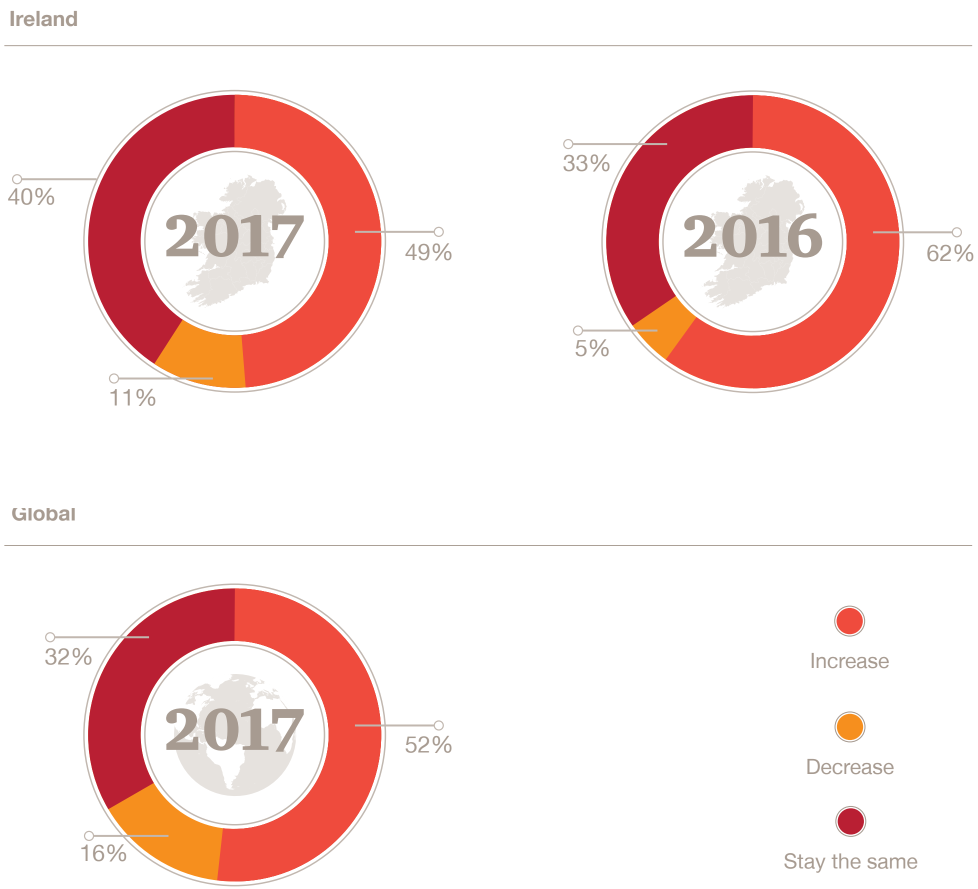
64% expect profit growth, 49% expect to increase headcount

Chart 5:

% very confident about revenue growth – Irish and Global CEOs

Chart 6:

Do you expect headcount at your company to increase, decrease or stay the same over the next 12 months?



Economic and policy threats

CEOs are concerned about the high marginal tax rate. While effective personal tax rates in Ireland are relatively low, particularly at average incomes, the marginal rates are high. Our Taoiseach, Leo Varadkar, has committed the Government to reducing the rate and this would be welcomed by CEOs. In the short term, particularly in the context of Brexit, the Government may want to enhance the incentives to encourage foreign executives to relocate to Ireland. France recently announced a similar approach. This could bridge the gap until the top rate is reduced for all. With smaller business start-ups in mind, the Government might also reduce the tax burden on share options.

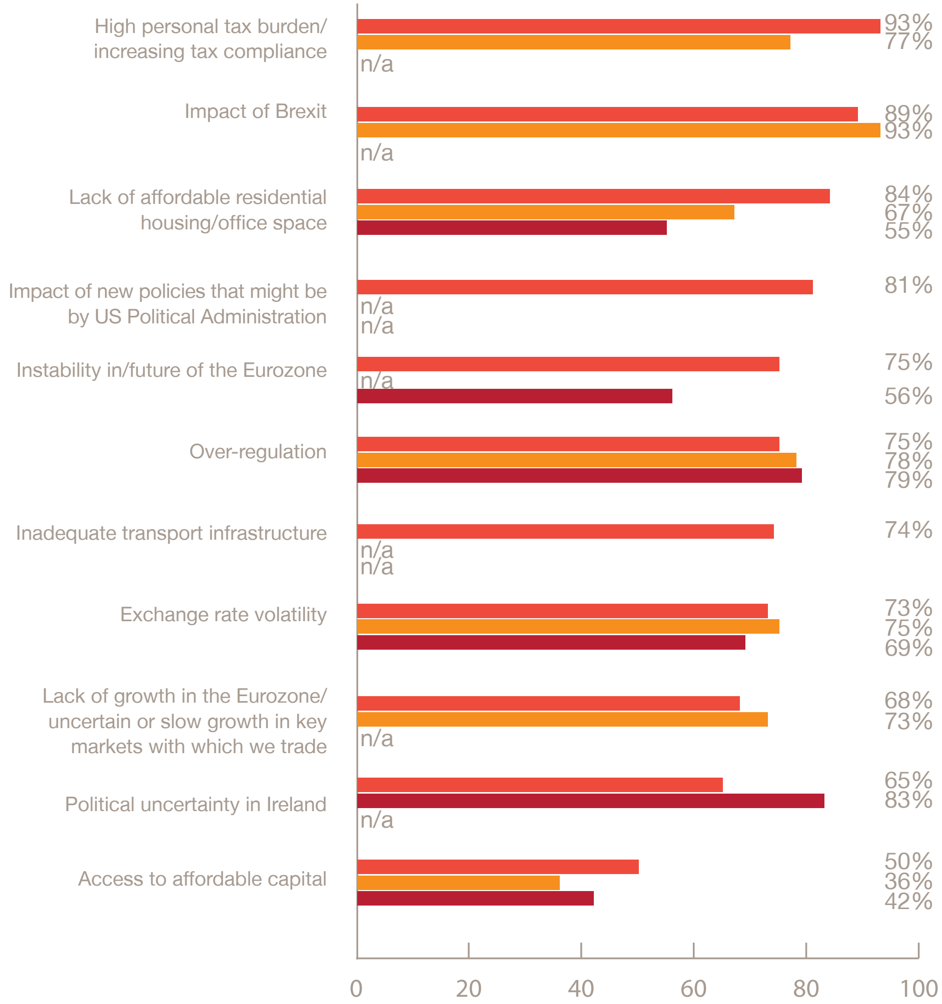
With the majority of business leaders believing that Brexit will bring more challenges than opportunities, it is not surprising that Brexit is the next greatest concern. Based on conversations with clients, some of the greatest concerns driven by Brexit are exchange rate volatility, possible tariffs at the borders, which may drive up costs, and the mobility of people.

The shortage of affordable residential housing/office space is the third greatest concern, significantly outpacing last year's and global levels. Nine out of ten respondents to the 2017 SCSI/PwC Construction Industry survey confirmed that they expect output in the residential sector to increase in the year ahead while 65% of participants in the same survey said that output for non-residential construction would increase.

Other key risks, according to the survey, include the impact of new policies that might be introduced by the US Political Administration and the future of the Eurozone. Concerns around access to affordable capital have increased since last year while political uncertainty has fallen.

Chart 7:

Top economic and policy threats for business growth (% concerned)



Business threats

Irish CEOs much more concerned about cyber attacks than global peers

The top three business threats keeping CEOs awake at night are rising wage costs, cyber attacks and the availability of key skills.

There is no doubt that the skills challenge is putting pressure on wage costs, particularly for specialist skills. Unemployment in Ireland has fallen rapidly in recent years, declining to a nine-year low of 6.3% in August (CSO), having been as high as 15% in 2012. The OECD recently noted that this has led to 'strong wage growth'. In the private sector, the skills challenge has no doubt put pressure on the cost of specialist skills. In the public sector, the draft pay restoration for workers provides for pay improvements of between 6.2% to 7.4% by 2020.

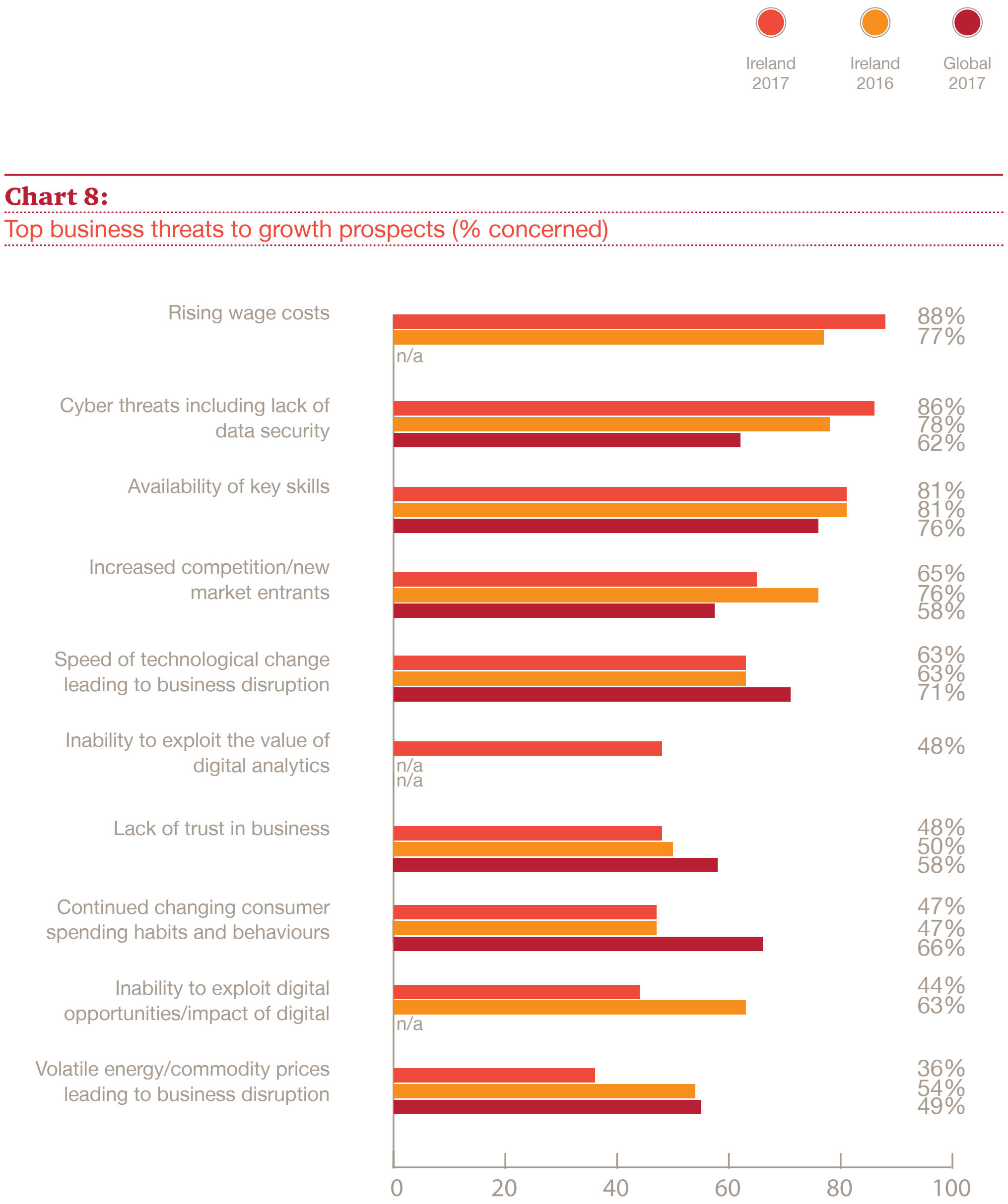
The recent cyber attacks have again brought the need for cybersecurity to the top of the boardroom agenda. Aside from possible reputation and financial loss, cyber attacks can cause significant customer upset and distrust as well as take up a huge amount of senior management time. We expect these attacks to become more frequent in the future. Effective protection against cyber attacks has less to do with any particular technological factor, and everything to do with proactive risk management.

