



**Better Lives,
Better Business**
An Ibec campaign

Is Irish business getting ready for the Circular Economy?

A survey conducted in association with the EPA



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Foreword

Ibec is committed to improving the quality of life of people who live and work in Ireland. Businesses see this as a key factor in attracting and retaining the talent that is vital for securing investment and enhancing Ireland's prosperity.

Ibec's ongoing *Better Lives Better Business* campaign has four interlinked strands, namely Housing, Infrastructure, Planning and Sustainability. The last of these includes helping our member firms to become more sustainable by adopting circular economy principles and practices.

As first step, we felt it appropriate to assess the current state of play by surveying a sizeable sample of the membership. The results indicate that much work remains to be done. However, we believe that the attitudes and intentions expressed by many of the respondents are suggestive of a very encouraging trend. To make our findings accessible to a wider audience, this report includes some background material on the EU's circular economy initiative and what it means for Irish business.

We hope that our findings and recommendations will be of practical help to Irish policymakers seeking to accelerate the transition, as well as to firms aiming to become successful early adopters.



Neil Walker

Head of Infrastructure, Energy and Environment

Executive Summary

The European Commission believes that a move to a more circular economy is essential to developing a sustainable, low carbon, resource efficient and competitive society. It has proposed a set of actions for member states that aim to ‘close the loop’ of product lifecycles through changes in product design and increased waste prevention, reduction, re-use and recycling. Many of these actions will have implications for Irish business.

Ibec’s Research Unit, with the support of the Environmental Protection Agency, undertook an online survey of Ibec member companies during 2018. The main objective was to assess the perceived importance of the circular economy to senior managers across a range of sectors, and to understand their current state of readiness, as evidenced by levels of engagement in a variety of circular economy initiatives. It posed a range of questions covering aspects of business planning for the circular economy, initiatives currently in place, attitudes to the circular economy across businesses and the perceptions of Irish business around the circular economy. The 217 respondents who completed the online survey were a mix of manufacturing, service and distribution businesses.

Key Findings

- Barely half of respondents to the Ibec survey understood beforehand what was meant by the circular economy. Less than two out of five were even aware of the EU framework.
- However, almost half the respondents acknowledged that moving to a more circular economy presents a business opportunity in the long-term, with such initiatives being increasingly important to company operations.
- A wide variety of circular initiatives are already in place, for example:
 - Formal green teams (mainly in larger organisations)
 - Increasing usage of local supply chains
 - Design for dismantling and re-use
 - Reduced use of critical (scarce) raw materials
 - Innovative service delivery
 - Avoiding or reducing single use packaging materials.

- Only one-tenth of the respondent companies had a specific budget in place in their organisation to support circular economy initiatives. These firms appear to be a lot more active in pursuing circular initiatives.
- Almost two out of five respondents reported that they expect availability of funding to be a major challenge in the next 3 to 5 years. A similar proportion, when prompted, said they would consider making a voluntary pledge.

The survey confirmed that there are opportunities and potential winners in transitioning to a circular economy. Ibec believes that targeted education, reinforced by closer cooperation within supply chains, would be beneficial to help more Irish firms to transition successfully.

Chapter 1: Introduction to the circular economy

1.1 What is the circular economy?

Whereas the traditional economy (make, use, dispose) can be considered linear (Figure 1) the concept of a circular economy starts at the design phase of a product's life with the aim of keeping resources in use for as long as possible, extracting the maximum value from them while in use, and finally recovering or regenerating products and materials at the end of each service life (Figure 2).

Figure 1:
Linear economy

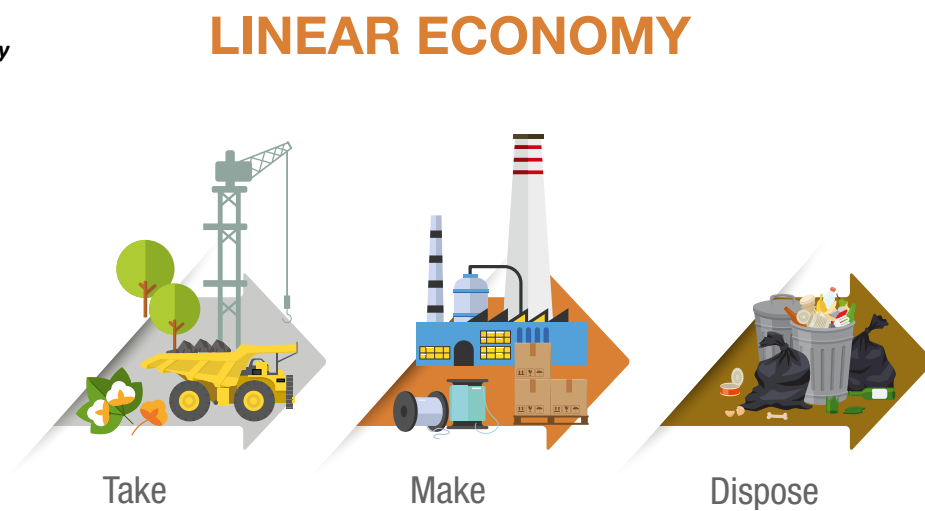
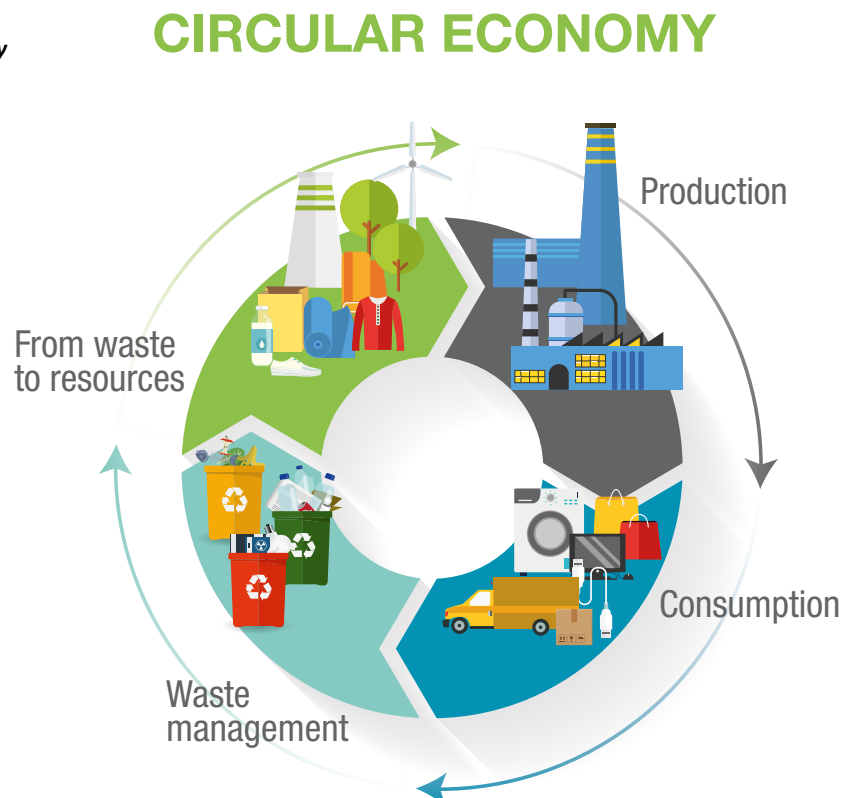


Figure 2:
Circular economy



1.2 The EU circular economy package

In December 2015, the European Commission adopted an Action Plan entitled '*Closing the loop – An EU action plan for the circular economy*¹, more commonly known as the Circular Economy Package (CEP). The Commission has stated that it will contribute to the EU's continuing efforts to develop a sustainable, low carbon, resource efficient and competitive economy. It also considers that such a move represents a systemic shift, building long-term resilience, generating business and economic opportunities, as well as providing environmental and societal benefits.

Successfully implemented, the CEP could boost the EU's competitiveness by protecting businesses against scarcity of resources and volatile prices. It could create local jobs at all skill levels and in all regions across Europe. It will also create opportunities for social integration and cohesion. It is anticipated that full implementation of the package could create up to 178,000 direct new jobs in Europe by 2030².

The CEP entails the development of strategies for specific issues such as plastics, the revision of the EU waste directives and the setting of targets up to 2025, 2030 and 2035. It examines and sets out actions on improving production, consumption and waste management and boosting the market for secondary raw materials and water reuse. These actions contribute to 'closing the loop' of product lifecycles through changes in product design and increased waste prevention, reduction, re-use and recycling. It lists five priority areas: plastics; food waste; critical raw materials; construction and demolition; and biomass and bio-based products. These areas have been highlighted due to the specific challenges they will pose during Europe's transition to a more circular economy.

As part of the CEP, new Directives were adopted in July 2018 to set the following targets:

- Re-use/recycle 65% of municipal waste by 2035
- Reduce landfill to a maximum of 10% of municipal waste by 2035
- Re-use/recycle 70% of all Packaging waste by 2030
- Re-use/recycle 55% of Plastic Packaging waste by 2030.

¹ https://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_1&format=PDF

² European Environment Agency. (2016) No. 2/2016 Circular economy in Europe. Developing the knowledge base

How this affects Irish business

The circular economy and the implementation of legislation is expected to have an impact on Irish business bringing as it does, requirements such as improved waste management, reduced use of hazardous substances and improved design and re-usability of goods and services.

Progressive Irish companies should now be examining the design of their products and associated packaging to facilitate ease of re-use/ recycling. They may also need to rethink the raw materials used in their processes, products and packaging, as more chemicals are likely to fall under the scope of the REACH Regulation. On the plus side, the CEP should bolster markets for secondary raw materials and could provide opportunities to create jobs in Ireland. It also presents an opportunity for brand owners in Ireland to become sustainability leaders within their sector and thereby gain international market share. For example, it may be possible to increase the use of recycled content in food packaging while ensuring that food safety and public health are not compromised. Brand owners may however have to source from alternative materials suppliers, which could have implications for Irish contract manufacturers.

While there are evident opportunities and potential winners in transitioning to a circular economy, the potential risks to Irish business also need to be appreciated. Closer partnership through supply chains will be essential to identify and minimise risks to business operations during the transition.

Chapter 2: Overview of the survey

2.1 Methodology and questionnaire design

Ibec's Research Unit, with the support of the Environmental Protection Agency, undertook an online survey of Ibec member companies during 2018. It was designed to gauge the importance of the circular economy to Ibec members and to understand current or anticipated levels of engagement in a variety of circular economy initiatives. It covered aspects of business planning for the circular economy, as well as initiatives already in place, and the attitudes or perceptions of the business community. Most questions were single-response or multiple-response options, but there were also several open-ended ones that gave respondents the opportunity to supply additional information or provide more detailed opinions. Appendix 1 sets out the full questionnaire.

Respondent companies were asked to select, from a wide range of initiatives, those they were currently involved in or were considering implementing within the next 12 months. The range included most of initiatives identified in the EU action plan as critical to successful implementation of the circular economy including, among others:

- Reduced use of hazardous materials
- Increased use of local supply chains
- Increased consumption of services rather than goods
- Increased partnerships with social enterprises
- Reduced water usage
- Creation of a green team within the organisation

2.2 Profile of Respondents

The survey was distributed to senior managers in both high- and low-tech manufacturing, service sector industries and distribution companies. A total of 217 organisations, collectively employing 81,534 staff in Ireland, responded. One third were engaged in manufacturing activities whereas three-fifths were in the services sector. Distribution, whether retail or wholesale, accounted for the remainder.

Nearly three-fifths of the companies that responded to the survey were from companies with fewer than 50 employees (Figure 3). This size profile appears broadly representative, given that firms with fewer than 50 employees account for nearly half of total employment in Ireland's private sector³.

