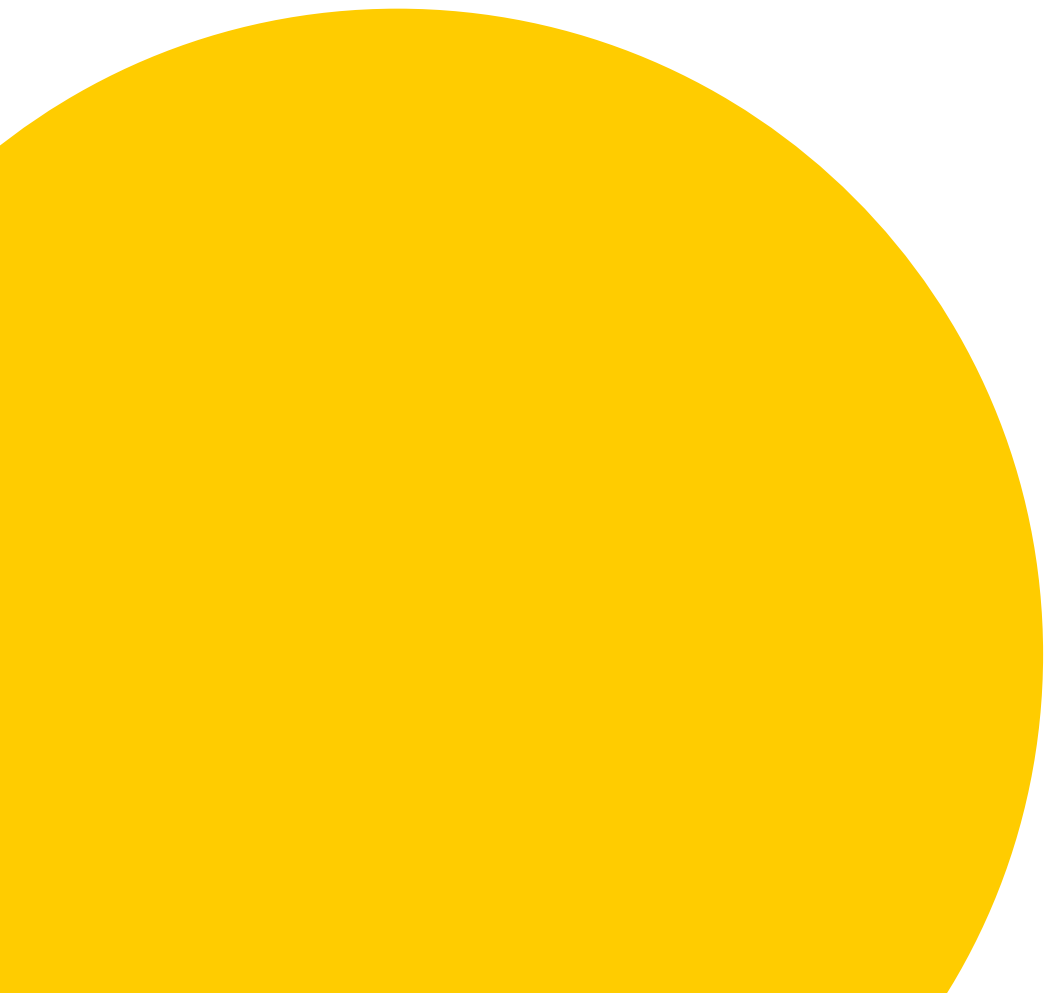


Proposed Resources & Waste Sector Deal

CONSULTATION DOCUMENT





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Introduction & Context

This document provides a summary of the preliminary scoping work undertaken since the formation of the UK Resources Council (Resources Council) in the pursuance of a Sector Deal with BEIS for the Resources & Waste Sector. Its purpose is to provide an overview of the work done to date, along with relevant supporting data, to help stakeholders provide comments and feedback on the proposed direction of the Sector Deal at this intermediate stage.