We see the most effective companies focus on developing their cybersecurity acumen. New ways of approaching computer systems will become a way of life: preventing intrusion; preparing for the response (including separating backups from the network); detaching backups from the rest of the activity; responding rapidly and effectively to intrusions when they occur; recovering, if necessary, with measures put in place ahead of time; and building resiliency. When these activities have become ingrained in the organisation, then the ability to manage cyber risks becomes a strategic asset. If you can do that, you can also master many of the other management challenges in what is an increasingly complex business environment.

According to a recent report (July) by the UN International Telecommunication Union, Ireland ranked 26th out of 195 states and territories around the world in terms of meeting its commitment to cyber security. It noted that 'cybersecurity is an eco-system where laws, organisations, skills, co-operation and technical implementation need to be in harmony to be most effective.'

The availability of key skills continues to be an enormous challenge for Irish businesses and, like last year, is of greater concern compared to global peers. Aside from the technical skills, demand for soft skills is high and nurturing them is a priority for businesses. The workplace model is fundamentally changing and navigating the changes is fraught with unintended consequences. CEOs have an enormous challenge ahead of them including showing that in the technological age, humans are the priority.

Chart 8:
Top business threats to growth prospects (% concerned)



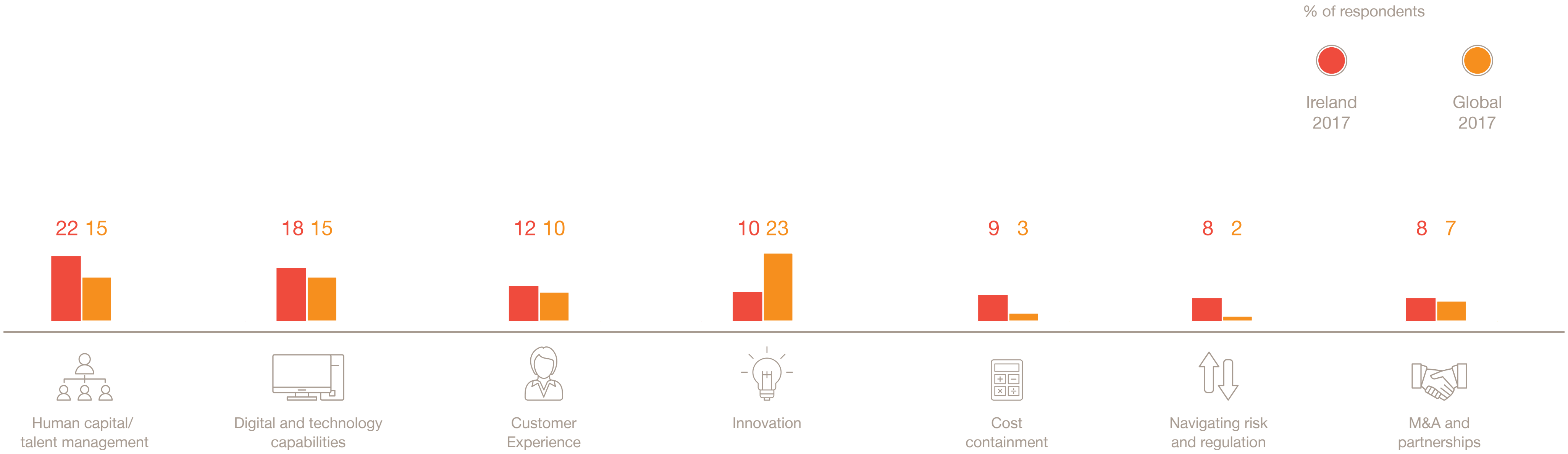
Business threats (cont'd)

Getting the people strategy right in a world where humans and machines can work alongside each other will be one of the biggest challenges business leaders will ever face. No one can be sure how the world of work will evolve, so organisations must prepare for every scenario.

In response to some of the threats to business growth, key areas for strengthening in order to capitilise on new opportunities are talent management, digital capabilities and customer service and innovation. However, less than one in ten will focus on cost containment. Global CEOs intend to have a much greater focus on innovation than Irish CEOs.

Chart 9:

Given the business environment you are in, which one of the following do you most want to strengthen in order to capitalise on new opportunities?



Exports

Over one in four expect to increase their exports by more than 20%

Six out of ten (61%) Irish business leaders confirm that their organisations are not planning to export.

Of those who are exporting, over a quarter (28%) plan to increase their exports by more than 20%, up from 18% last year. Nearly half (44%) expect revenue growth in international markets of between 5% and 20%.

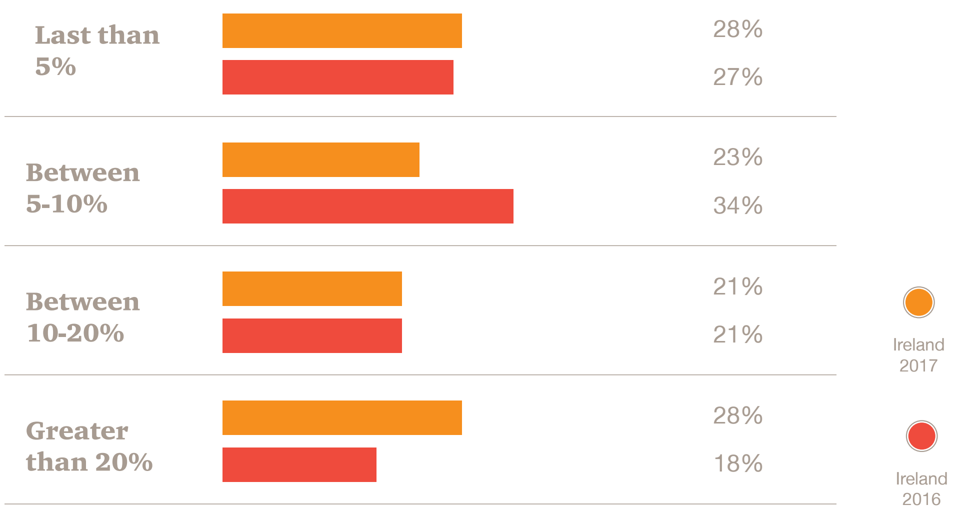
Many businesses are already struggling in Ireland with a weaker pound and exchange rate volatility of up to 10% in the last year. And with Sterling weakening to beyond 93 pence against the euro at the end of August - the highest level since 2009 - there is no doubt that it has been a difficult year for many Irish exporters trading with the UK. Spending by British consumers is growing at the weakest rate in almost 3 years. The slowdown in private consumption comes as rising inflation and weaker levels of wage growth puts the squeeze on household budgets (UK National Statistics, August 2017).

According to the Central Statistics office, Irish goods exports rose 4% to €116.9 billion last year, but exports to the UK dropped by 4% to €13.3 billion. The UK accounts for approximately 17% of Ireland's exports but 30% of all employment is in sectors which are heavily related to UK exports.

In light of Brexit and around 40% of Ireland's food and drink exports going to the UK, it is even more important for Irish businesses to diversify markets. Earlier this year, the Government launched its new Trade and Investment Strategy – Ireland Connected, Trading and Investing in a Dynamic World – which contains a range of measureable targets including to increase indigenous exports, including food, to reach €26 billion by 2020; to secure 900 new foreign direct investments; and to intensify and diversify 80% of indigenous export growth by 2020 to be outside the UK market. The Strategy will be backed up with a most extensive programme of Ministerial-led trade missions.

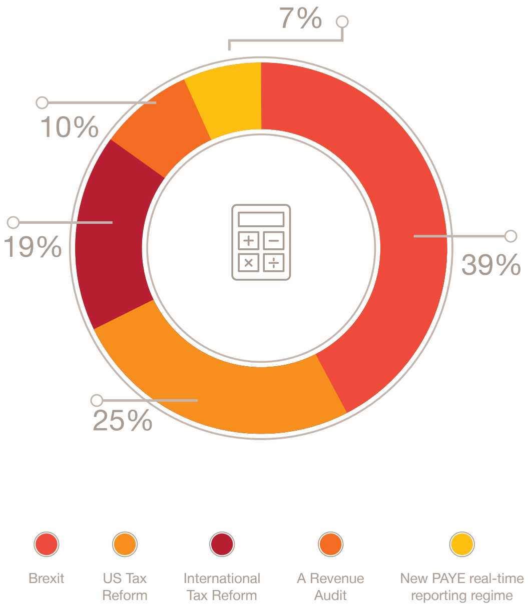
Some of the practical things companies should consider as they seek to further expand geographically include: the time it will take to build new customers and relationships; potential language barriers; people on the ground, people mobility, work permits etc; supply chain issues including sourcing inputs locally and/or using local warehousing; new markets will have different tastes, cultures; product reformulation may be needed to suit new customer tastes; intensive consumer insight and market research to identify opportunities and minimise risk; if multiple EU markets are to be serviced, localised packaging solutions may be needed to account for different languages; the route to market will be different and agents and new distributors may be needed, etc; pricing; product life including the time to transit to mainland Europe; logistics and costs; different food standards/regulations; tax and legal considerations including employee taxes; feasibility study including cost benefit analysis setting out break-even points to understand the full financial risks.

Chart 10:
If planning to export or to continue exporting, what revenue growth do you expect from your exports in the year ahead?



Tax Concerns

Chart 11:
From a tax perspective, what is your greatest concern?



CEOs are naturally concerned about how Brexit will impact their businesses. It is their greatest concern from a tax perspective. CEOs have to understand the impact it will have on their businesses. They can consider a range of outcomes from "no deal" to a "soft Brexit". They should then be able to understand what they would have to do in each situation and how long it would take them to do that. They may find that they need to act now as they will require almost two years to prepare or they may find they will only need a few months notice in which case they can await developments.