Size of company		
	No. of Responses	Percentage
Less than 50 employees	130	59.9%
50-99 employees	29	13.4%
100-249 employees	25	11.5%
250-499 employees	14	6.5%
Over 500 employees	19	8.8%
Total	217	100%

Figure 3: Response rate by company size

³ Central Statistics Office (CSO). Business Demography Survey 2016

Chapter 3: Irish business attitudes to the circular economy

3.1 Company awareness and understanding of the circular economy

Our survey casts a spotlight on what appears to be a significant information deficit amongst Irish businesses. Fewer than two out of five respondents stated that they were aware of the EU framework on the circular economy. This is a surprisingly low proportion, given its prominence within the European Commission since adoption in 2015. On the positive side, though, it seems that many firms are undertaking circular economy activities without explicitly labelling them as such.

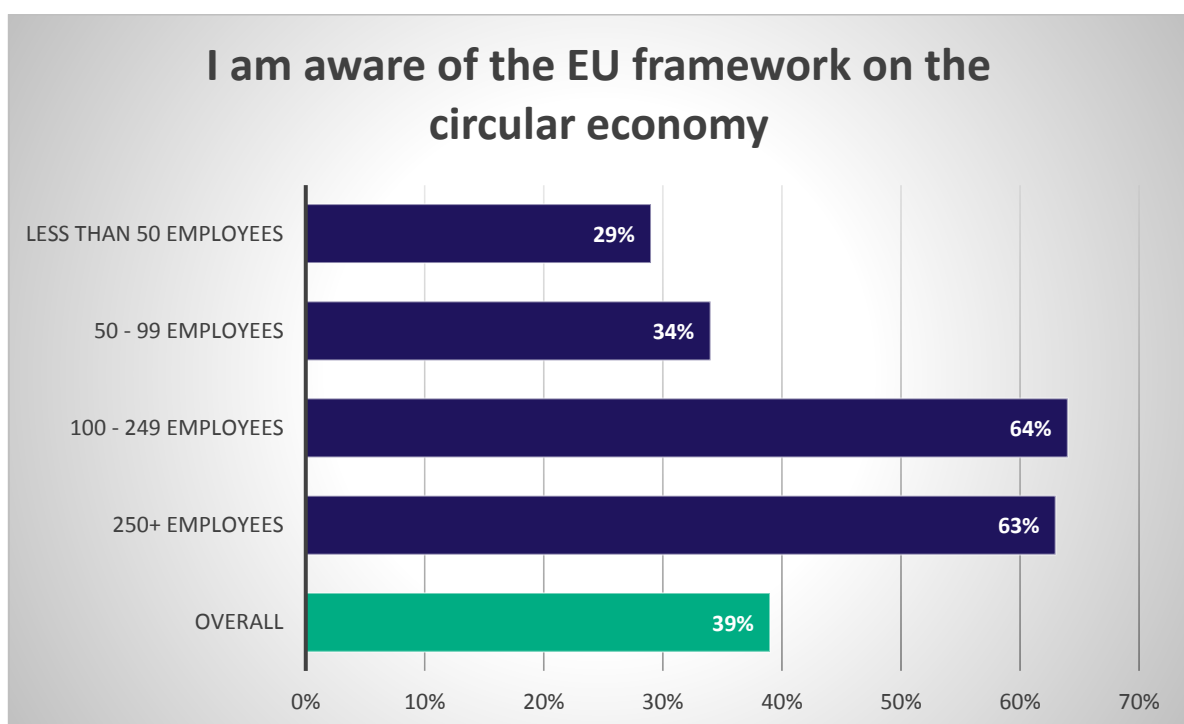


Figure 4: Awareness of the EU framework on the circular economy - by company size

As Figure 4 shows, awareness of the EU framework is proportionally higher in larger companies than in smaller ones. Nearly two-thirds of companies with more than 250 employees indicated awareness of the framework, compared with one-third of companies employing fewer than 100 staff. This may simply be because larger companies are more likely to have dedicated environmental/sustainability personnel with the capacity and expertise to keep up to date on both EU and national legislation.

Figure 5 similarly shows that larger respondent companies are nearly twice as likely as small ones to be aware of the circular economy concept. It is also worth noting that, regardless of company size,

there is a higher awareness of the concept than of the EU framework itself. The difference may reflect the fact that circular economy principles are neither new nor exclusive to the EU.

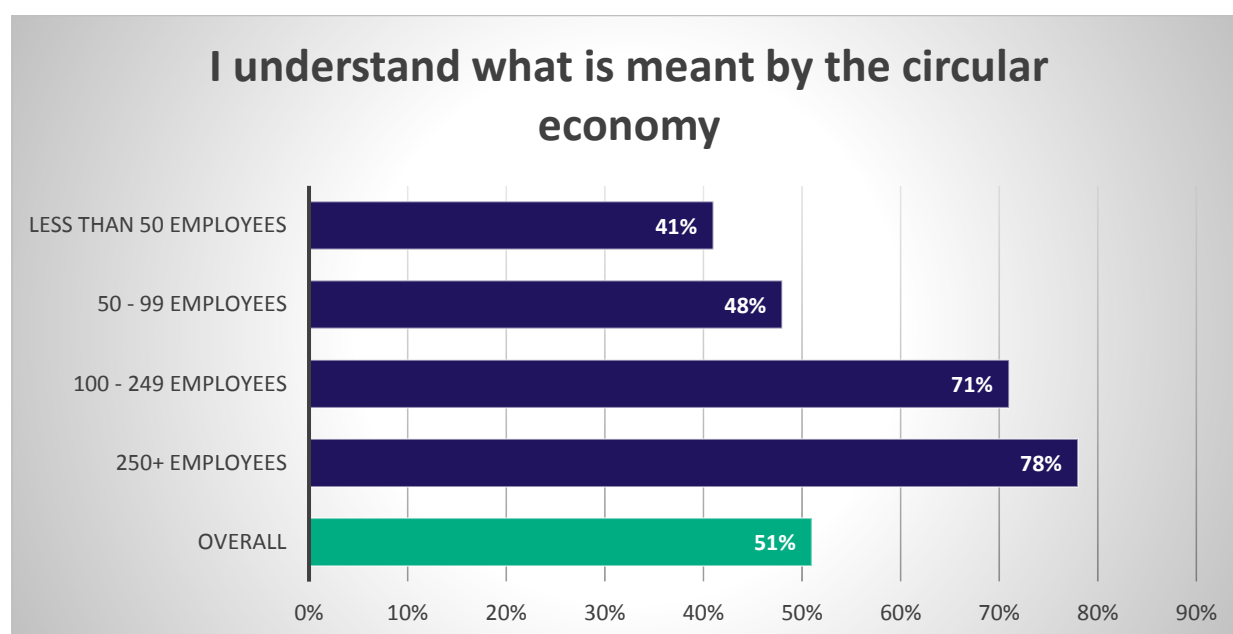


Figure 5: Understanding of what is meant by the circular economy - by company size

Awareness of the EU framework by survey respondents is closely correlated with their understanding of the circular economy. Overall, among those who are aware of the EU framework, almost all agreed that they understand what is meant by the circular economy. For those who indicated that they are not aware of the EU framework, understanding of what is meant by the circular economy was just 30%. The survey responses suggest the need for better awareness, particularly amongst SMEs. Identifying business opportunities and supporting efforts to mitigate potential negative effects will be core elements in Ireland's successful transition.

3.2 Circular economy – opportunity or threat?

Almost half the survey respondents viewed the transition to a more circular economy as an opportunity for their organisation in the long-term. However, this attitude varied by company size. The larger the organisation, the more likely they were to hold positive views. This may reflect a greater prevalence of specialised personnel in larger organisations.

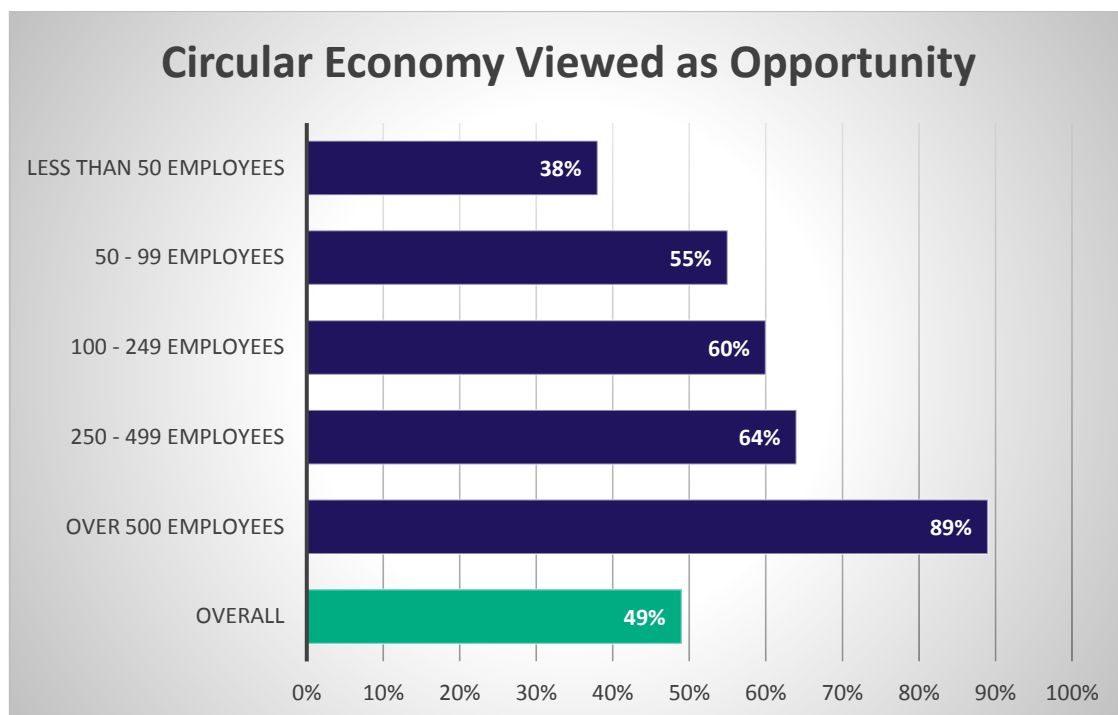


Figure 6: Circular economy viewed as opportunity - by company size

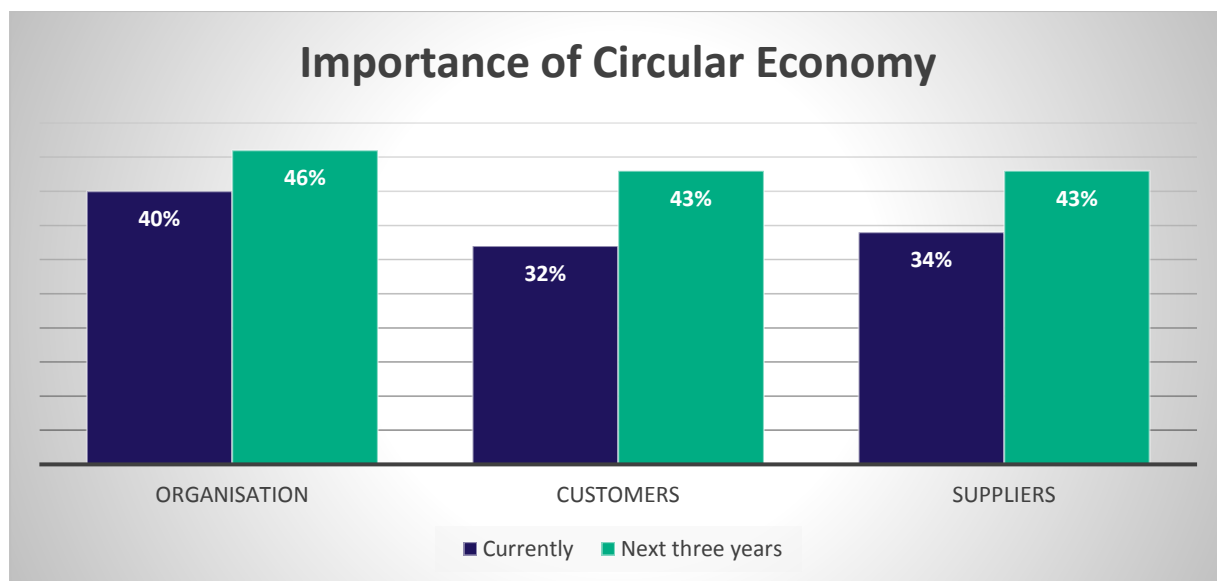
Roughly one in ten responding companies, mainly employing fewer than 100 staff, explicitly viewed the circular economy as a threat. It should be noted, though, that a sizeable minority of respondents did not provide any answer to this question.