A Sector Deal is a collaborative model of working established by the Government's Industrial Strategy, which enables specific sectors to come together to negotiate a deal with the government to boost the earning power and productivity of that sector.

The membership of the Resources Council was assembled to include representatives from the following key areas, all of which are integral to the UK's proposed transition to a circular economy:

- Materials and design;
- Producers and end users of materials;
- Recycling, resource recovery and logistics;
- Energy producers; and
- Policy and regulation.

These key areas were identified through a preliminary scoping exercise undertaken by an experienced external advisor, and former advisor to the Department for Business, Energy & Industrial Strategy (BEIS), and were chosen to provide the widest representation necessary to deliver a fully scoped and actionable Sector Deal.

Following its inaugural meeting, the Resources Council established four working groups to consider the likely scope and content of a range of critical topics for inclusion in a Sector Deal; and which could form a useful starting point for further consultation without constraining this process. The four working group topics chosen were:

1. Data and design
2. Infrastructure
3. Places
4. People

The members of each working group were identified as being able to provide the necessary scope of experience relevant to each topic, and to enable agile and quick delivery. The consultancy Anthesis was instructed by the Resources Council to help administer the process and to bring their wide experience, skills and datasets to support the Council and the working groups.

These four working groups have fed back regularly to the Resources Council, which has considered the emerging content to provide recommendations or direction as to each group's next stage of works.

This document presents the outcomes from the working groups to date. The feedback from this consultation process will be channelled back to the UK Resources Council, which will consider the comments, suggestions and any new data, and will incorporate the substance of the feedback into the planned Sector Deal documentation. This will also be written to reflect the Government's industrial strategy, which is built around their "five foundations of productivity", namely:

1. People
2. Place
3. Business Environment
4. Infrastructure
5. Ideas

Stakeholders are invited to reply to questions relevant to them and their organisation. It is not anticipated that all stakeholders will answer all questions, but all responses will be used to help inform the direction and ongoing development of the Sector Deal proposals.

The Resources Council would appreciate and value feedback from as broad a range of respondents as possible, as we seek to develop a Sector Deal which is truly representative of the sector as a whole.

Section 1: Role of the UK Resources Council

Realising the growth potential of a low carbon circular economy

The UK has become the first G7 country to legislate itself into becoming a net zero carbon area by 2050. The resources and waste sector has a key role to play in delivering this ambitious goal.

Our vision is that by 2030 we will lead on innovation and growth opportunities – designing out waste wherever possible and capturing and utilising all of our remaining recoverable resources. We will create a world-leading secondary resources sector that will refine and process materials and transform them into inputs for our major industrial sectors and appropriate export customers, using innovative new technologies, which can be disseminated around the world.

This sector has significant opportunity to generate net environmental benefit and contribute to the restoration and preservation of the UK's natural capital, through reduced resource consumption. This Sector Deal is about helping making this happen.

The remit of the UK Resources Council is to support (and where necessary go beyond) the Government's Resource and Waste Strategy, which seeks to "make the UK a world leader in terms of competitiveness, resource productivity and resource efficiency".

The twin aims of the Resources & Waste Strategy are to maximise resource value and to minimise environmental impacts, in particular through reducing greenhouse gas emissions, and also through maximising the value and benefits we get from our resources – doubling resource productivity and working towards zero avoidable waste by 2050.

The Strategy seeks to safeguard our natural capital from extraction and disposal impacts, as well as obtain benefits in terms of resource security and efficiency, and jobs and growth.