The prospects for US tax reform have diminished in the past few months. There is still a possibility of a rate reduction and of changes relating to repatriation of profits. However, they are less likely to impact businesses in Ireland compared to the potential changes which were being discussed.

On the other hand, the pace of international tax reform has increased. President Macron has promised to bring a new impetus to EU tax reform. This will be one to watch.

The Revenue conducted over 6,000 audits last year as well as approximately 500,000 interventions. We have seen significant enhancements in their risk profiling and in their use of data analytics. We have recently seen the launch of the Cooperative Compliance Framework for large corporates. CEOs will watch with interest to see how this develops over the next 12 months.

PAYE Modernisation and real time reporting will start on 1 January 2019. We suspect that it hasn't been raised to the CEO level at this time, but it will be keeping CFOs and their teams busy preparing over the next 18 months.

? Tough questions about competing in an age of divergence:

1 How will you find fresh organic growth in the new divergent and low-growth global economy?

2 As the pattern of world trade alters and protectionism threatens, how are you preparing to compete while continuing to optimise your cost base?

3 In a more uncertain world, where will you increase your investment and where will you 'hunker down'? How will you measure the relative success of your ventures?

4 If innovation is key to your success, how much more do you need to invest in R&D and new product development to ensure a proportion of future winning brand offerings?

5 In an increasingly risky business environment, how can you factor both agility and resilience into your growth strategy?

Economic Indicators

- The Exchequer returns for the period January to August indicated that the Government collected just under €30.5 billion in taxes, which was 0.7% or €209 million less than expected at the start of the year, but nearly 5% or €1.4 billion up on 2016 (Department of Finance, Sept 2017).
- Unemployment fell to a nine-year low of 6.3% in August (CSO), the lowest since its peak in 2012. The State's jobless is now lower than the Euro-area average of 9.3%.
- Irish consumers remain positive in relation to the prospects for the Irish economy and jobs. However, consumer sentiment weakened slightly in August as consumers reined in their spending plans and continued to report only limited gains in their personal finances (KBC Bank Ireland/ESRI, Sept 2017).
- The Fiscal Advisory Council warned 'that the country's debt levels remain very high, which leaves Ireland vulnerable to adverse shocks such as those from a harder-than-expected Brexit (Sept 2017). (note: Ireland's debt is approximately 75% of GDP, having fallen from 120% in 2012).
- Ireland is ranked 2nd in the 2017 IMD World Competitiveness Index, up from 6th place last year (June 2017).
- The ESRI warned that the potential output of the economy would be 3.2% lower than it otherwise would be if the UK pulls out of both the Single Market and the Customs Union, and needs to use World Trade Organisation (WTO) rules (June 2017).
- Irish manufacturing sector growth hit a two-year high in August, reaching the highest level since July 2015. The Investec Manufacturing Purchasing Managers' Index noted that while Ireland is particularly vulnerable to Brexit, manufacturers are proving increasingly resilient with new export orders rising (Sept 2017). Growth in Ireland's services sector inched up to a three-month high in August, but there were signs that the strength of the euro may be impacting exports in the sector. Nearly eight times as many firms expect to see growth in activity over the coming year as those who anticipate a decline (Investec Services Purchasing Managers' Index, Sept 2017). Overall, Investec noted 'very solid expansion in the Irish private sector in the first half of the year'.
- IDA Ireland announced in January that it had the highest level of employment in its client companies in its history, with total employment at overseas companies standing at almost 200,000, the highest level on record. In July, IDA Ireland further announced the creation of 11,000 jobs (represented by 114 projects) in the first half of this year.
- The Irish construction sector remains firmly in expansion territory and is recording growth that is close to that seen in the years immediately prior to the recession (Ulster Bank Construction Purchasing Managers' Index (August 2017).
- Heavily boosted by transactions in the motor trade, the volume of retail sales in Ireland rose by 2.1% in the 12 months to the end of July 2017, noting 'as Sterling continues to depreciate, the retail sector is particularly vulnerable to price squeeze, with consumers looking to online UK retailers for goods'. (CSO, August 2017).
- 2017 Irish export growth is forecast to accelerate to 5% 'supported by a pick-up in external demand with Ireland's main trading partners - US, UK and the euro area - all expected to record reasonably solid growth this year' (SES, July 2017).
- The Department of Finance projects GDP growth for 2017 to be 4.3% 'with strong contributions from both net exports and underlying domestic demand'. GDP for 2018 is expected to be 3.7% (SES, July 2017).
- The IMF expects the Irish economy to grow by 3.9% in 2017, 'propelled by strong domestic demand', noting 'the outlook remains positive, but with substantial, mainly externally-driven downside risks'. It expects growth of about 3% over the medium term (June 2017).
- The OECD predicted Irish GDP growth to be 3.7% in 2017 and 2.5% in 2018 (June 2017).
- Euro-area economic confidence jumped to its highest level in a decade and is the strongest reading since August 2007 (European Commission, June 2017). The latest IMF forecast projected the eurozone would grow 1.9% in 2017 and 1.7% in 2018 (July 2017).
- The IMF forecast US growth of 2.1% for 2017 and 2018 (July 2017). According to the US Department of Commerce, US GDP rose by 3% in the second quarter 2017 reflecting robust consumer spending as well as strong business investment (August 2017).
- The IMF forecast global growth to be 3.5% in 2017 and 3.6% in 2018. It noted that the stronger performance by the Eurozone, China and Japan had been offset by the weaker performances elsewhere. (July 2017).

Foreign Direct Investment

Foreign Direct Investment

CEOs crave success and the survey confirms that 96% of MNCs consider their investment in Ireland a success. This is a really strong result which leads 91% of MNCs to confirm they will increase or maintain their investment in Ireland.

This excellent track record of success is a key factor in encouraging CEOs of companies who are looking to invest in Europe to pick Ireland.

Brexit is also a factor in determining investment. Most MNCs are looking to access the EU market of 500 million people. It is easier to access this market by locating in the EU. Increasingly, we are competing with France, Germany and other EU countries rather than the UK.

Recent trade deals by the EU with Canada and Japan also enhance the attractiveness of Ireland compared to the UK – at least until they manage to negotiate similar deals.

The consistent and low corporate tax rate of 12.5% is critical. Equally important is the ability to access excellent employees both from Ireland and across the EU.

The changing international tax landscape is a positive for Ireland. It is requiring companies to earn their profits where they have substantial operations. This is reducing the attractiveness of Caribbean tax havens and also reducing the attractiveness of countries who agree tax liabilities based on a ruling. It is enhancing the attractiveness of Ireland which offers a low corporate rate and the ability to set up substantial operations here.

For the sixth year in a row, Ireland has been named the best country in the world for attracting high-value foreign direct investments (2017 IBM Global Locations Trend Annual Report (Sept 2017).

Ireland also ranked the most attractive location for digital business models across 33 countries, according to the PwC 2017 Digital Tax Index (Sept 2017).

The 2017 United Nations World Investment report further highlighted that greenfield investments to the Republic of Ireland in 2016 were valued at US$6.4 billion, up 7% from 2015.

91% of MNCs in Ireland said that they will increase or maintain their investment in Ireland


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Chart 12:

Plans for investment in Ireland (% MNCs responding)

	2017	2016	2015	2014	2013	2012	2011
Increasing	48%	50%	49%	37%	34%	34%	33%
Maintaining investment	43%	42%	43%	51%	50%	52%	39%
Reducing investment	9%	8%	8%	12%	16%	14%	28%

58% say retaining a competitive corporate tax rate is critical to increasing investment

CEOs in this survey remind Ireland of the three key things we must continue to do well. These are:

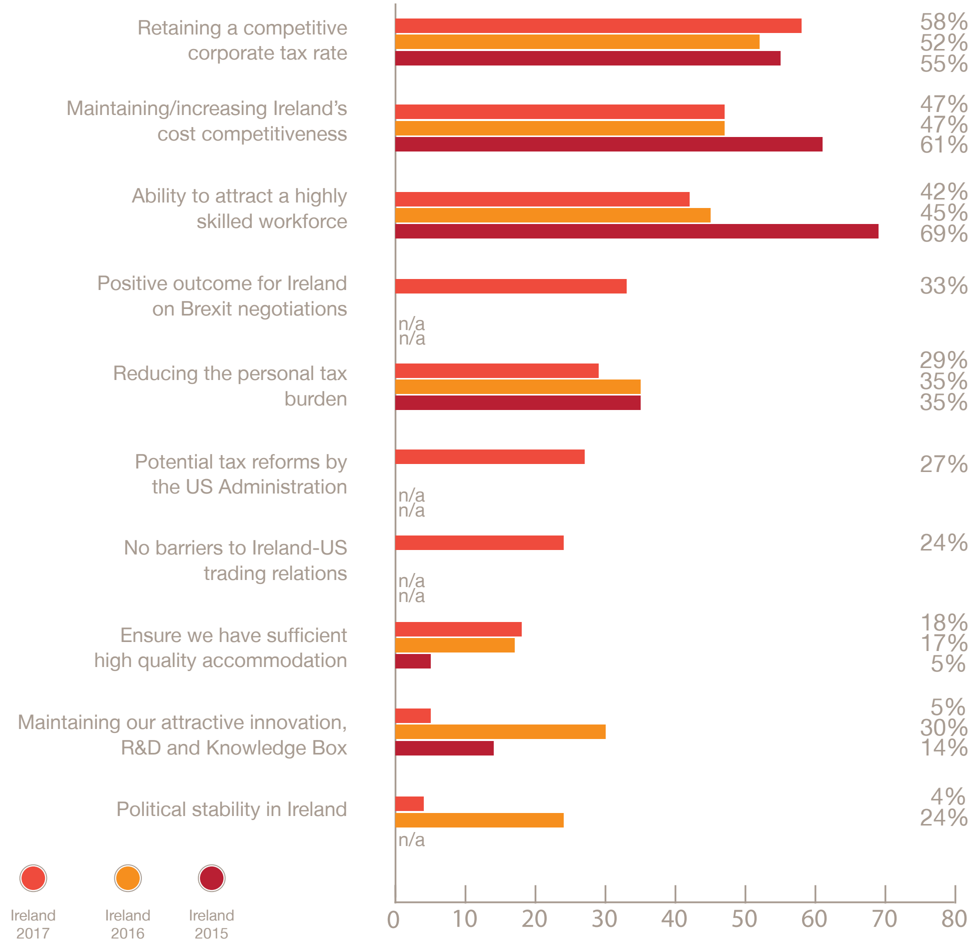
1. Retain our low corporate tax rate
2. Maintain our ability to attract a highly skilled workforce
3. Maintain our cost competitiveness

CEOs tell us they want Ireland to focus on two key areas in the next few years: Firstly, work to achieve the best possible outcome for Ireland on Brexit and, secondly, reduce the personal tax burdens.