The survey responses point to the need for education and support, particularly to smaller companies, on the opportunities (or threats) that may arise as Europe transitions to a more circular economy.

3.3 Importance of circular economy

Respondents were asked to state their views on the importance of the circular economy to the organisation itself as well as to their customers and suppliers, both at the present time and over the next three years.

As Figure 7 shows that only a minority of respondents currently rated the circular economy as important. Across all three business types (manufacturing, services and distribution), however, there was a shared expectation that its importance would grow over time.



(N = 217)

Figure 7: Circular economy ranked as either 'important' or 'very important'

It is intuitively obvious that SMEs could struggle to become more circular in isolation. A supportive, well informed supply chain, along with the formation of sector clusters, has the potential to mitigate the risks and accelerate the transition.

Chapter 4: Scope and prevalence of circular economy initiatives

This chapter compares the level of engagement on a variety of themed circular initiatives across the three business categories.

Over 1,700 initiatives were reported to be in place across the respondent companies. The majority of these were in firms that viewed the circular economy as an opportunity.

The following sections briefly outline current and planned initiatives across five thematic headings, namely:

- Waste management and recycling
- Energy and water usage
- Sustainable business practices
- Localising business
- Staff development

4.1 Waste management and recycling

Figure 8 shows the level of current and possible future engagement for the three most common waste management and recycling initiatives.

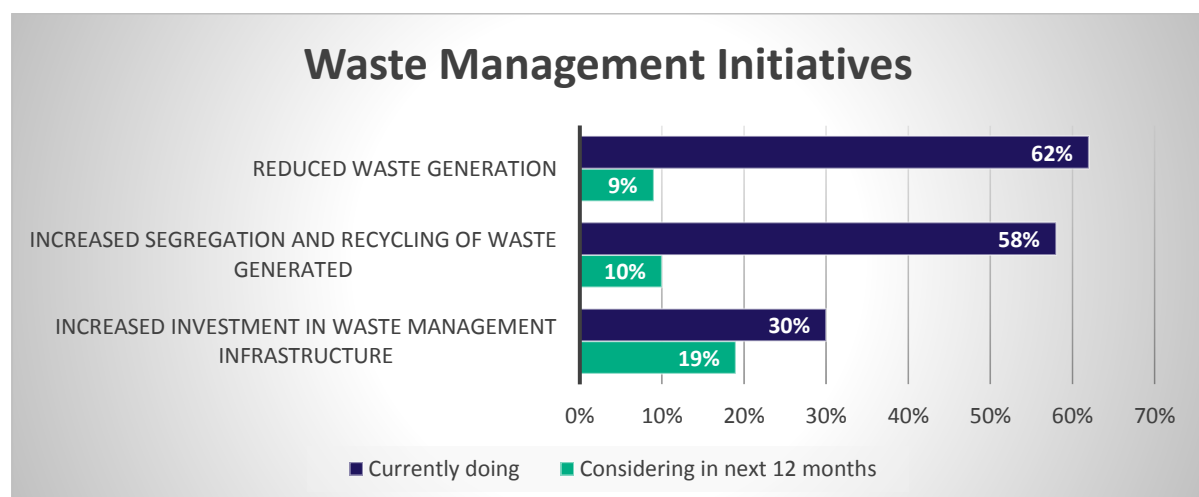


Figure 8: Waste management initiatives – All respondents

Over three-fifths of respondents were currently reducing waste generation within their companies, with nearly as many seeking increased segregation and recycling of waste generated. Nearly one-third of respondent companies had already increased their investment in waste management infrastructure with a further one-fifth considering doing so in the next 12 months.

Engagement in waste management initiatives therefore appears to be a common priority among the respondents. This is not surprising, given the level of Government supports for waste prevention and resource efficiency under the EPA National Waste Prevention Programme.

4.2 Energy and water usage

Figure 9 indicates a high level of engagement across respondent companies on the reduction of energy and water usage. Two-thirds of companies were currently engaging in energy reduction measures, while an additional 10% of respondents were considering doing so within twelve months. Half of the respondents were already engaged in water reduction measures, with a further 16% considering such initiatives over the following year. It is noteworthy that two-thirds of the companies engaged in these initiatives have fewer than 100 employees, indicating that the efficiency message has been getting through to SMEs.

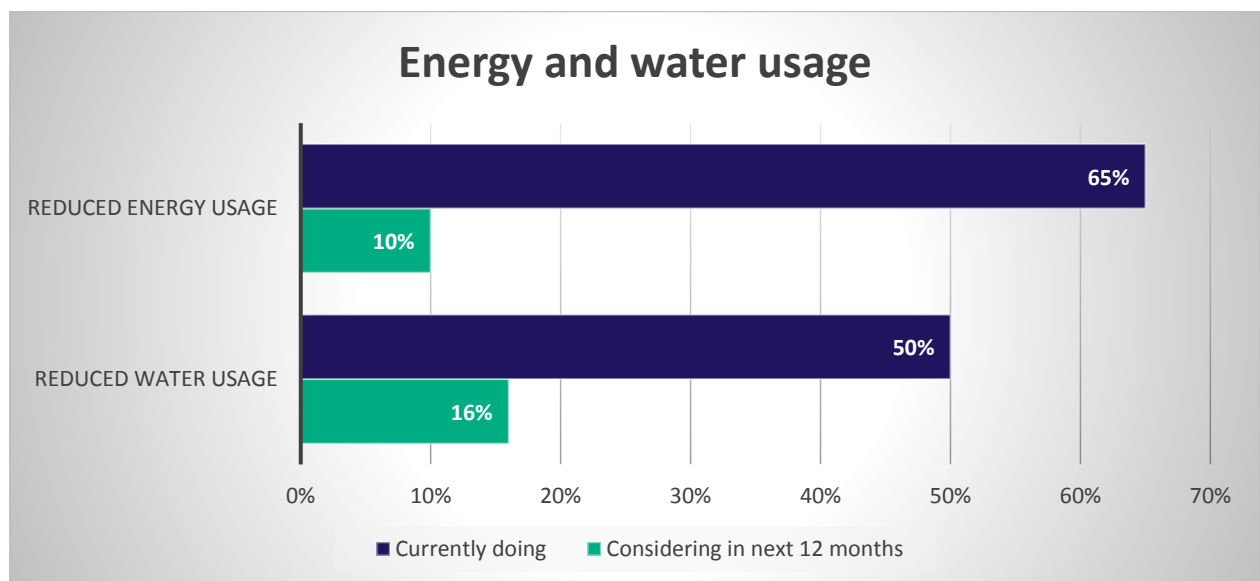


Figure 9: Energy and water usage

4.3 Sustainable Business Practices

The survey addressed a range of topics under the heading of sustainable business practices, asking companies to identify areas where they currently had initiatives in place and to pinpoint areas of potential growth for the coming year.

As shown in Figure 10, a reduction in the use of hazardous materials was taking place in more than two out of five of the respondent companies. Nearly one-quarter of respondents were promoting sustainable practices to their suppliers, with one in five taking an organisation-wide approach. Only one in six of the respondents were currently increasing their engagement with social enterprises, but a significant additional number were considering doing so within the next 12 months. Below, we discuss the rationale for each of these initiatives, along with some examples.

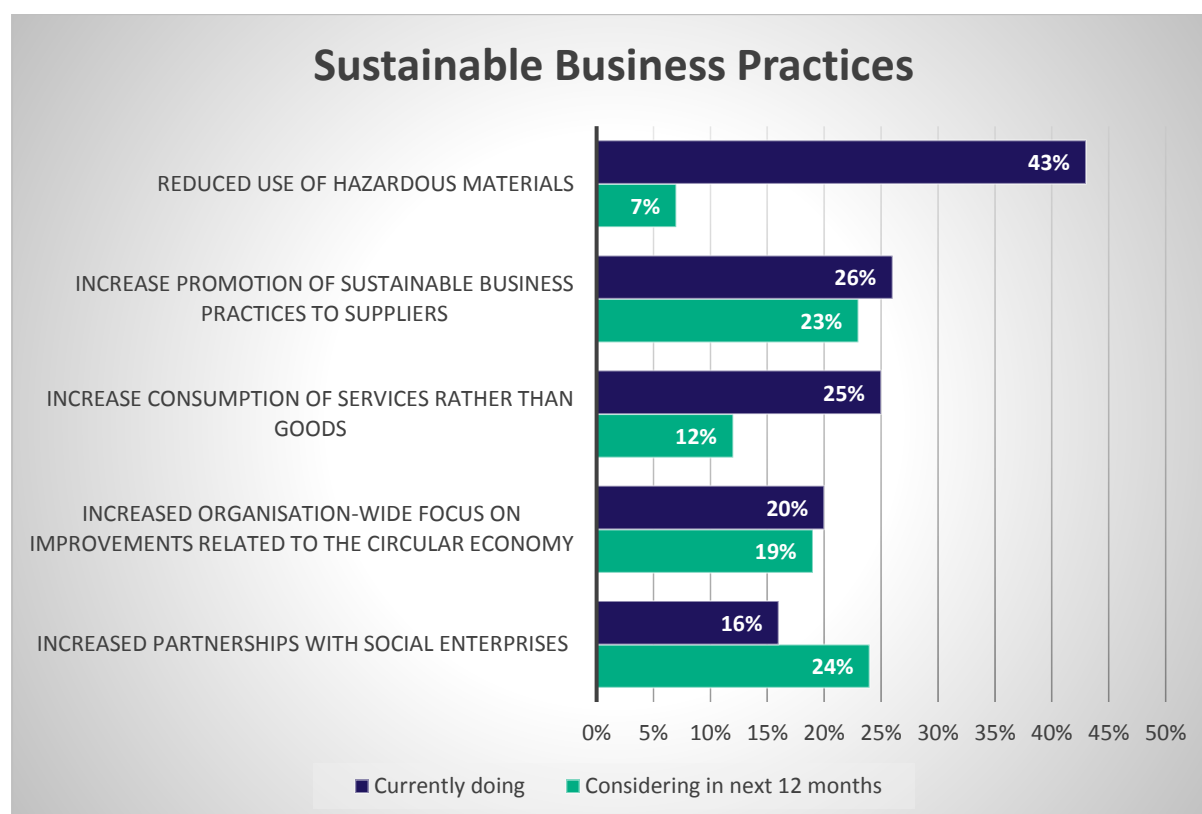


Figure 10: Sustainable business practices

Reduced use of hazardous materials

The EU circular economy package includes a focus on reducing the use of hazardous materials. The European Commission has identified the possible presence of toxic substances in manufactured products as a factor inhibiting the uptake of recycled ('secondary') raw materials. It is therefore working with stakeholders on how to safely increase the use of recyclates.