Nearly one in five cite having sufficient high quality accommodation as being a critical factor to investing in Ireland. Half of survey participants called on Government to have a co-ordinated plan to tackle the national housing/ accommodation deficit. It is not good news that Dublin scored the second most expensive city in the Eurozone behind Paris for employees who are working abroad, according to Mercer (June). The study identified that cost pressures associated with housing as a key factor in Dublin's relatively high ranking.

Chart 13:

Factors critical to maintaining and/or increasing Ireland's attractiveness as a location of choice for Foreign Direct Investment (% MNC respondents)



Insight

Our advice - Prepare for what's to come

Joe Tynan
Tax Leader, PwC Ireland

We can see from the results of the 2017 survey that CEOs rightly have tax matters at the forefront of their minds.

A quarter of multinational company CEOs have concerns about the impact of potential tax reforms and trade barriers being tabled by the new US administration.

However, the prospects for US tax reform have diminished in the past few months. Whatever form the changes take - including a rate reduction and changes relating to repatriation of profits - they are less likely to impact business in Ireland when compared to the changes that were originally discussed.

While uncertainty exists around US tax reform, there are more pressing reforms coming that CEOs and CFOs in Ireland can start planning for straight away.

The pace of international tax reform has increased. President Macron has promised to bring a new impetus to EU tax reform. As part of BEPS, Ireland is on an agreed timeline towards implementing various EU Anti-Tax Avoidance Directive ("ATAD") and ATAD2 measures. In the coming years, provisions including CFC rules, exit tax changes and anti-hybrid rules will be introduced.

In Ireland, Revenue conducted over 6,000 audits last year, as well as approximately 500,000 interventions. We have seen significant enhancements in their risk profiling and in their use of data analytics. We have recently seen the launch of the Cooperative Compliance Framework for large corporates. CEOs will watch with interest to see how this develops over the next 12 months.

PAYE modernisation and Real Time Reporting will begin on 1 January 2019. Employers will have to report various pay, tax and deduction information at the same time as they run their payroll. We expect that it is not front of mind for CEOs now, but preparation for the changeover will be keeping CFOs and their teams busy over the next 18 months.

Our advice to CEOs is to make sure you are planning for all these upcoming changes. Consider the impacts they will have on your business now, and monitor the progress of reform.

Brexit

Brexit

More challenges than opportunities

Two-out-of-three CEOs are calling on Government to ensure that Ireland has a clear national strategy to deal with Brexit. The survey also finds a large majority of Irish CEOs (81%) believe that Brexit will bring more challenges than opportunities. Over three-quarters (76%) are of the view that the UK will leave the EU at the end of March 2019 with nearly 15% saying it will be a hard Brexit. 70% believe that Ireland can do more to develop a national strategy to better promote Ireland's attractiveness as a location of choice for investment post-Brexit. Nearly one in three expect their level of trade with the UK will decline post-Brexit.

Brexit is dampening confidence

According to the survey, business confidence in the outlook for the next three years has fallen. Less than two-thirds (61%) of Irish CEOs are confident about their organisation's prospects for revenue growth over the next three years, down from 85% prior to the UK's decision to leave the EU in June 2016. Additionally, nearly a third (30%) say that they expect a decline in their level of trade with the UK post-Brexit. An overwhelming majority (87%) are concerned about the flow of goods to and from the Republic of Ireland.

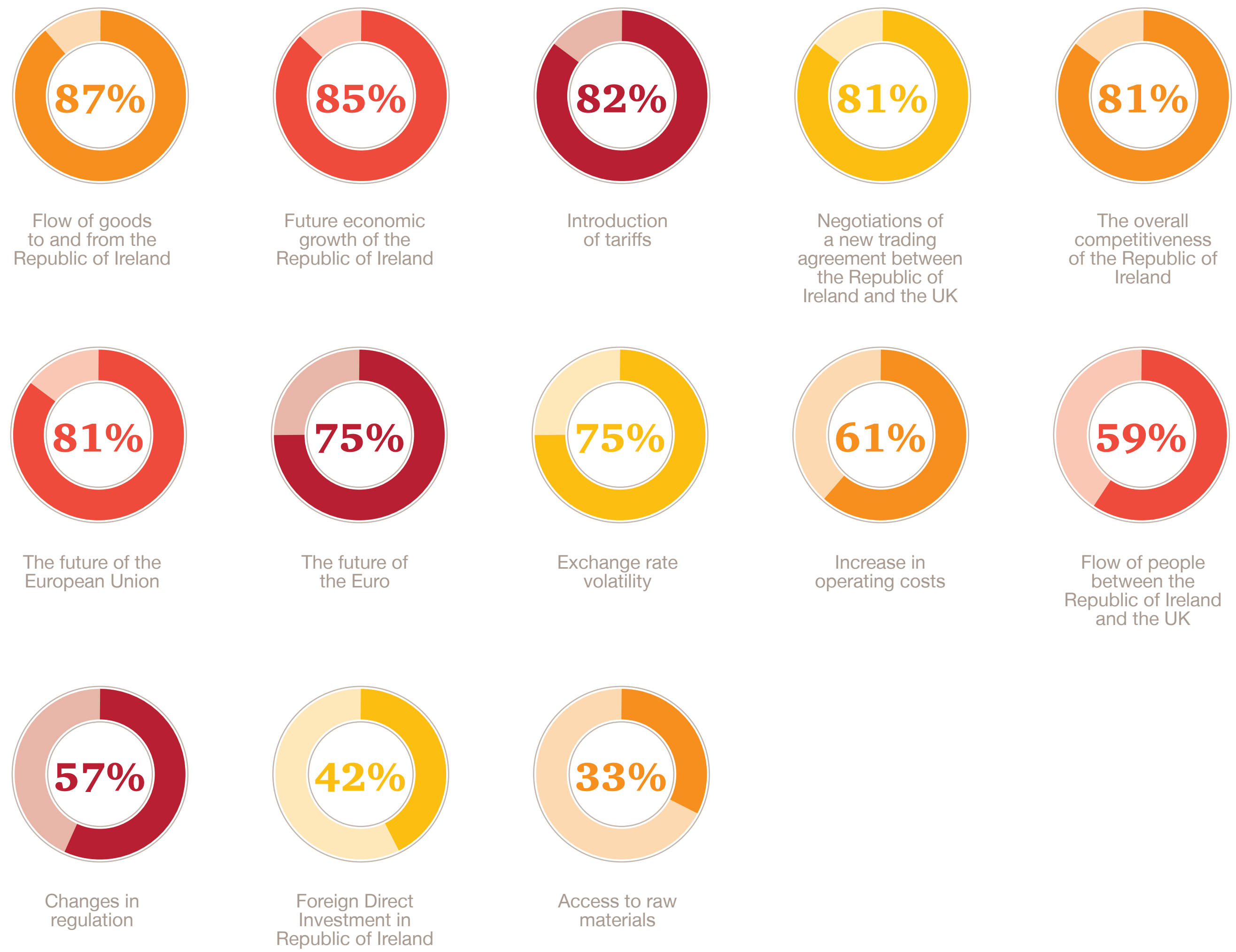
> "Customs and tariffs are a key concern for Irish business leaders. If World Trade Organisation rules govern EU-UK trade relations post March 2019, competitiveness and costs would likely be impacted as companies compete on a new global playing field. For example, tariffs as high as 55% for imports into the UK of cheddar cheese may apply and would have serious implications for the Irish agri-food sector. Additionally, non-tariff barriers such as customs compliance will drive incremental costs and potential border delays with contracts also needing to be reviewed in the context of who would bear duty at point of entry. For importers into Ireland, companies also need to consider the tariff impact on the purchase of raw materials, ingredients and finished goods with costs also expected to rise. For companies who import and subsequently export, there are opportunities to mitigate the Brexit impact through the use of existing customs reliefs e.g. inward processing relief."
>
> **John O'Loughlin,**
> *Global Customs & Trade Leader, PwC Ireland*

The ESRI in June 2017 warned that the potential output of the economy would be 3.2% lower than it otherwise would be if the UK pulls out of both the Single Market and the Customs Union, and needs to use World Trade Organisation (WTO) rules.

Other concerns as a result of Brexit cited in the survey include: our future economic growth (85%); potential introduction of tariffs (82%); our overall competitiveness (81%); the negotiation of a new trading agreement between the Ireland and the UK (81%) and exchange rate volatility (75%).

Chart 15:

Concerns as a result of Brexit (% of Irish respondents who are concerned)



It is not surprising, with all of these risks and uncertainties, that a large majority of Irish business leaders believe Brexit will bring more challenges than opportunities. Yet only one in ten reported to have a fully developed Brexit strategy in place. What is clear is that businesses cannot wait for the negotiations to conclude and we would urge them to start planning for the scenarios immediately. Part of this planning should include how World Trade Organisation rules might impact their organisations, consideration of people mobility issues, a full scale review of suppliers to achieve greater cost competitiveness as well as further diversification of products and markets.

Ireland calling - 41% see opportunity for FDI

The survey points to opportunities for Ireland as a result of Brexit. Well over a third (41%) see the greatest opportunity as being the potential for increased FDI based on Ireland being the only English speaking member state in the EU. Other opportunities include Ireland's EU passporting benefits (15%) and the opportunity for Ireland to play a more prominent role in the EU (8%).

It is positive to see that some of PwC Ireland's clients are already looking at opportunities in other EU markets such as France and Germany and also in the US and Australia.

Of those survey participants who have UK operations, over a quarter (27%) are either planning to relocate some or all of their operations to Ireland or this is under consideration. It is important that Ireland maximises the opportunities from Brexit. Ireland has a pro-business environment, a highly skilled and flexible workforce and will be the only English speaking EU member state post-Brexit with the same common law jurisdiction as the UK. Ireland is therefore recognised by many business leaders as a great location to do business. However, we will need to do all we can to secure any potential business that may come our way.

Better promoting our attractiveness

Nearly three-quarters (70%) of Irish CEOs are of the view that Ireland can do more to develop a national strategy to better promote its attractiveness as a location of choice for investment post-Brexit. The survey also highlights certain areas for improvement to further attract organisations to locate to Ireland post-Brexit, for example, the high personal tax burden (29%), accommodation deficits (25%), lack of available talent (17%), poor infrastructure (15%) and regulation (14%).

Many Irish companies over the years, and particularly since the recession, have proven their ability to adjust to uncertainty. We are a small open export led economy and it will be very important that we continue to broaden our footprint in international markets. Our long standing trading relationships with the UK is crucially important for Irish businesses and it is essential that we maintain our strong ties with our nearest neighbour in the future.

It will also be important that we continue to stay very close to the EU Brexit negotiations as they happen, creating stronger relationships with like-minded member states and helping to build on the successful Single Market.

70% say Ireland can do more to promote its attractiveness

Insight

The issue uppermost in the minds of Irish CEOs in 2017 is Brexit. What should you do to prepare your business for the changes ahead?

Brexit: the immediate issue for Irish CEOs

David McGee
Brexit Partner,
PwC Ireland

The issue uppermost in the minds of the Irish CEOs in 2017 is Brexit. What should you do to prepare your business for the changes ahead?

According to the findings of the 2017 CEO survey, nine out of ten Irish CEOs see Brexit as a threat to business growth.

Following completion of the third round of Brexit negotiations, it is positive that EU Chief Negotiator, Mr Barnier, and his UK counterpart David Davis, articulated a mutual understanding that the British Irish Common Travel Area would remain largely unaffected after Brexit, allowing EU citizens to travel - but not necessarily work - within both jurisdictions. However, there remains a long road ahead in the negotiations.

A 'hard Brexit' would push Irish business in uncharted territory. With no exit agreement or free-trade transition arrangement in place by the end of March 2019, a very different landscape would emerge.

It is clear that businesses cannot wait for the negotiations to conclude and I would urge them, if not already started, to proceed with the planning immediately. Companies need to proactively prepare themselves for any eventual outcome.

We recommend that CEOs follow three simple steps to prepare themselves for Brexit and assess their exposure:

Step 1

Create baseline assumptions

Step 2

Analyse your business

Step 3

Define your Brexit action plan

Regardless of what sector you operate in, these steps will help you to reduce risk and identify any potential opportunities.

Talent

Talent

One of the ever present themes in our Global CEO survey is the topic of talent – and the challenge leaders face in having the right people, in the right place, at the right time, doing the right thing. The talent conundrum is regularly cited as one of the main reasons why organisation's fail to execute many of their strategic intentions. In the twenty years since we first began asking CEOs for their views on talent management, we've witnessed globalisation and technological change transform business, our lives and the way we work. Ironically, at a time when technology is taking over the workplace, people power is reaching new heights.

CEOs have to tread carefully to address the dangers of globalisation and technology while capitalising on the opportunities they bring. The workplace model is changing fundamentally and navigating the change is fraught with unintended consequences – as trailblazers for new working structures built around the emerging 'gig' economy have found. Getting the people strategy right in a world where humans and machines work alongside each other may be the biggest challenge leaders will ever face.

Back in 2015, we published a report entitled *The Most Extraordinary Technology of All* where we argued that even though it is predicted that 53% of all jobs will be replaced by computers by 2025, it is people who remain at the heart of any organisation. This CEO Survey reinforces that view, and the unquestionable need to get talent management right.

Wanted: More technology and more people

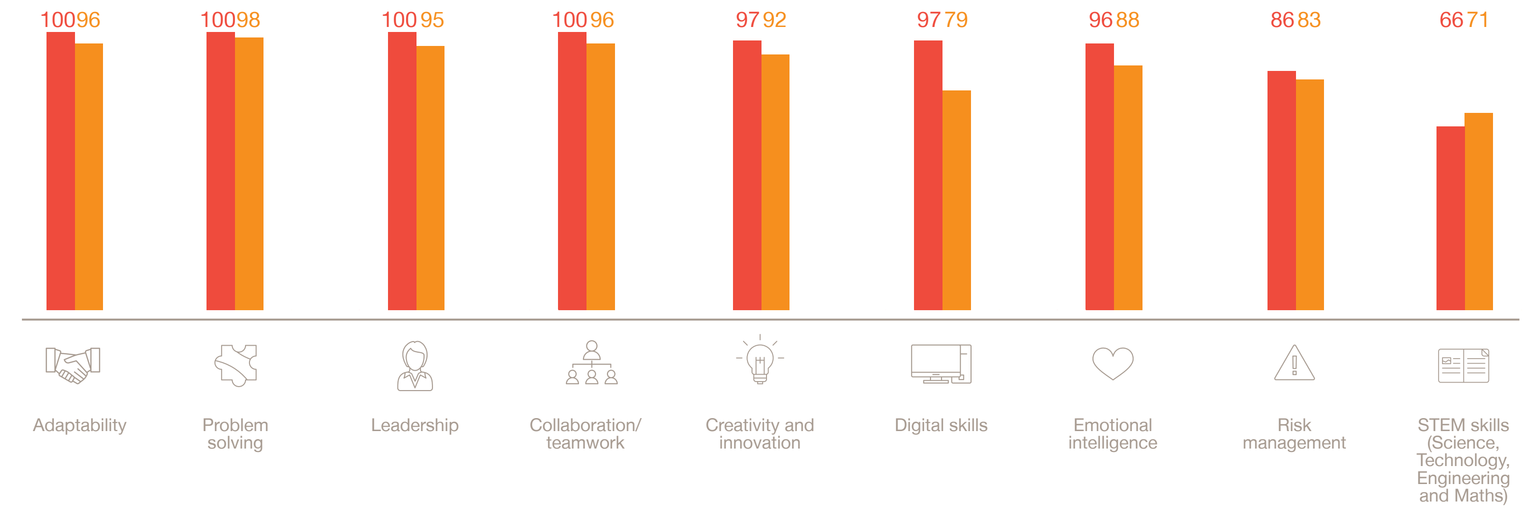
In Ireland almost half (49%) of survey respondents plan to expand the workforce. Nearly one third (31%) are considering the impact of automation/robotics on the future skills needs and is somewhat behind global CEOs (39%). Globally and in Ireland, CEOs see the value of marrying technology with uniquely human capabilities, but whilst they are actively exploring the benefits of automation, they're still looking for more and more people. What does this mean?

The clue comes in the skills that CEOs are now looking for. The wish list has shifted, and very quickly. Suddenly, the most valued skills are 'soft' and uniquely human capabilities such as adaptability, creativity, innovation and emotional intelligence (see Chart 16). These are things that robots and software simply can't replicate. So whilst computers far outstrip humans when it comes to analysing vast quantities of raw data, they certainly lack the intuition, judgement and creativity required to make sense of that data.

Anxiety over the availability of key skills is

Chart 16:

In addition to technical business expertise, how important are the following skills to your organisation? (% who said 'important' and 'very important')



Ireland 2017

Global 2017

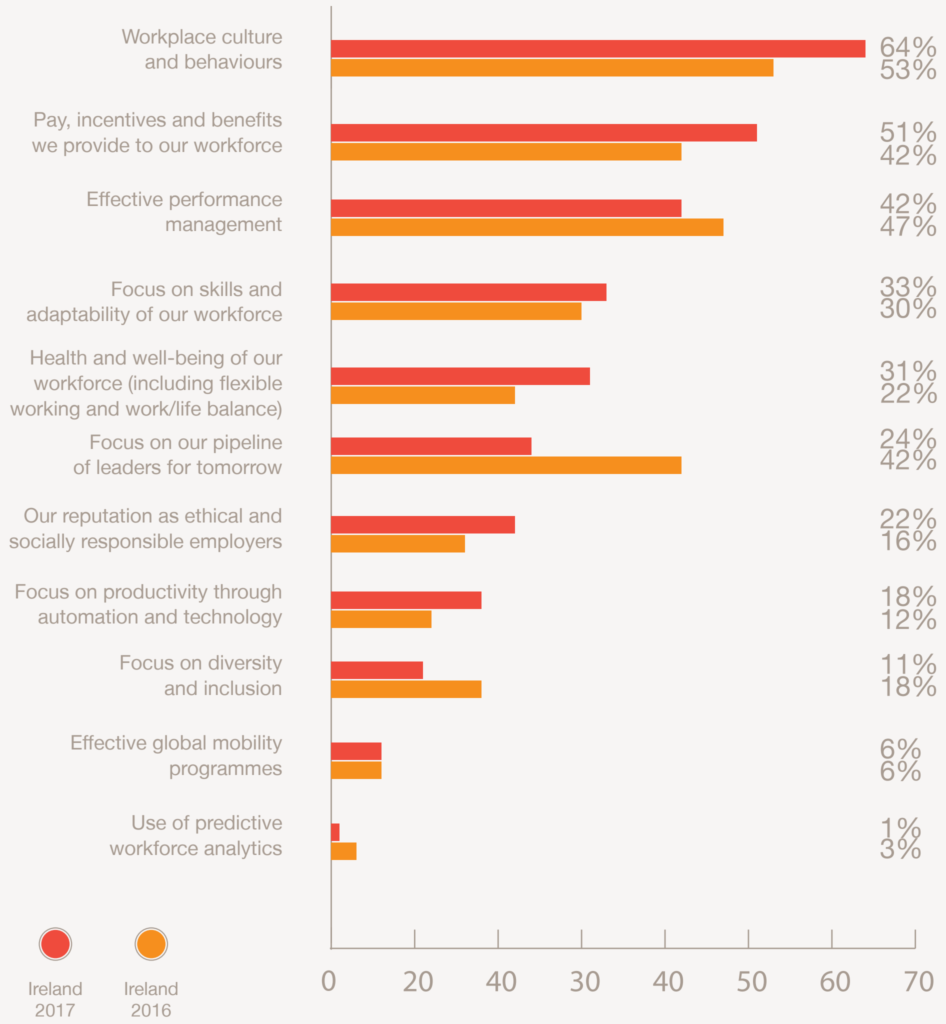
rising in line with parallel worries about the speed of technological change. The talent demands now stretch from industrial engineers for robotics work to executives with a background in analytics and innovation. Slow and uncertain responses to these talent demands are leaving too many organisations on the back foot, facing growing skills gaps, when competitors are already moving on.

There are a number of key strategies that Irish organisations are changing to improve their ability to attract, retain and engage the people they need. These are in the areas of workplace culture and behaviour, pay and incentives and performance management. Worryingly, just a quarter plan to focus on the future leadership pipeline, down from 42% last year. However, on a more positive note the health and wellbeing of the workforce has come into greater focus. Using predictive workforce analytics is also an area where greater opportunities could be gleaned and while organisations are embracing 'big data' on other facets of their business, it is almost alarming that they are not seeing that value this could have with regard to talent.

There are huge opportunities for organisations to bring their people strategies up to speed with knock-on benefits to their ability to adapt to technology, become more diverse and inclusive and rebuild trust.

Chart 17:

What aspects of your talent strategy are you changing to make the greatest impact on attracting, retaining and engaging the people you need to remain relevant and competitive?



So how are CEOs addressing the skills crunch? Like global companies, a significant number of Irish CEOs confirm that they promote diversity and inclusiveness. However, few see this as an area needing change in order to recruit and retain talent. Two-thirds say they seek the best people, no matter who or where they are; a similar proportion move employees where they are needed. But less than two-thirds have changed their people strategy to reflect the skills and employment structures their companies will require in the future, compared to over three-quarters for global peers. Even less are rethinking their HR function.

Fewer again agree that their organisation effectively uses technology to hire, train and retain people, or that they are exploring how emerging technologies such as artificial intelligence, robotics and automation impacts on future skills needs.

It's clear that the next few decades won't be about machines taking over from people but about finding a way to exploit technology to the best advantage in the workplace. That will mean people with the right skills working alongside technology. It will mean developing effective ways to 'build' people with the right capabilities internally. It will also mean appointing executive teams that reflect the diversity of the employee pool and create a purpose and culture that inspires people. CEOs will have to find ways of protecting their employer value proposition and nurture a trusting relationship with employees in an incredibly complex world. Retaining the human element in a more virtual world will be a prerequisite for future success.