Insufficient availability of information about quantities and types of hazardous materials in products is a common obstacle. In sensitive applications, such as food contact materials, the safety of recycled plastics is tightly regulated. Currently, recovered PET is suitable to be used in food contact materials

provided that adequate decontamination processes are used. Other recovered plastics cannot yet be used because of a lack of information on the possible presence of hazardous ingredients.

Another obstacle identified by the EU is the presence of hazardous materials in legacy substances, chemicals whose use was permissible at the time of production, but which has since been prohibited. When the product becomes waste, the offending substance may still be contained in the recycled material and may pose health risks.

In addition to ensuring consumer safety, any forthcoming legislation must also ensure a level playing field. Products imported to the EU for sale in the Single Market must be subject to the same safety regulations as comparable products made and sold in Member States.

Increased promotion of sustainable business practices to suppliers

Such practices can range from large brand holders mentoring and educating small suppliers to including sustainability criteria in all tenders. Assisted by sectorial schemes such as Bord Bia's Origin Green, the respondents' level of engagement with suppliers and their promotion of sustainable business practices along the supply chain should increase year on year.

Increased consumption of services rather than goods

Innovative forms of consumption can reduce the amount of waste generated and support the development of a circular economy. Examples include sharing products or infrastructure (collaborative economy), consuming services rather than products, or using IT or digital platforms.

Increased partnerships with social enterprises

A social enterprise is an operator whose main objective is to have a social benefit through providing goods and services for the market. Any profits generated are generally applied to achieve social, environmental or community objectives. Such enterprises are typically active in fields such as recycling, repair, and innovation, providing sustainable and meaningful employment opportunities for people who might not otherwise have access to it.

Increased organisation-wide focus on improvements related to the circular economy

Such initiatives may involve working with supply chains in areas such as sustainable sourcing, reducing marine litter, reducing food waste, and increasing the global market for secondary raw materials. If successfully implemented at scale, they can help to protect businesses against scarcity and volatile prices.

4.4 Localising business

There are several benefits to the use of existing local networks and to recruitment within the business' catchment area, including environmental and economic efficiencies. Figure 11 summarises the relevant survey responses.

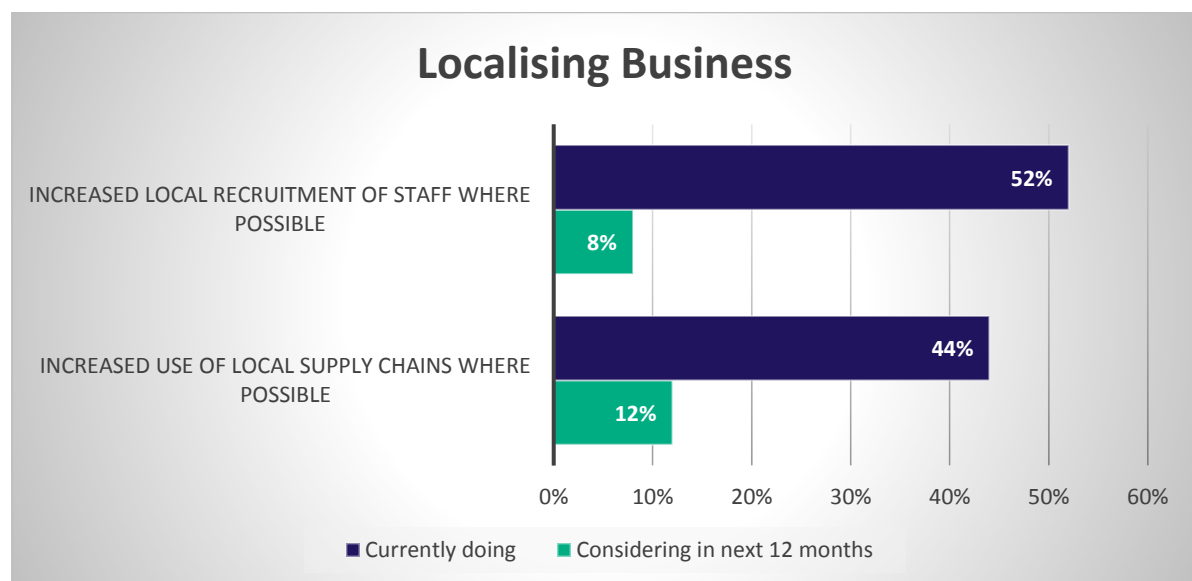


Figure 11: Localising business

Increased local recruitment of staff

Over half of respondents were currently recruiting staff locally where possible, with an additional eight percent considering this in the next twelve months.

Recruitment of staff from within the local area allows more sustainable commuting options. Even in circumstances where cars are used, employing staff from the local area reduces travel time. It can improve productivity while helping to reduce the carbon footprint of the organisation.

Increased use of local supply chains

The increased use of local supply chains was evidently a priority for the Irish business community, with 44 percent of respondents currently engaged in such initiatives. It is noteworthy that 60 percent of respondents who view it as such are based outside Greater Dublin. This suggests that operating away from a major population centre does not appear to be an inhibiting factor for companies wishing to use localised supply chains.

4.5 Staff development

For companies to become more sustainable and circular, the employees need to be engaged and committed to the journey. The preparation of staff for initiatives that may impact their roles is therefore an important element of implementing aspects of the transition. Figure 12 shows that two out of five respondents were currently engaging in training programmes for staff on sustainable business practices.

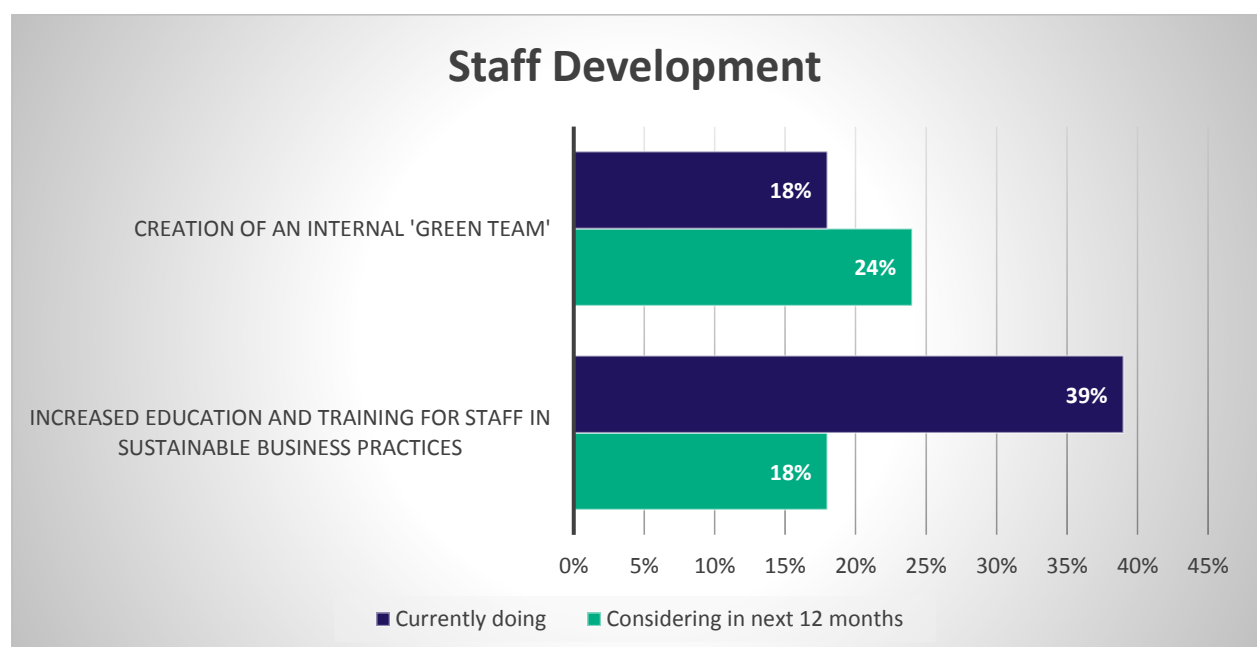


Figure 12: Staff development

The use of green teams was also a key staff development initiative. Nearly one in five reported having created a green team. The majority of these employed more than 100 staff.

These results suggest that promoting staff awareness in this area is a business priority but that a significant minority, especially among SMEs, are not yet engaged in creating the internal cultural changes required.

Chapter 5: Focus on manufacturing companies

A total of 72 respondents self-identified as being primarily engaged in manufacturing activities.

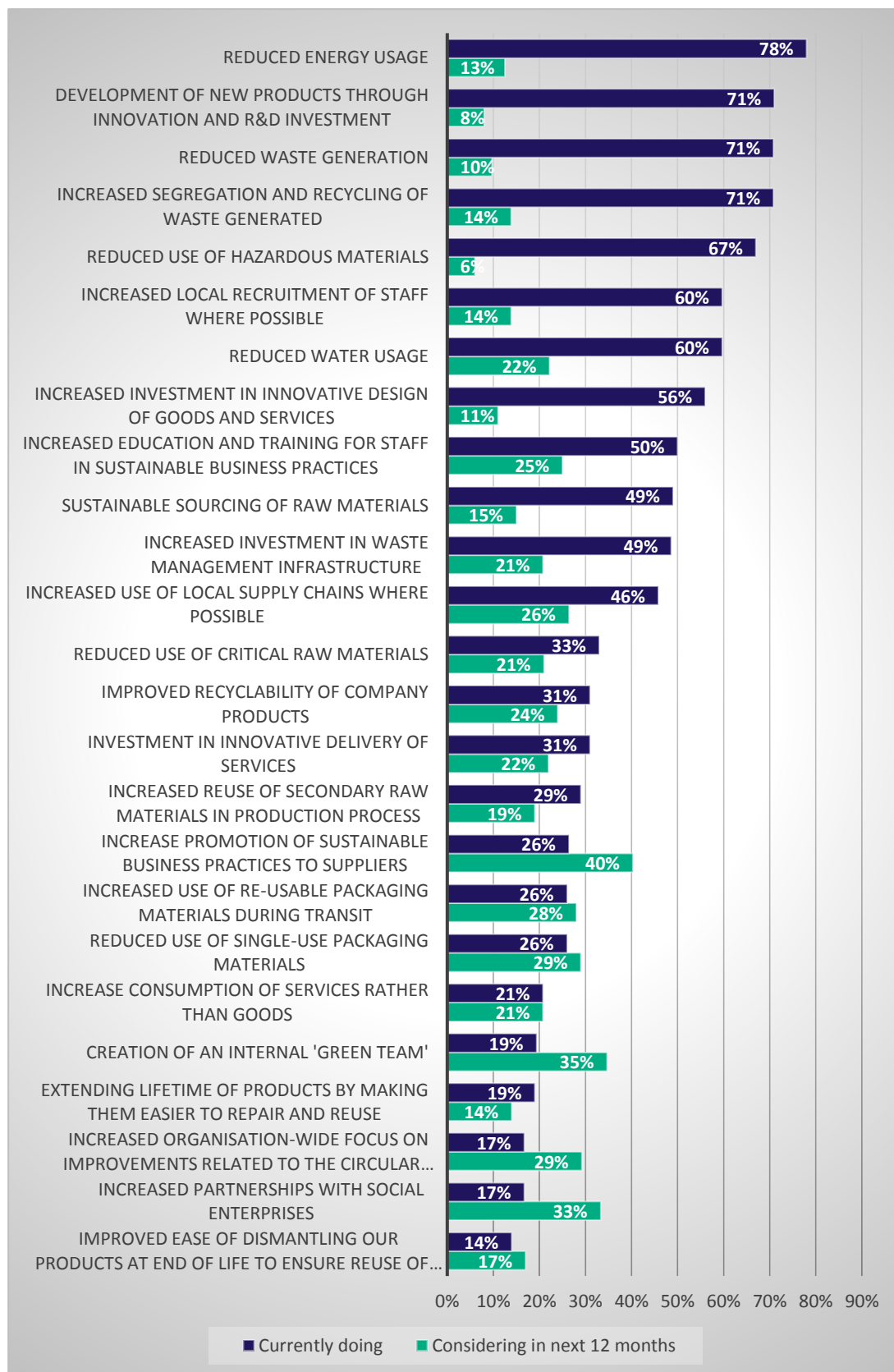
Figure 13 shows the current and expected near-term prevalence across 25 prompted initiatives, including eleven options that were put solely to this sub-set of respondents. Appendix 2 separately presents the results for these sector-specific questions.