Chart 18:

Agreement with the following statements about your organisation's talent activities?
(% who agreed)

? Tough questions about managing man and machine

1 What parts of your business model will benefit from further automation?

2 Is your HR function ready to adapt to managing man and machine? What's missing from its capabilities and how will you fix it fast?

3 How are you going to find the rarer skills like leadership, creativity and adaptability required for your company to innovate and build brand differentiation?

4 Have you considered how artificial intelligence and automation will help you create competitive advantage in your key markets?

5 Have you redesigned your business processes so that your employees are best placed to work seamlessly with automation to create new value?

Insight

Invest in talent today to succeed tomorrow

Doone O'Doherty
Tax Partner,
PwC Ireland

Despite the increasing emphasis on digitalisation and automation, Irish CEOs have identified how vital people are to a business's success.

Half of the CEOs surveyed intend to expand their workforce over the next year. They also recognise that securing the right person for the job is becoming more and more challenging. Organisations across every sector are fishing from the same, small talent pond.

When it comes to what organisations can do to retain talent, it's important that CEOs understand the shifting attitudes to work and employment. It's not enough to offer a "secure" job. What people expect in terms of work satisfaction, flexibility and opportunities is changing. This does not just apply to millennials. Our data shows that CEOs need to be asking themselves how best to work to make sure their talent strategies align with staff expectations.

Our People and Organisation team works with many of the country's top employers. We help them to plan, develop and put in place their people strategies. Regardless of the sector you operate in, we recommend that you take the following steps:

Step 1

Develop a comprehensive people strategy

Step 2

Benchmark your reward strategy to ensure it's consistent with your long-term business goals and industry norms.

Step 3

Review your organisational culture and implement change as necessary.

This will help your company ensure it has the talent it needs today to succeed tomorrow.

Trust

Trust

Maintaining trust in a world of technology led disruption

Irish CEOs are less concerned than global peers about the impact of most business disruptors on stakeholder trust

The financial crises has brought business trust into greater focus and with the after-effects of global stagnant economic growth, high debt levels and geopolitical uncertainties, trust is an area that remains high on the agenda for business leaders and consumers. This year's survey also focuses on how technology has exacerbated the trust challenge. Worryingly, Irish CEOs are less concerned than global peers about how a number of key potential disruptors such as data breaches, IT outages and artificial intelligence will damage stakeholder trust levels in the next five years.

Given the level of business disruption through technology led change, maintaining trust is a growing challenge for CEOs. At the same time, the level of investment in technologies such as artificial intelligence and robotics continues. CEOs know that social wellbeing is vital in driving long-term economic performance and that, in the future, humans and machines will inevitably work ever closer together.

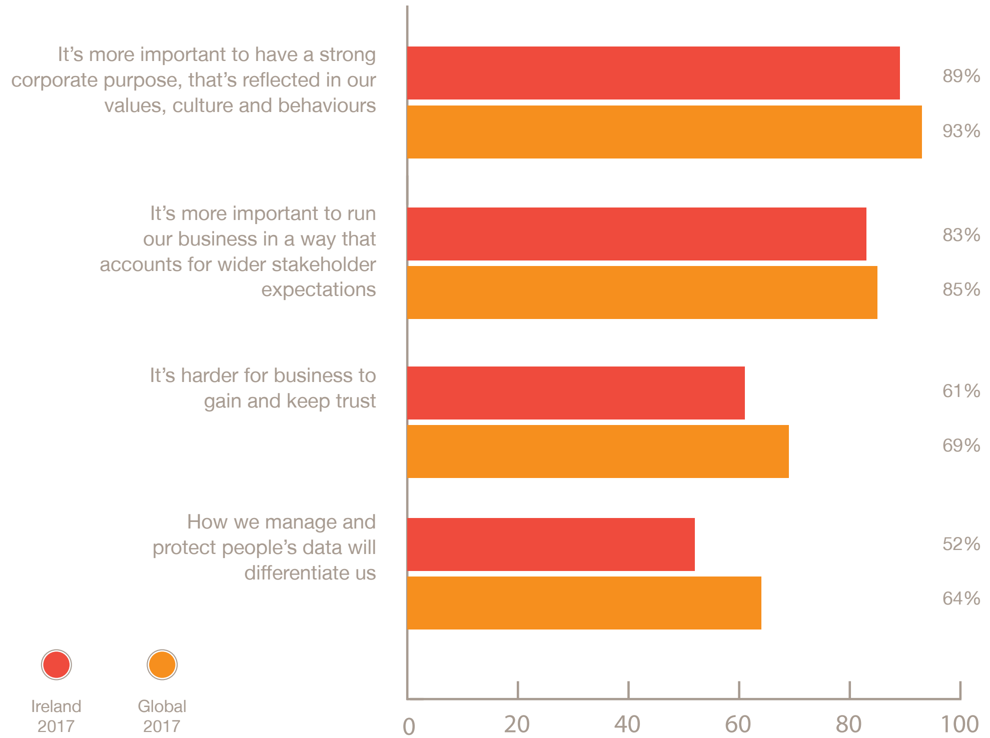
Having sound business processes to manage uncertainty and disruption will be critical. How can they make sure that their organisation manages disruption while gaining from the connectivity of the digital world, without sacrificing trust? This is a massive challenge business leaders will face – and they will need strong support from all stakeholders.

Nearly half (48%) of Irish business leaders view the lack of trust in business as a threat to growth prospects, but their global peers are more concerned (58%). Every decision that business leaders take – whether it involves customers, employees, suppliers, partners, shareholders or the wider community – has a bearing on trust. In an increasingly transparent world, stakeholders are keenly interested, not just in what businesses do, but also in how and why they do it.

Compared to traditional business models, establishing and maintaining trust is a lot more challenging in the digital age. In the context of an increasing digital world, nearly two-thirds (61%) of Irish CEOs feel that it is harder to establish and maintain trust. At the same time, an overwhelming majority (89%) believe it is more important to run their companies in a way that establishes a strong corporate purpose that is reflected in their organisation's values, culture and behaviours.

Chart 19:

% Agreement with the following statements in the context of an increasingly digitised world (% who agreed)



While Irish CEOs do appreciate that risks associated with tech and data can impact business trust, global CEOs seem to have a consistently higher level of concern about the impact of data protection breaches, artificial intelligence, automation and intellectual property. Over half (53%) of Irish CEOs view cyber security breaches as having a significant negative impact on stakeholder trust.

Chart 20:

To what extent do you think the following key business disruptors will impact negatively on stakeholder trust levels in your industry in the next five years? (% who said 'a large extent')

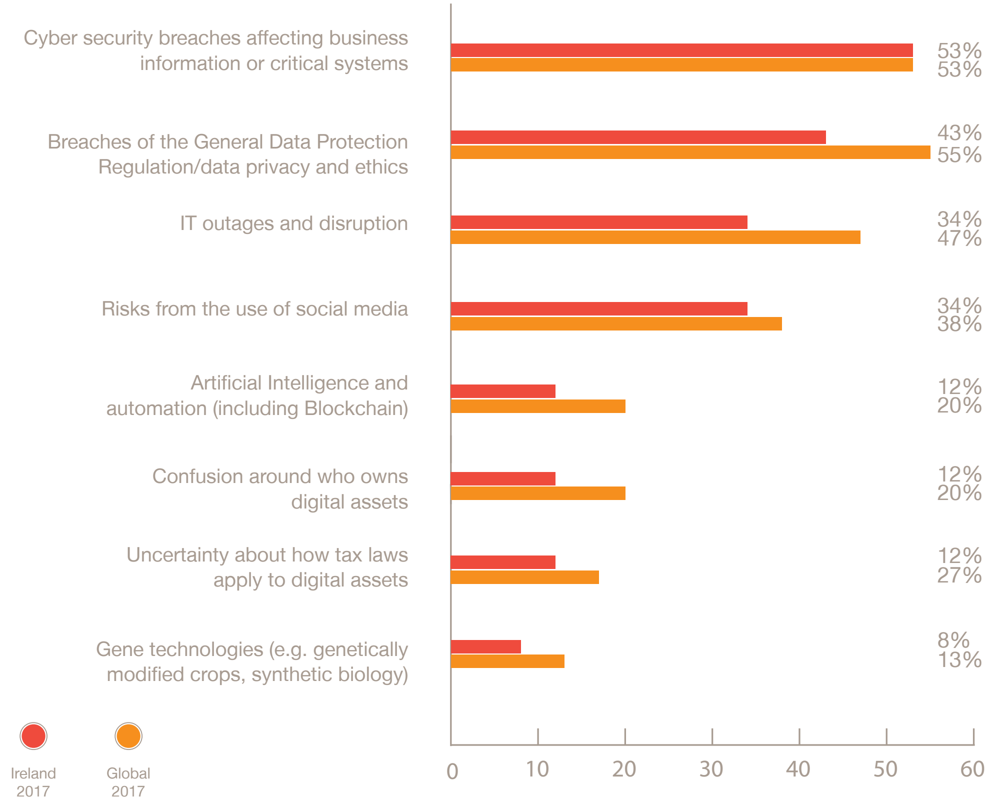
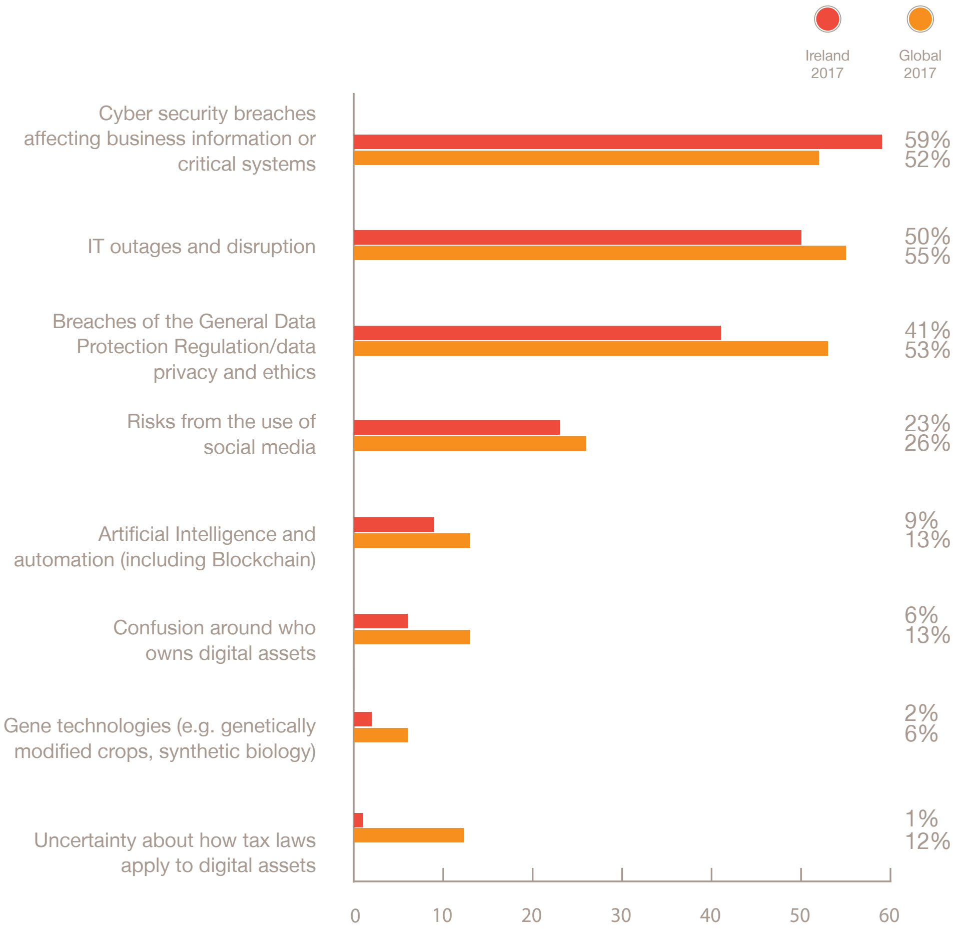


Chart 21:

To what extent is your organisation addressing key business disruptors today? (% who said 'a large extent')



Data security and ethics

The survey suggests that some 40% of Irish CEOs are not seriously addressing the impact of cyber security breaches affecting business information or critical systems.

Many companies already collect a vast amount of customer data, which they use to target specific customers and influence their behaviour. As the Internet of Things (IoT) spreads to everything from wearables to consumables, cars and every conceivable part of the home, what companies know about people will increase exponentially.

This data is an incredible asset for companies. It enables businesses to deliver a better service, develop closer relationships with their customers and earn their trust. It also enables customers to get more targeted offerings and engage with companies in more meaningful ways. But what happens if a company crosses the line between anticipating customers' needs and intruding on their privacy, or if a government tries to access the data in an effort to control security risks? And what happens if the data gets lost or stolen and ends up in the hands of criminals? Privacy and security concerns can impact trust and therefore reduce online and mobile purchasing. Even worse, people's physical security could be compromised as businesses and individuals become increasingly connected.

The companies that are most effective in addressing these issues will be those that are not only strengthening their IT security, risk and governance strategies, but also collaborating with government and engaging with stakeholders. They will need to decide what levels of transparency stakeholders should be entitled to and how to balance competing interests, as well as educating people on how to manage their technology footprint. Employers will also have to consider how much information it is necessary or acceptable to gather on their people, and how open they should be about what they are collecting, and why and how it will be used.

IT outages and disruptions

Notwithstanding the intrinsic reliance Irish corporates have on core business processes, the survey shows that half of Irish CEOs are not seriously addressing the risks of IT outages and disruption.

The risk of IT outages and disruptions should be a huge business concern. If the lights go out in a world that is heavily reliant on technology, the consequences can be extremely disruptive. What happens if customers cannot access their money when they need it, or if their connected homes lock them out? Deeply inconvenient though such incidents are, they pale into insignificance next to the physical risks that can arise as we become more connected. For example, imagine the impact on business and society that would result from a major Telco or Utility provider or hospital not being able to provide services due to a cyber attack.

Artificial Intelligence, automation and robotics

The survey suggests that nine out of ten Irish CEOs are not seriously addressing the impact of Artificial Intelligence (AI) and automation.

Behind automation, robots and smart machines lie algorithms. These maybe nothing more than instructions for computers to achieve particular outcomes, but they shape lives to a much bigger extent than many people imagine. The way we navigate websites, how we interact with connected devices and how we make informed decisions are all influenced by code. This raises questions about what safeguards are needed to ensure that machines carry out human orders effectively, in the way they were intended. It also raises various ethical questions. To what extent, for example, is it acceptable to influence human choices? And can the humans who write these codes – or the companies they work for – be trusted?

A trust strategy for a digital age

In some respects, digital connectivity has made us more trusting; in the sharing economy, for example, consider how many people let strangers stay in their homes i.e Airbnb and/or invest in businesses they have never heard of before i.e. crowdfunding? In other respects, digital connectivity has eroded trust by creating new threats and exposing organisations to far more scrutiny. The growing complexity of technology and the increasingly distributed way in which we work, with greater individual autonomy, have also made it much harder for companies to build trust – or rebuild it, once it has been lost. And no firm gets it right every time, which is why effective crisis management is as crucial as robust risk management.

But if losing people's trust is a sure-fire route to failure, earning their trust is the single biggest enabler of success. Trust is an opportunity, not just a risk. Nearly two-thirds (64%) of global CEOs believe that how they manage and protect their data will differentiate them, but is just one in two (52%) for Ireland. Are Irish CEOs missing an opportunity here?

It will be important to have a trust strategy for a digital age, including robust risk and governance frameworks. It will also be crucial to better integrate human and machine collaboration. But the companies that are successful in addressing these challenges will be those that also prioritise transparency and communication. Without a clear idea of how rules are defined and implemented, for example, stakeholders may question a company's fairness and honesty.

? Tough questions about gaining from connectivity without losing trust

1 Does your CIO know the extent to which the technology you are investing in today will affect how your stakeholders trust you tomorrow?

2 What are you doing to protect customer and employee data from theft, loss or misuse – and how robust are those strategies?

3 How can you build the right infrastructure for collecting, managing, governing and securing data?

4 As cybersecurity risks increase, have you got clear protocols in place for when systems go down and inconvenience your customers?

5 What can you do to measure and leverage trust in your brand as a competitive advantage?

Insight

Dealing with unprecedented levels of cyber attacks

Pat Moran
PwC Ireland
Cyber Leader

Given the unprecedented global cyber attacks that have already occurred in 2017, it's worrying to learn that the survey suggests that some 40% of CEOs do not intend to seriously address their cybersecurity immediately. Data security, or the lack thereof, poses a huge threat to organisational reputation. Clients, customers and stakeholders have to be able to trust you with their information.

If this trust is lost it's very difficult, not to mention costly, to regain it.

PwC advises and assists our clients complete the key steps they can take to reduce the likelihood of incidents, limit their impact if one does occur, and to recover swiftly and effectively.

These steps include:

- Adequate investment to design and deploy a robust cyber security strategy
- Robust business continuity planning
- Creating crisis and incident response strategies
- Ensuring you have strong security hygiene policies and user awareness
- Implenting rigorous patch and vulnerability management

We urge CEOs to develop a trust-based strategy for a digital age, including robust risk and governance frameworks that is adaptable to the rapidly changing landscape.

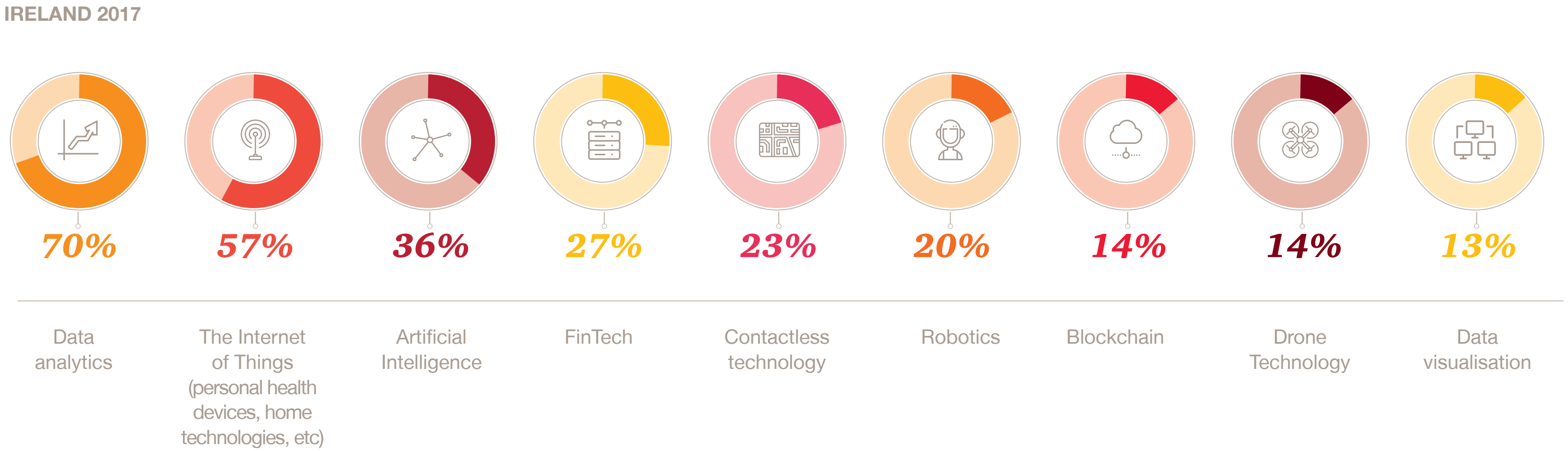
Technology

Technology

Irish business leaders see data analytics as the emerging technology having the greatest opportunity with quite a lead over other technologies. This is followed by the Internet of Things and Artificial Intelligence. Just over a quarter (27%) see FinTech as presenting the greatest opportunities while Blockchain, drone technology and data visualisation are seen to present less opportunities.

Chart 22:

What emerging technologies have the greatest opportunities for your organisation? (% who said 'yes')



As the definition of digital has grown more expansive, company leaders have recognised that there exists a gap between the digital ideal and their digital reality. Over half (53%) of Irish business leaders reveal that technology has either completely or significantly reshaped competition in their industry in the last five years. And even more startling, three-quarters (76%) are of the view that even more significant change is yet to come in the next five years.

The extent of technological change in the next five years is expected to be more dramatic than ever seen in recent times.

There is a new wave of transformation emerging from artificial intelligence, virtual reality and robotics bringing hitherto futuristic concepts into our day-to-day lives both at work and at home. Technology has become a vital component of every industry, bringing unprecedented opportunities for growth along with challenges and competition from traditional and new threats.

More to do on digital literacy

Just over half (54%) of Irish CEOs admit that they have strong digital skills. Indeed, for most areas of digital literacy, Irish CEOs lag their global counterparts.

What does good look like when it comes to digital savvyness?

It's a company in which the workforce is tech fluent, with a culture that encourages the kind of collaboration that supports the adoption of digital initiatives. The organisational structure and systems enable leaders to make discerning choices about where to invest in new technologies. The company applies its talent and capabilities to create the best possible user experience for all of its customers and employees.

Simply upgrading your IT won't get you there. Instead of spending indiscriminately, start by identifying a tangible business goal that addresses a problem that cannot be addressed with existing technology or past techniques and then develop the talent, digital innovation capabilities and user experience to solve it. These three areas are where the new demands of digital competence are most evident. They are equally important; choosing to focus on just one or two won't be enough.

It's time for company leaders to build their digital confidence and their digital acumen; they cannot afford to wait.

Chart 23:
To what extent has technology changed competition in your industry over the past 5 years?