Addressing the entire life cycle of new products from the outset is essential to achieve an effective transition. In many cases, the recyclability of a product is primarily determined at the design stage with up to 80 percent of a product's environmental impacts set in the early stages of product development, for example in the concept creation phase. Product developers and process engineers therefore need to embrace eco-design principles.

Innovation

Over seven out of ten manufacturing companies who responded were currently engaged with the development of new products through innovation and investment. Over half were currently increasing investment in innovative design of goods and services. By contrast, only one-fifth were engaged in initiatives to extend the lifetime of products by making them easier to repair and reuse. Just one in seven were considering initiatives to provide for easier dismantling and re-use at the end of the product lifecycle. This suggests that while a significant focus within manufacturing seems to be on design and development, focus on the full lifecycle and the end-of-life of products is at a much lower rate.

Figure 13: Circular economy initiatives in manufacturing companies



Packaging

Increasing the use of re-usable packaging materials during transit of both raw materials and finished product was a focus for over one-quarter of manufacturing companies surveyed. There is significant potential for increased use of multi-trip packaging, which would not only reduce waste disposal costs but would also benefit the environment. Nearly one in three respondents were considering doing so over the next 12 months. Further research in this area would be worthwhile to understand the modalities by which such reductions were being sought.

Raw materials

Nearly half the respondents were pursuing sustainable sourcing of raw materials, while one-third were seeking to reduce their reliance on critical raw materials. Nearly one-third were exploring the increased use of secondary raw materials in the production process. The first of these objectives is germane to Ireland's commitment towards UN Sustainable Development Goals, while the second and third are relevant to improving security of supply.

Critical raw materials are those deemed of high importance to the EU economy but vulnerable to supply disruption. In some cases, their extraction also causes significant environmental impacts. Most are produced in non-European countries. For the last 10 years, reliable and unhindered access to some of these materials has been a growing concern within the EU due to their value to the European industrial base.

Secondary raw materials are recycled materials that can be used in manufacturing processes instead of or alongside virgin raw materials. Forthcoming EU waste directive targets will need to be achieved by 2025 and therefore more products will need to incorporate secondary raw materials. It will require firms to consider more carefully the sustainability of raw materials when developing new products.

Figures 14 and 15 respectively highlight the most and least commonly reported initiatives (both current and planned) of Irish manufacturing companies. Some of the least common ones at present appear the likely to become far more widespread in the future.

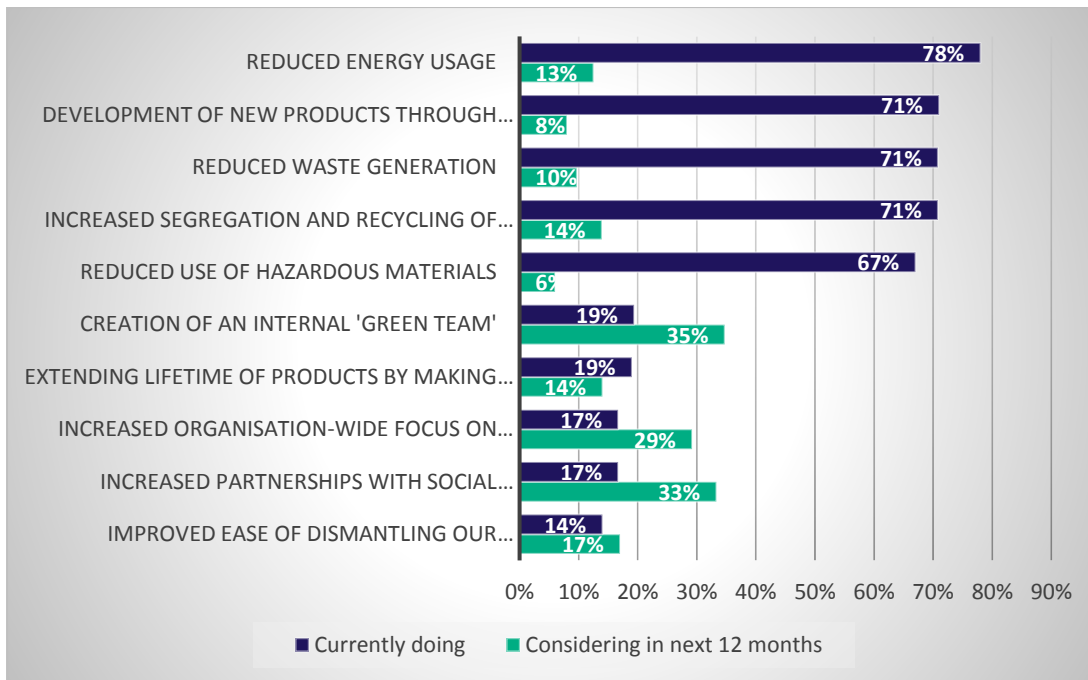


Figure 14: Most common versus least common **current** initiatives

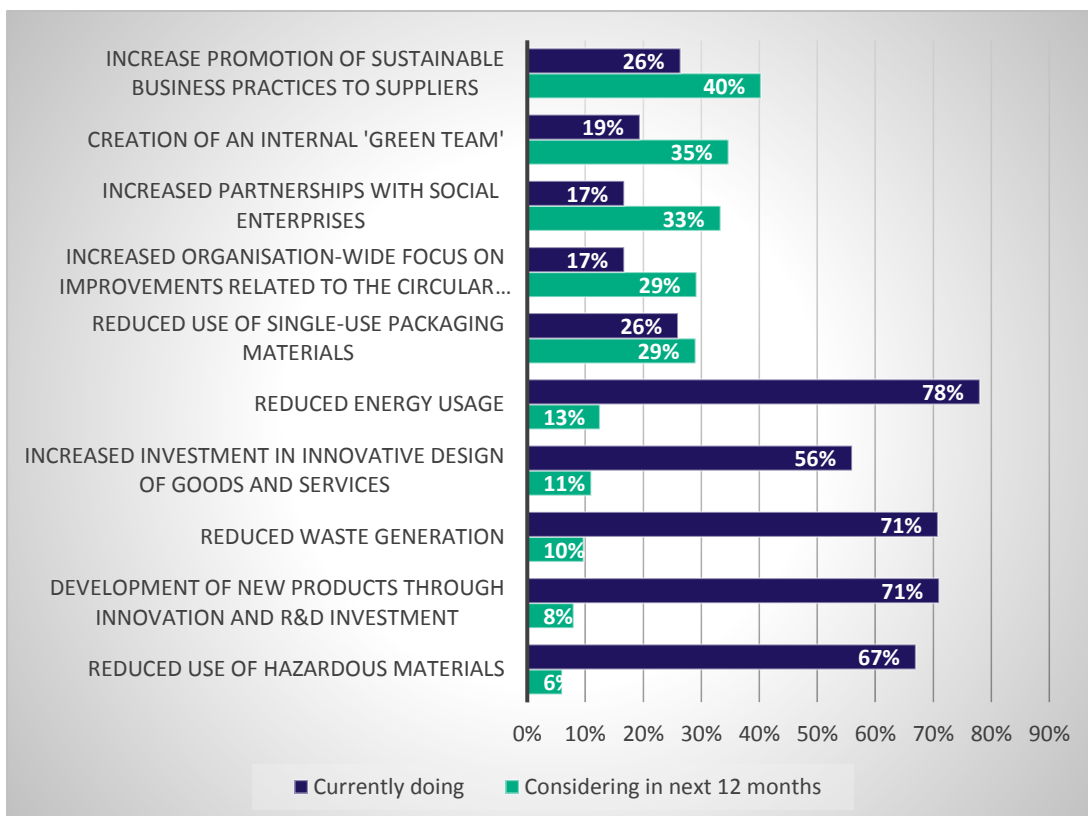


Figure 15: Most common versus least common **planned** initiatives

Chapter 6: Focus on services and distribution companies

A total of 145 companies self-identified as being primarily engaged in services or distribution.

Figure 16 shows the current and expected near-term prevalence across 21 listed initiatives, including seven options that were put solely to this sub-set of respondents. Appendix 3 separately presents the results for these sector-specific questions.

Over a third of the cohort of firms reported that they were investing in innovative delivery of their services. Nearly 30 percent said they were engaged in the development of new products through innovation and R&D investment, with 25% being engaged in investment in innovative design of goods and services. Some of the less common initiatives related to packaging, with less than one-fifth having increased their use of re-usable packaging during transit or having reduced their use of single use packaging.

The most prevalent initiatives relate to efficient resource usage rather than circularity by design. Including circular design principles when innovating was reported by just 15% of this cohort. This figure was rather lower than would be desirable but was not unexpected. It is arguable that supports from state agencies to date largely focus on helping businesses to become more resource efficient rather than more circular *per se*.

On a more positive note, though, the types of circular initiatives that service/distribution companies are considering over the next few years include:

- Increased partnerships with social enterprises (20% of the cohort)
- Creation of an internal green team (19%)
- Increased investment in waste management infrastructure (19%)
- Increased organisation-wide focus on improvements related to circular economy (15%)
- Increased promotion of sustainable business practices to suppliers (15%).

CE Activities - Services & Distribution Companies

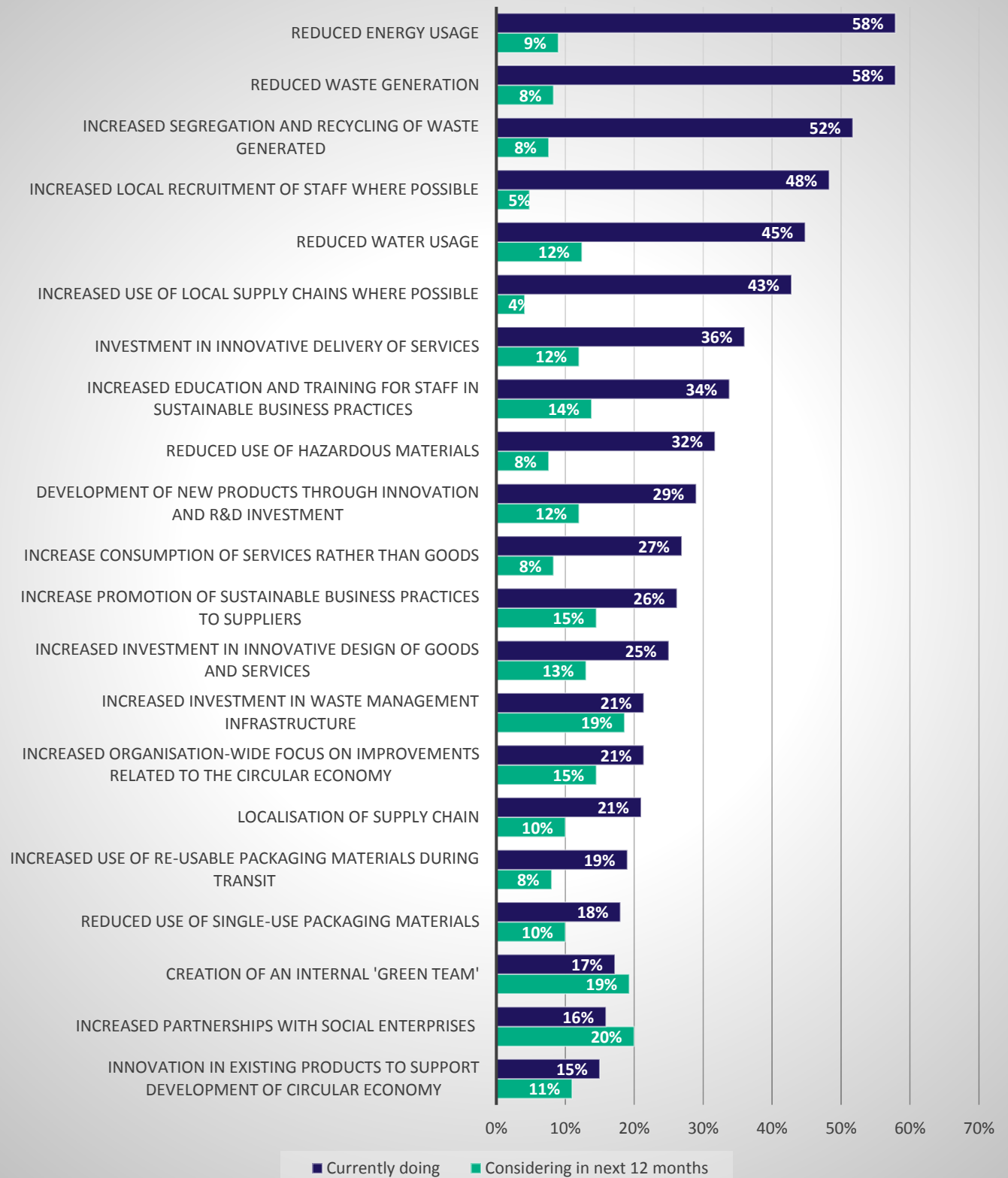


Figure 16: Circular economy initiatives in services/ distribution companies

Finally, it is worth noting (as Figure 17 shows) that service firms were less likely than manufacturing firms to be involved in circular economy initiatives common to both categories. Hopefully this is not symptomatic of a lower level of interest in the transition.

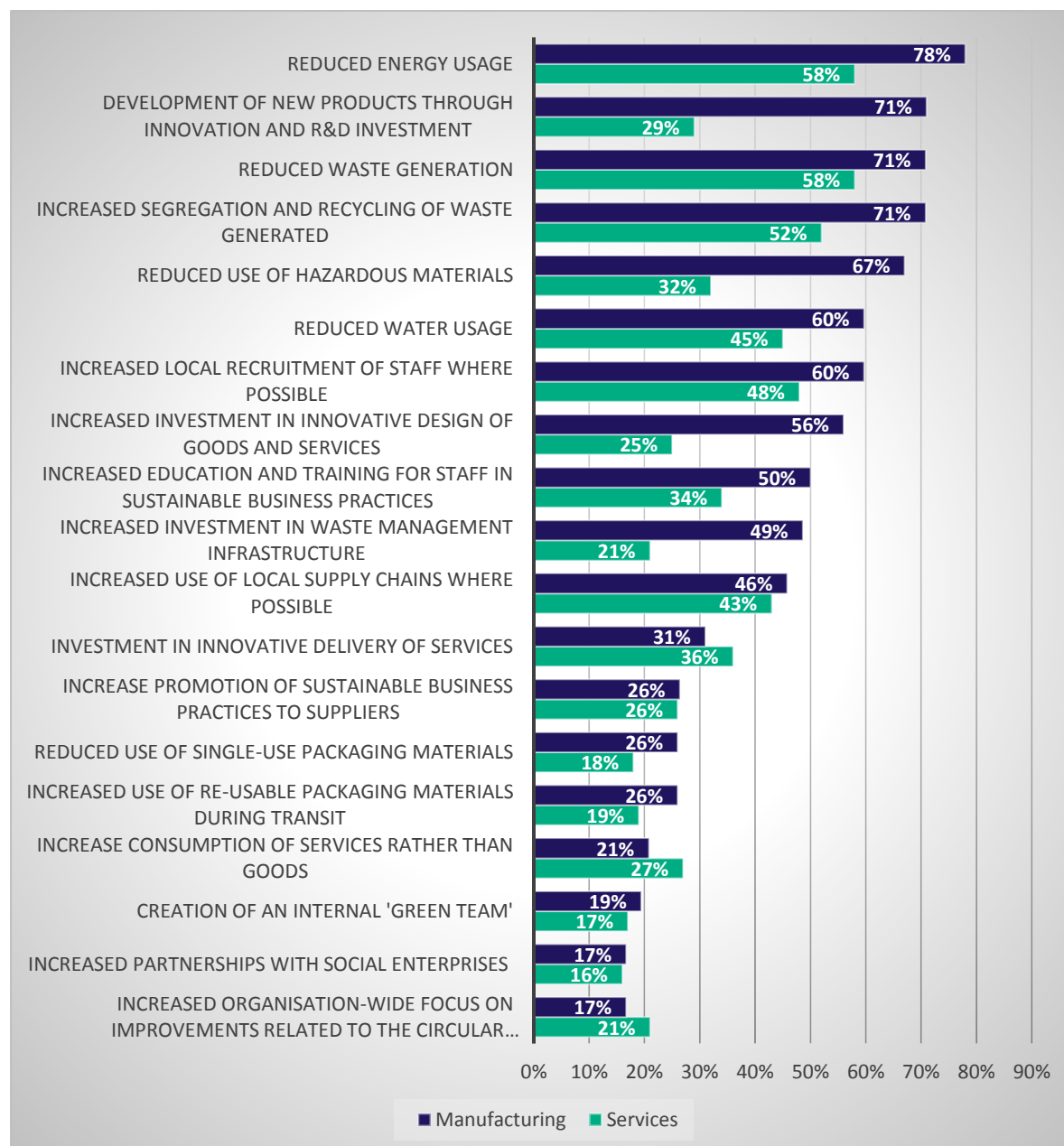


Figure 17: Circular economy initiatives – prevalence by sector

Chapter 7. Developing a circular economy over the next five years

7.1 Perceived challenges

Availability of funding and recruitment of skilled staff were reported to be major challenges by almost two out of five respondents, while investment in technology and equipment represented a major challenge in more than one-third of cases. As Figure 18 shows, respondents generally considered other organisational challenges relating to the circular economy to be somewhat more manageable.

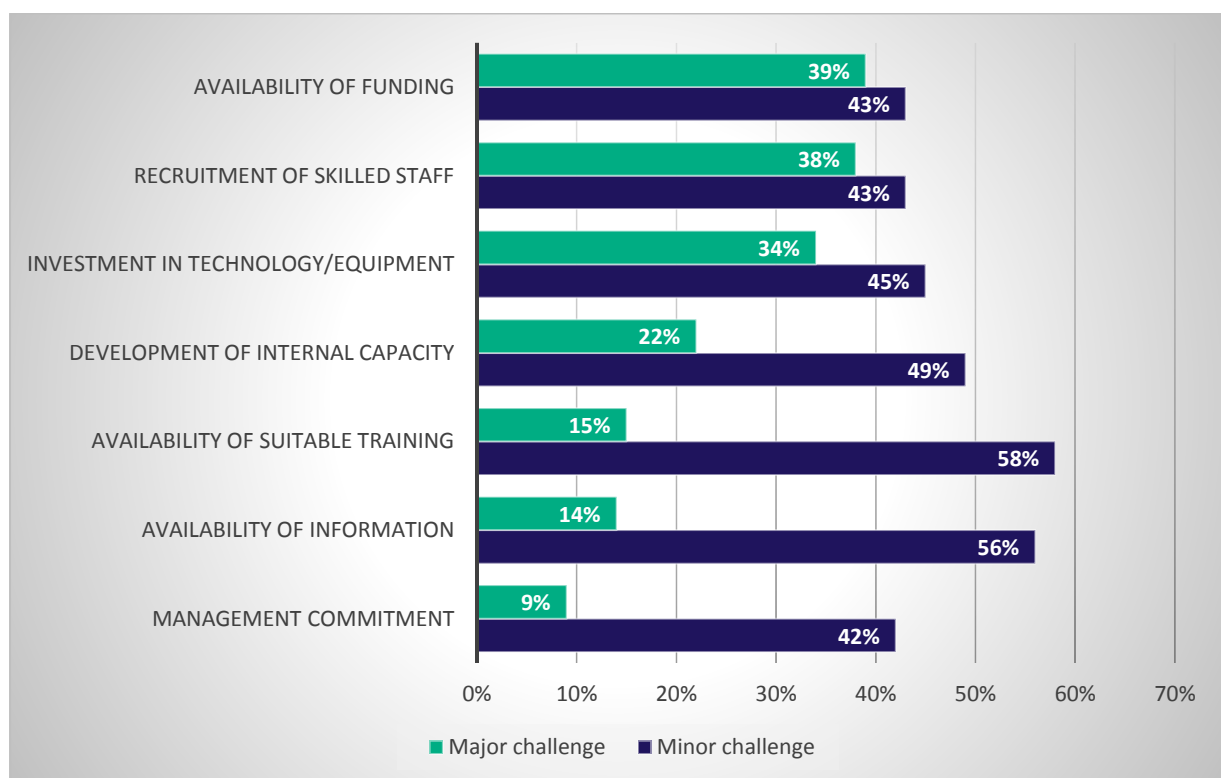


Figure 18: Anticipated circular economy challenges

7.2 Budgeting for circular economy initiatives

The availability of funding for the circular economy transition is viewed as challenging to some degree by over 80 percent of the respondent companies. However, the reported level of applications for grant funding (see section 7.4) is very low. The incidence of specific budgets to support circular economy initiatives varies between the business categories. Although one in six manufacturing companies reported having one, the figure reported by service and distribution companies was significantly lower. The incidence also varies by company size. Among the respondents employing

more than 250 staff, some 28 percent report having a budget in for circular economy initiatives, compared to just 4 percent of those with less than 50 employees.

Given the broad range of initiatives covered under this heading, it may simply be the case that this type of spend is identified under a variety of budget headings. An important question, therefore, is whether having a dedicated circularity budget leads to greater activity and management commitment. On the face of it, the survey data tabulated below appears to support this hypothesis. For example, the average number of circular economy initiatives in place in companies with a specific circular economy budget is double that in companies where such a budget does not exist. This may be partly explained by larger companies having more structured budgets as well as more opportunities to innovate. In the longer term, as circular thinking becomes mainstreamed, it may not be necessary to have a ring-fenced budget. Nevertheless, it seems intuitively reasonable that a company of any size wishing to become more sustainable and circular would benefit from a specific budget that is ringfenced to implement focused initiatives.