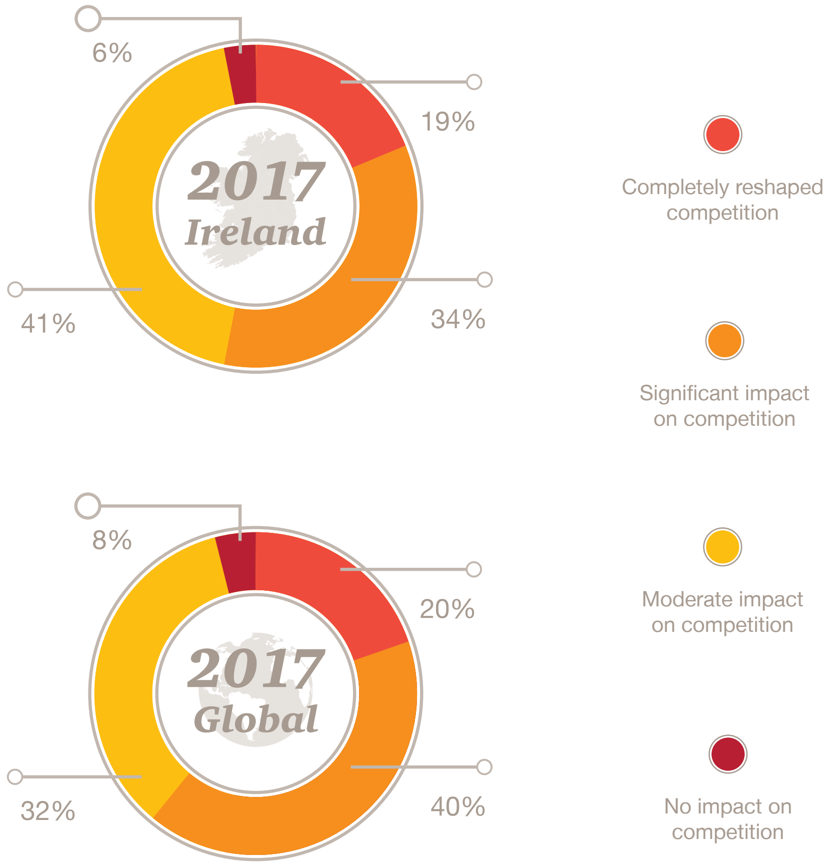


Chart 24:

To what extent do you think technology will change competition in your industry over the next 5 years?

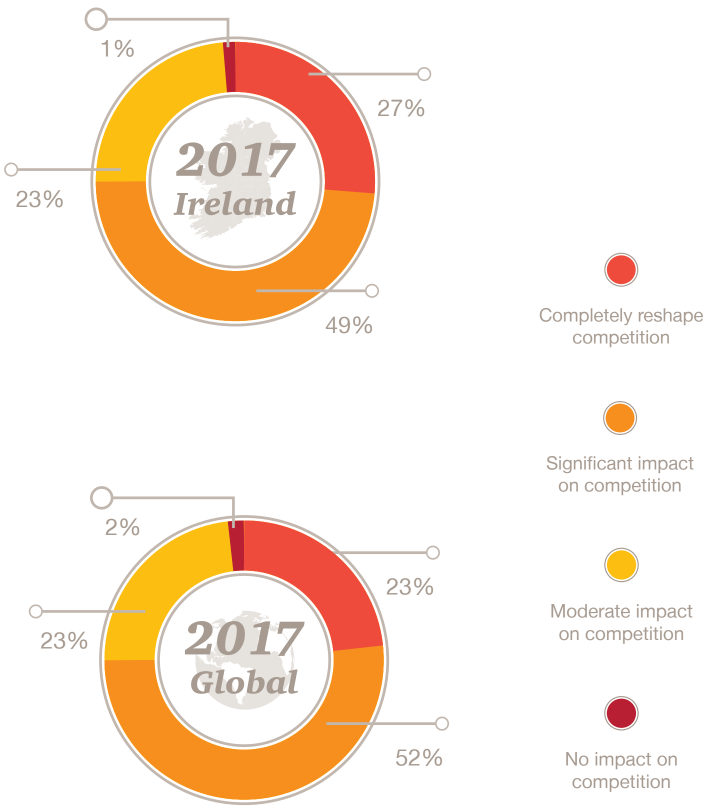
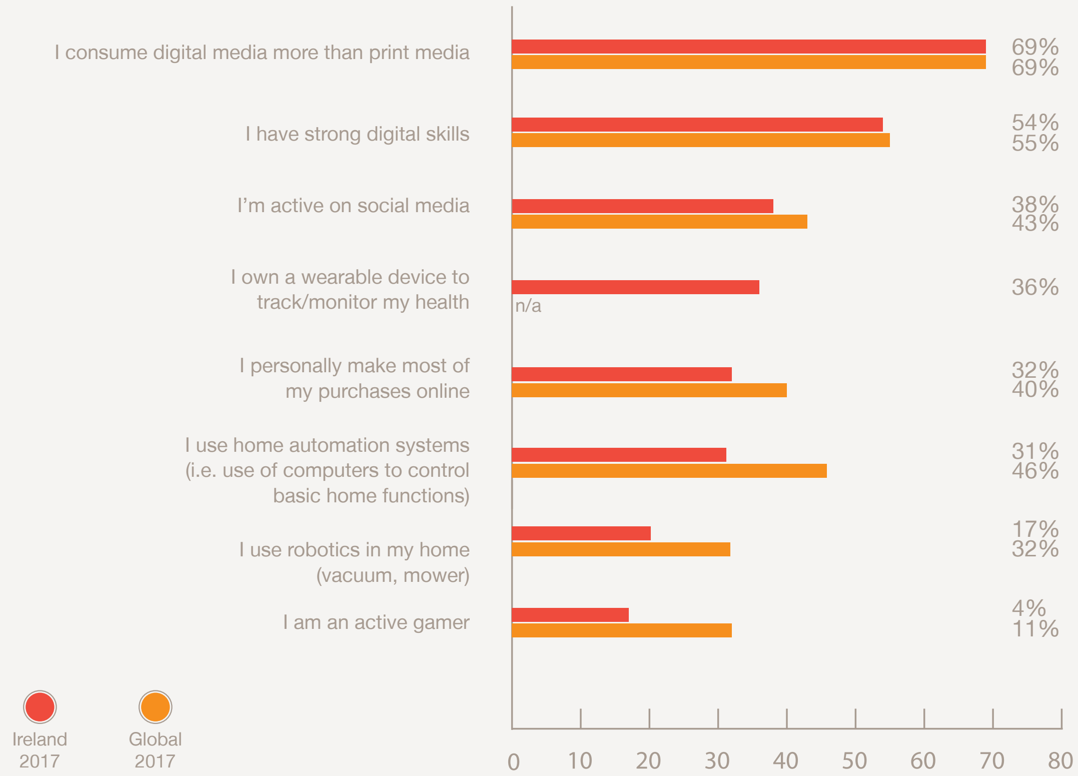


Chart 25:

Personal use of technology (% who 'agreed ' with the following statements)



Artificial Intelligence: fundamental shift in technology

Leaders need to think more analytically

Just one in three (36%) Irish CEOs see Artificial Intelligence (AI) as an opportunity. Yet in our experience with clients we see AI rapidly working its way into business operations and decision making within many industries globally and in Ireland.

Grappling with the new technologies will be unavoidable for leaders because of two important structural forces driving AI. First is the supply of new products, services and platforms. For example, the typical person's media diet is, in effect, already designed by computer-based nutritionists. Every day, millions of Spotify listeners take their cues from AI-generated playlists. Said one leader: 'for me, asking if a business can benefit from AI is like asking if a business can benefit from the internet. It is that fundamental a shift in technology. If you don't figure out how to use it and benefit from it, you are going to go out of business. Your competitors will destroy you.'

The second structural force is demand. The business shift is being driven by consumers' desire to move to a world in which they have greater customisation, spontaneity and personalisation in the way they purchase, communicate and engage with businesses.

AI is both a strategic imperative and an immense opportunity. It can be applied to all areas of corporate endeavor: process, monetisation, distribution and creative work. To date we see many companies are in denial of AI. Some are beginning to experiment, focusing on specific activities (e.g. the back office or customer service). Others are taking a strategic, organisation-wide view. But in order to make the most of AI, leaders have to learn to think more analytically about the challenges and opportunities at hand.

Insight

How can you prepare your business for the future? Investing in transformation and emerging technology are imperative

Give your business the future

Ciarán Kelly
Advisory Leader,
PwC Ireland

The world is changing at an unprecedented rate. Organisations have invested a lot of time and resources to keep up with new technology and customer expectations. Technologies like Nest, Amazon's Alexa and cryptocurrencies seemed farfetched five years ago. Now they are part of many of our day-to-day lives.

The survey highlights that less than half of Irish CEOs are seriously addressing many of the areas causing business disruption. CEOs need to recognise that trust can be established as well as rapidly lost in the digital era. However, they cannot deny the unstoppable progress of the digital world that continues to become part of the fabric of our daily personal and business lives.

Companies prepared for the next wave of transformation are the ones that will thrive in the years to come. That wave will feature the steady introduction of artificial intelligence (AI), virtual reality and robotics into our daily and business lives.

AI is both a strategic imperative and an immense opportunity. It has the potential to improve efficiency, create new and better user experiences and products, free up people to get involved in more intense creative efforts, and contribute to the bottom line.

Ongoing advances in AI will have profound impacts on jobs, skills and HR strategies in almost every industry. Companies don't have the luxury of time to map out their plans for an AI-enabled world.

Investing in emerging technology depends on many factors, but businesses need to invest in a way that is appropriate and unique to their sector and individual business.

Companies keen to develop their transformational capabilities should:

- Ensure C-Suite buy-in
- Consider the impact of business disruptors on stakeholder trust
- Develop an emerging technology strategy
- Identify and measure KPIs expected from digital investments
- Upskill or recruit staff to make emerging tech a strategic norm
- Invest in cybersecurity

We asked CEOs what specific aspect of today's world might be disrupted or replaced by new technology over the next 20 years and below is a synopsis of the views received:

- The human workforce will be significantly disrupted by robotics/automation
- Banking services will dramatically change
- Transport will become driverless
- The fixed workplace will become a lot more remote
- How we purchase goods and services will change
- FinTech and digital automation will impact financial decisions
- Digital technology will transform the relationship between work and leisure
- Mental health issues will increase as a challenge
- Healthcare advances will be assisted through wearable technology
- Introduction of a cashless society
- Artificial Intelligence will transform of society
- Service provision will be defined by Artificial Intelligence
- Customer contact will be significantly disrupted
- Transport systems will become more automated including high speed trains
- The Internet of Things will become pervasive
- Data centres will reshape data storage and transmission
- Increasing management of life by the smartphone

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The survey was carried out in April/May 2017 amongst Irish CEOs (Multinational and Irish Indigenous) across all key industry sectors having over 200 participants.

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