	Budget in place	No budget in place
Proportion of respondents with/without CE budget	10%	90%
Average number of CE initiatives per company	16	8
Total number of CE initiatives	332	1,370

Figure 19: impact of a dedicated budget on the number of initiatives

7.3 Voluntary pledges

The survey asked each respondent organisation whether it would consider making a voluntary pledge to use more recycled material (wood, metal, plastic, paper etc). Three-fifths of responding service companies and half of the manufacturing companies indicated that they would consider doing so. However, only 11% of distribution companies did so. The results suggest that, in principle, the Irish business community is open to committing to a voluntary pledge. Evidence of this commitment can be seen in the examples listed in Appendix 4 where Irish companies have already made pledges with regards to specific issues such as food waste, carbon and plastic packaging.

Pledge types can vary. For example, a 'top-down' approach might entail a collective target that signatories jointly seek to achieve by a specific date. By contrast, a 'bottom-up' approach allows each business to choose a target appropriate to their individual circumstances.

7.4 Future investment and funding

One quarter of respondent companies expected the 2018 spend on waste reduction to increase compared to the previous year. One-third expected to increase their spend on recycling initiatives. Spending on design of new products was anticipated to increase in nearly one-third of cases and expenditure on the redesign of existing products was expected to increase in almost one quarter. This may help explain why the availability of funding support was flagged as an issue by many of the respondents.

The survey asked each respondent whether it had applied for funding and if so, what the outcome of the application was. The question was not specific to circular economy initiatives but to support funding in general. It contained multiple choice options of 'applied, funding received'; 'applied, decision pending'; 'applied, denied funding' and 'have not applied for funding'.

Businesses were presented with a selection of funding sources against which to specify the above outcomes. These included financial institutions, the Environmental Protection Agency, the European Commission, Enterprise Ireland and the Sustainable Energy Authority of Ireland.

Approximately 35% of companies did not respond to this question. A further 55% stated they have not applied to any of the source options listed for funding. This suggests that a low proportion of Irish business have made applications for funding support of any kind. Those respondents that had applied, however, appeared to have a good chance of receiving it. Only a very small number of respondents stated that they were either pending a decision or had been denied funding.

7.5 Views on the way forward for businesses and policymakers

Finally, the survey presented a list of possible actions for five different stakeholder groups, namely individual companies, the business community, business representative organisations, the EPA and the Irish Government. It asked respondents to select what they consider to be the single most effective action for each of these groups. Only one-third of survey responses included answers to this question. Figure 20 shows the percentage within this cohort who selected each option.

Individual companies can:	Educate/raise awareness with staff	34%
	Educate/raise awareness with suppliers and customers	16%
	Have senior management championing change	14%
	Lean the operation	12%
	Invest in circular innovation, research and development	12%
	Increased use of reusable/recyclable materials	8%
	Employ dedicated staff	4%
The Irish business community as a whole can:	Adopt circular design principles	19%
	Education and awareness by industry	17%
	Cross-sectoral collaborations	15%
	Sharing of ideas and good practice	13%
	Create market for use of secondary raw materials	11%
	Increase public understanding and awareness	9%
	Invest in circular innovation, research and development	8%
Representative organisations such as Ibec can:	Mentor smaller businesses	8%
	Increase awareness and understanding of CE principles	25%
	Advocate for CE business supports	22%
	Facilitate sharing of ideas and good practice	18%
	Lobby on the potential impacts	13%
	Host topical events with guest speakers	13%
The Irish Government can:	Develop and share guidance	8%
	Provide additional supports, incentives and funding	46%
	Embed circular principles in policy and regulation	22%
	Develop a long-term circular economy plan	13%
	Communication to improve understanding/awareness	10%
Ireland's Environmental Protection Agency can:	Highlight businesses that are leaders	9%
	Increase education and host workshops	24%
	Provide more guidance and advice to businesses	20%
	Take a more proactive leadership role	18%
	Be consistent in messaging	11%
	Increase communication to improve public awareness	11%
	Incentivise good behaviour	9%
	Provide additional supports and funding	7%

Figure 20. Action categories identified by survey respondents as a priority.

Chapter 8: Conclusions and high-level recommendations

The concept of a circular economy has certainly gained momentum in the years since the adoption of the European Commission's circular economy package. The transition to a sustainable Europe can generate business opportunities and create local jobs, including in Ireland. Progressive firms that are embracing this new thinking should be excited by the prospect of becoming technological leaders in their respective sectors. They should also be encouraged to advise and mentor other organisations, especially SMEs within a local cluster or supply chain.

It is encouraging that nearly half the respondents to our survey stated they were currently or considering investing in innovative ways to deliver services. However, only a small proportion were already engaged in initiatives focused on improving the ease of dismantling their products to ensure the components can be re-used. The most common initiatives could be classified as resource efficiency, for example by reducing water and energy usage or waste generation. These are steps along the road, but the core principles of a circular economy are ultimately more far-reaching.

While almost half of Ibec member companies that responded to this survey see the transition to a more circular economy as an opportunity for their organisation in the long term, the potential risks to Irish business also need to be anticipated. Two out of five respondents did not have a view as to whether the circular economy was an opportunity or a threat to their business. Most of this cohort were companies employing fewer than 100 staff. This suggests that many Irish companies remained largely unaware of how the circular economy package and resulting legislation from Europe will impact their business, whether for better or worse.

It would be highly desirable to upskill these organisations on how to innovate through the application of circular economy principles, and how to manage associated risks. They would also benefit from a better understanding of how to access financial support, training and advice from state agencies, research institutions and supply chain partners. Ultimately, the successful companies will be those who are unafraid to seize the opportunities that present themselves. Ibec will continue to support and encourage companies to be forward looking and proactive during this transition.

Appendices

Appendix 1: Circular economy questionnaire

In December 2015, the European Commission adopted an action plan *Closing the loop - An EU action plan for the Circular Economy*, commonly known as the circular economy package. The actions proposed by this plan will contribute to "closing the loop" of product lifecycles through greater recycling and re-use and bring benefits for both the environment and the economy. It is hoped that successful implementation of this plan could result in the creation of up to 178,000 new direct jobs in Europe by 2030.

In an Irish context, while there are opportunities and potential 'winners' in the circular economy, the potential risks and losses to Irish businesses also need to be appreciated. This survey aims to quantify the main issues for Irish companies in the context of the circular economy and to provide a solid basis to inform Ibec's lobbying efforts on your behalf. The survey will take no more than ten minutes to complete. If you have any queries in relation to the survey, please contact research@ibec.ie.

Q1: Part 1 – Company profile

[All companies asked this section]

Organisation name

Name/Job title /email of person completing the survey (may be different from the person we sent it to originally).

Number of employees (full-time and part-time)

Principal activity (text field)

Industry pre-set – manufacturing /distribution /services (these will form a filter for subsequent questions)

Q2: Part 2 – the overall picture

[All companies asked this section]

This section consists of two statements

Answer options of strongly agree/agree/disagree/strongly disagree/ Don't know

- I am aware of the EU framework on the circular economy.
- I understand what is meant by the circular economy.

This section consists of a series of attitudinal statements to gauge how important the circular economy is to the business

Answer options of very important/ important/ unimportant/ don't know

Q3: How important do you think the circular economy is for your organisation, your suppliers and your customers?

- Your organisation currently
- Your customers currently
- Your suppliers currently
- Your organisation in the next three years
- Your customers in the next three years
- Your suppliers in the next three years

Q4: Part 3 – Your Organisation

Please indicate below which of the following your company is either currently doing, or considering implementing, in the next 12 months. If the item is not relevant to you, or you are not planning initiatives in this area, please leave line blank.

Answer options of currently doing / considering in next 12 months

- Reduced use of hazardous materials
- Reduced energy usage
- Reduced water usage
- Reduced waste generation
- Increased investment in waste management infrastructure
- Increased segregation and recycling of waste generated
- Increased education and training for staff in sustainable business practices
- Increase promotion of sustainable business practices to suppliers
- Creation of an internal 'Green Team'
- Increased use of local supply chains where possible
- Increased local recruitment of staff where possible
- Increased consumption of services rather than goods
- Increased organisation-wide focus on improvements related to the circular economy
- Increased partnerships with social enterprises (e.g. food cloud, rehab enterprises, etc.)

Please give details of any further sustainable / circular economy initiatives in your organisation.

[TEXT FIELD]

Q5: Part 4 – Initiatives related to production

[Manufacturing companies ONLY asked this section]

Please indicate below which of the following your company is either currently doing or considering implementing in the next 12 months. If the item is not relevant to you, or you are not planning initiatives in this area, please leave line blank.

Answer options of currently doing / considering in next 12 months

- Development of new products through innovation and R&D investment
- Increased investment in innovative design of goods and services
- Investment in innovative delivery of services
- Improved recyclability of company products

- Extending lifetime of products by making them easier to repair and reuse
- Improved ease of dismantling our products at end of life to ensure reuse of parts
- Increased re-use of secondary raw materials in production process
- Reduced use of critical raw materials
- Sustainable sourcing of raw materials
- Reduced use of single-use packaging materials
- Increased use of re-usable packaging materials during transit

Please give details of any further sustainable/ circular economy initiatives in your production process.

[TEXT FIELD]

Q6: Part 5 – Initiatives related to Services/ Distribution

[Services/Distribution companies ONLY asked this section]

Please indicate below which of the following your company is either currently doing or considering implementing in the next 12 months. If the item is not relevant to you, or you are not planning initiatives in this area, please leave line blank.

Answer options of currently doing / considering in next 12 months

- Development of new products through innovation and R&D investment
- Increased investment in innovative design of goods and services
- Investment in innovative delivery of services
- Innovation in existing products to support development of circular economy
- Localisation of supply chain
- Reduced use of single-use packaging materials
- Increased use of re-usable packaging materials during transit

Please give details of any further sustainable/ circular economy initiatives related to the service you provide to customers.

[TEXT FIELD]

Part 6 – Implementation

[ALL COMPANIES]

Q7: Has your organisation experienced increased enquiries/demand from customers for transparency around your practices relating to the circular economy?

Answer options of Yes (please give details) [TEXT FIELD]/ No/ Don't know

Q8: Does your organisation have a specific budget or budgets in place to support circular economy related initiatives?

Answer options of Yes (please give details) [TEXT FIELD]/ No/ Don't know

Q9: Compared with spend in 2017, does your organisation expect investment to increase/decrease or stay the same in 2018 for each of the items below?

Answer options of Increase/ Stay the same/ Decrease/ Don't know

- Waste reduction
- Recycling
- Design of new products
- Redesign of existing products

Q10: Do you consider the circular economy to be more a threat or an opportunity for your business in the long-term? Please give reasons for your answer.

- Opportunity [TEXT FIELD]
- Threat [TEXT FIELD]

Q11: In relation to the implementation of circular economy initiatives in your organisation, (including initiatives outlined in this survey), please identify if you consider each of the following items to be a challenge for your company, over the next 3-5 years.

Answer options of Major challenge/ Minor challenge/ Not a challenge

- Development of internal capacity
- Recruitment of skilled staff
- Investment in technology/equipment
- Availability of suitable training
- Availability of information
- Management commitment
- Availability of funding
- Other

Please give details of other challenge above, if applicable. [TEXT FIELD]

Q12: If there were one thing that could be done by any of the actors below to support circular economy initiatives within your organisation, what would it be?

- Internally within your organisation [TEXT FIELD]
- By the business community in general [TEXT FIELD]
- By representative organisations such as Ibec [TEXT FIELD]

- By the Environmental Protection Agency (EPA) [TEXT FIELD]
- By Government [TEXT FIELD]

Q13: Has your organisation applied for funding from any of the following?

Answer options of Applied, received funding/ Applied, decision pending/ Applied, denied funding/ Have not applied

- Environmental Protection Agency (EPA)
- SEAI
- Enterprise Ireland
- Horizon 2020
- Financial Institutions
- Other

Please give details of 'other' funding above. [TEXT FIELD]

Q14: Would your organisation consider making a voluntary pledge to use more recycled materials?

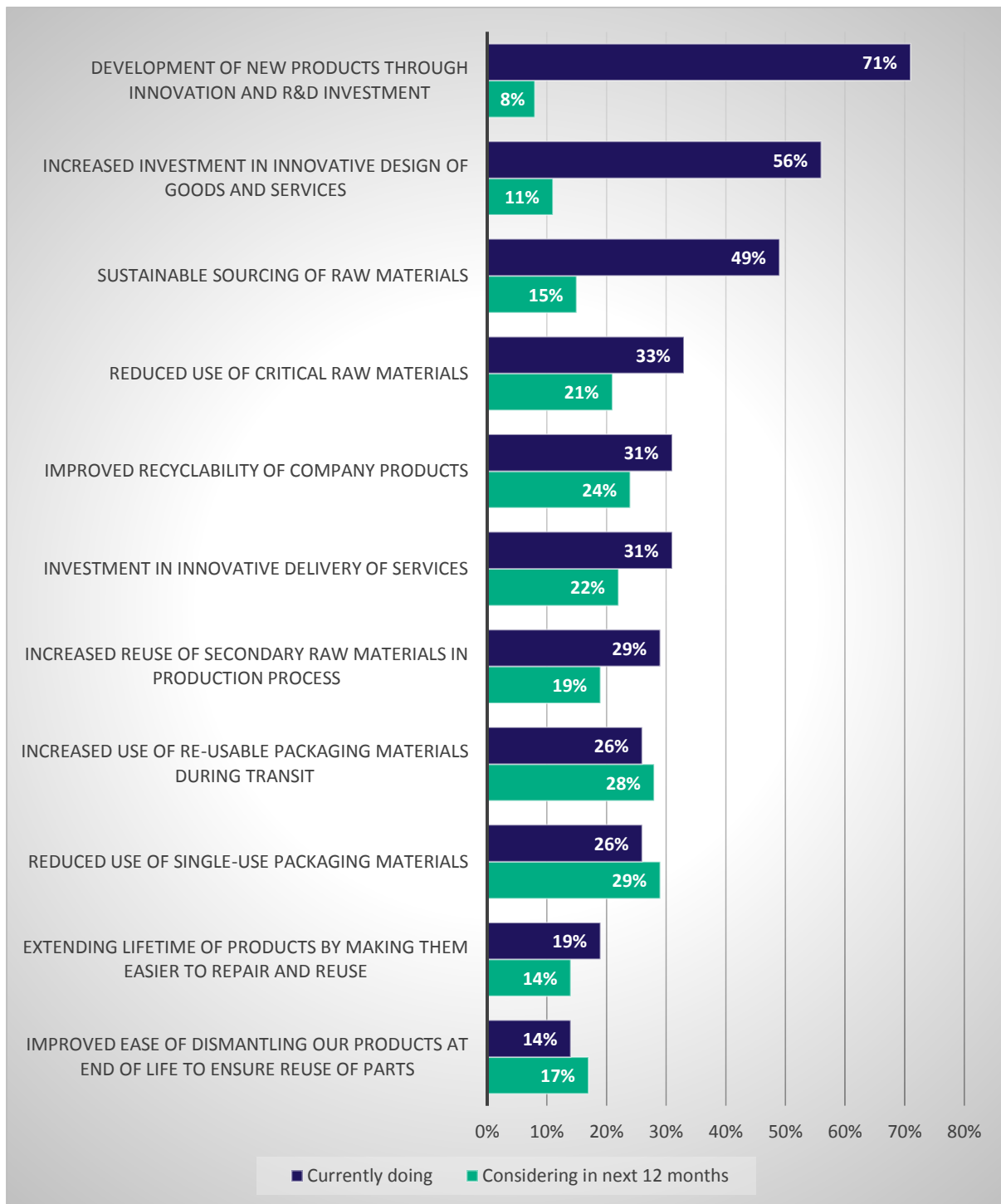
Answer options of Yes/ No/ Don't know

Q15: If you have any other comments in relation to the circular economy, please provide below.

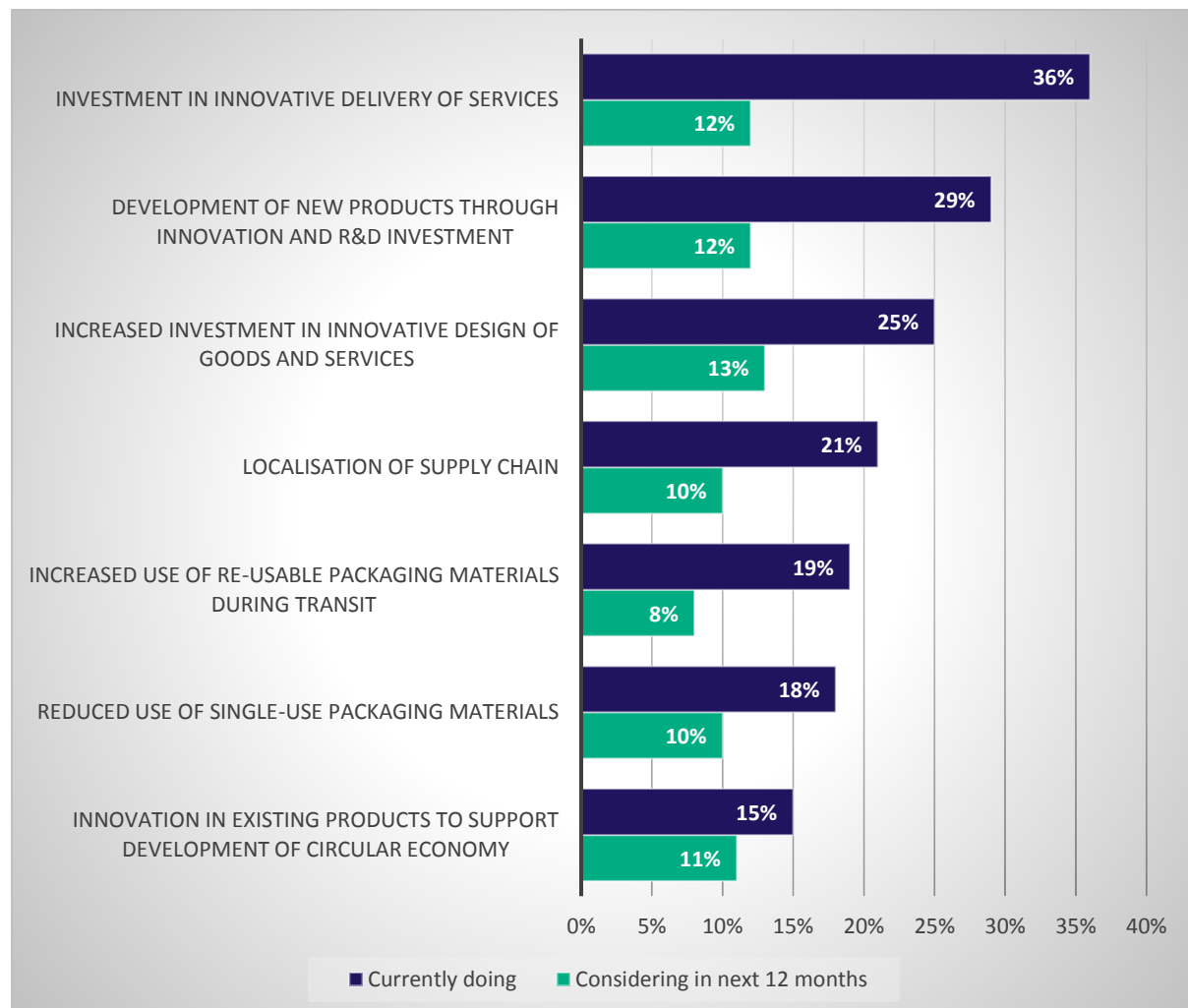
[TEXT FIELD]

THANK YOU FOR YOUR PARTICIPATION.

Appendix 2. Questions posed solely to manufacturing company respondents



Appendix 3. Questions posed solely to service/distribution company respondents



Appendix 4. Examples of Voluntary Pledges

Currently a variety of actors involved in the circular economy have launched voluntary pledge campaigns. Examples of these in Ireland include:

Department of Communications, Climate Action and Environment

In January 2018, the Food Waste Charter⁴ was signed by five of Ireland's major retailers. In signing the pledge, the five signatories agreed to make food waste prevention a priority and build awareness of the issue. The companies agreed to a common methodology for the collection of food waste data within their businesses. This pledge will form part of Ireland's efforts towards meeting the UN Sustainable Development Goals (SDGs), specifically Goal No. 12 on Responsible Consumption and Production. The Food Waste Charter is an example of how Irish businesses can work together and help to achieve the SDG target of halving per capita food waste by 2030.

Repak

In September 2018, Repak launched a plastic packaging pledge for its members⁵. To date 29 Irish companies have signed the pledge. Signatories represent a range of Irish sectors including dairy, meat, food processing, retail, chemicals and packaging suppliers. The pledge commits the business to reducing plastic packaging waste and helping Ireland to play its part in achieving the key goals set out within the EU Circular Economy Package.

Business in the Community Ireland

In November 2018, 43 companies who are members of Business in the Community signed a low carbon pledge⁶. This is the first dedicated pledge generated by Irish business to set industry standards on sustainability and reduce carbon usage. The companies include retail, manufacturing, agri-food, professional services, banks, transport and ICT businesses and all have pledged to significantly reduce their carbon emissions between now and 2030.

Other international examples include:

⁴ <https://foodwastecharter.ie/the-charter>

⁵ <https://repak.ie/for-business/members/current-repak-members/plastic-packaging-pledge>

⁶ <https://www.bitc.ie/the-leaders-group/the-low-carbon-pledge>

Wrap UK

In the UK, 114 companies signed the UK Plastics Pact⁷ in 2018. This pledge has signatories from across the entire plastics value chain. The Plastic Pact aims to stimulate innovative new business models to reduce the total amount of plastic packaging. Companies by voluntarily signing up to the pledge, have agreed to a common vision and ambitious targets by 2025.

Ellen MacArthur Foundation

In October 2018, the New Plastics Economy, which is part of the Ellen MacArthur Foundation, launched the New Plastics Economy Global Commitment⁸. Over 250 organisations from all along the plastics value chain; packaging producers, brands, retailers and recyclers, as well as governments and NGOs have signed the pledge. Signatories include companies representing 20% of all plastic packaging produced globally. Eliminating unnecessary and problematic plastics is an essential part of the Global Commitment vision, and this will help to eliminate plastic waste and pollution at source.

European Commission

In 2018, the European Commission called on stakeholders to submit voluntary pledges⁹ to increase the use of recycled plastic. The objective of the pledge is to ensure that ten million tonnes of recycled plastics find their way into new products on the EU market by 2025. Signatories were asked to pledge how they can contribute to the overall target. In total 65 pledges were submitted by European companies and industry associations.

Business Europe

Business Europe (to which Ibec is affiliated) maintains a web platform¹⁰ which aims to showcase examples of innovative ways in which industry, including SMEs, can contribute to the circular economy in Europe.

⁷ <http://www.wrap.org.uk/content/the-uk-plastics-pact>

⁸ <https://newplasticseconomy.org/projects/global-commitment>

⁹ https://ec.europa.eu/growth/content/european-strategy-plastics-voluntary-pledges_en

¹⁰ www.circularity.eu



Better Lives, Better Business

An Ibec campaign

ibec.ie/betterlives