In seeking to define what that support might comprise, the Council was committed to find ways of delivering commitments to deliver action in unlocking:

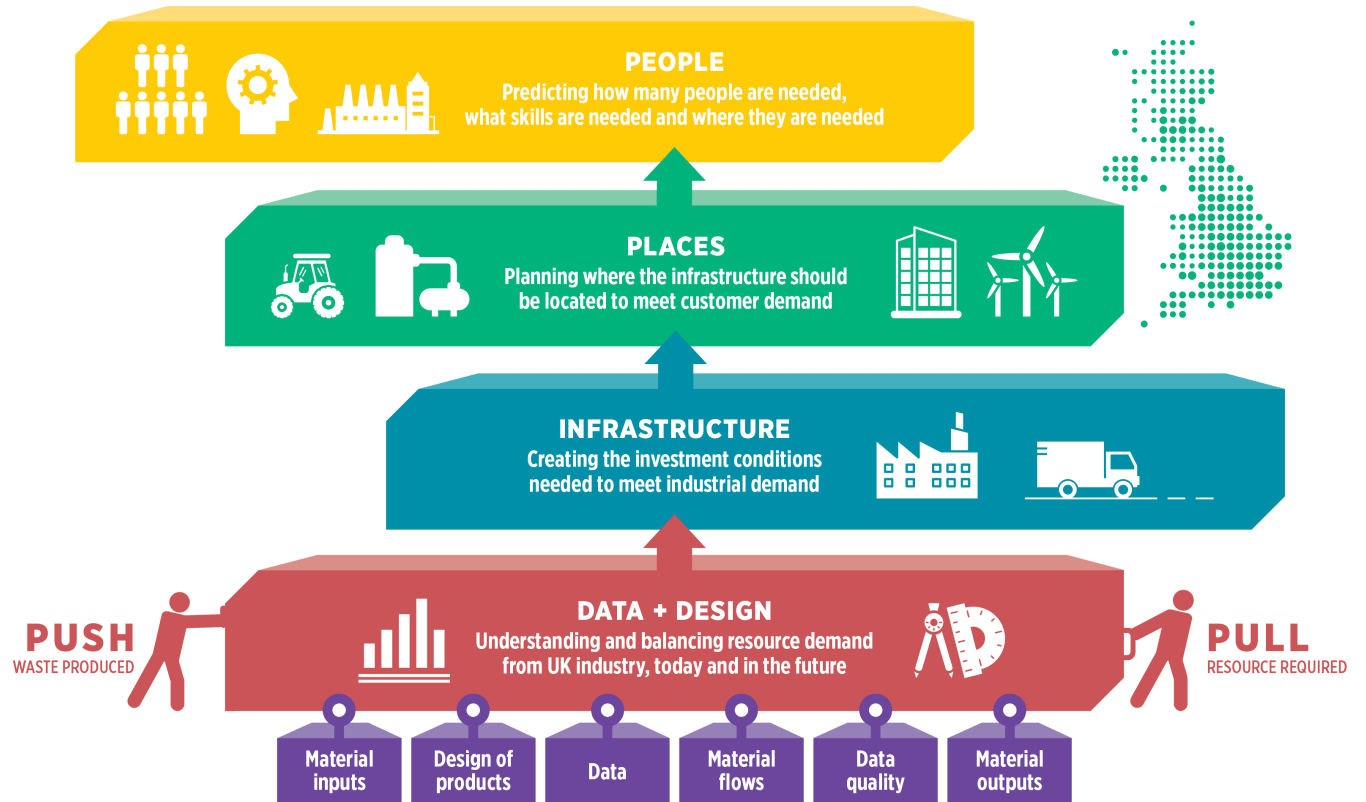
1. Innovation;
2. Demand for secondary materials;
3. Productivity; and
4. The professionalisation of the industry.

The UK Resources Council was also tasked with delivering the following core ambitions on which the Sector Deal would be founded:

- To advise the sector on the highest value opportunities for the UK's secondary resources;
- Improve and transform how we do our job today, while setting a clear and ambitious set of outcomes for our role in the future;
- Decarbonise our sector by designing processes to achieve a 30% reduction by 2030 and a fully decarbonised resources and waste sector by 2050;
- Enable and facilitate others to unlock a cleaner economy to improve resource productivity, and deliver a decarbonised economy;
- Identify the barriers to unlocking greater value to the economy;
- Build deeper and on-going collaboration between those who produce, consume and reuse resources;
- Accelerate investment in resource management and recovery processes; and
- Act today to start the journey.

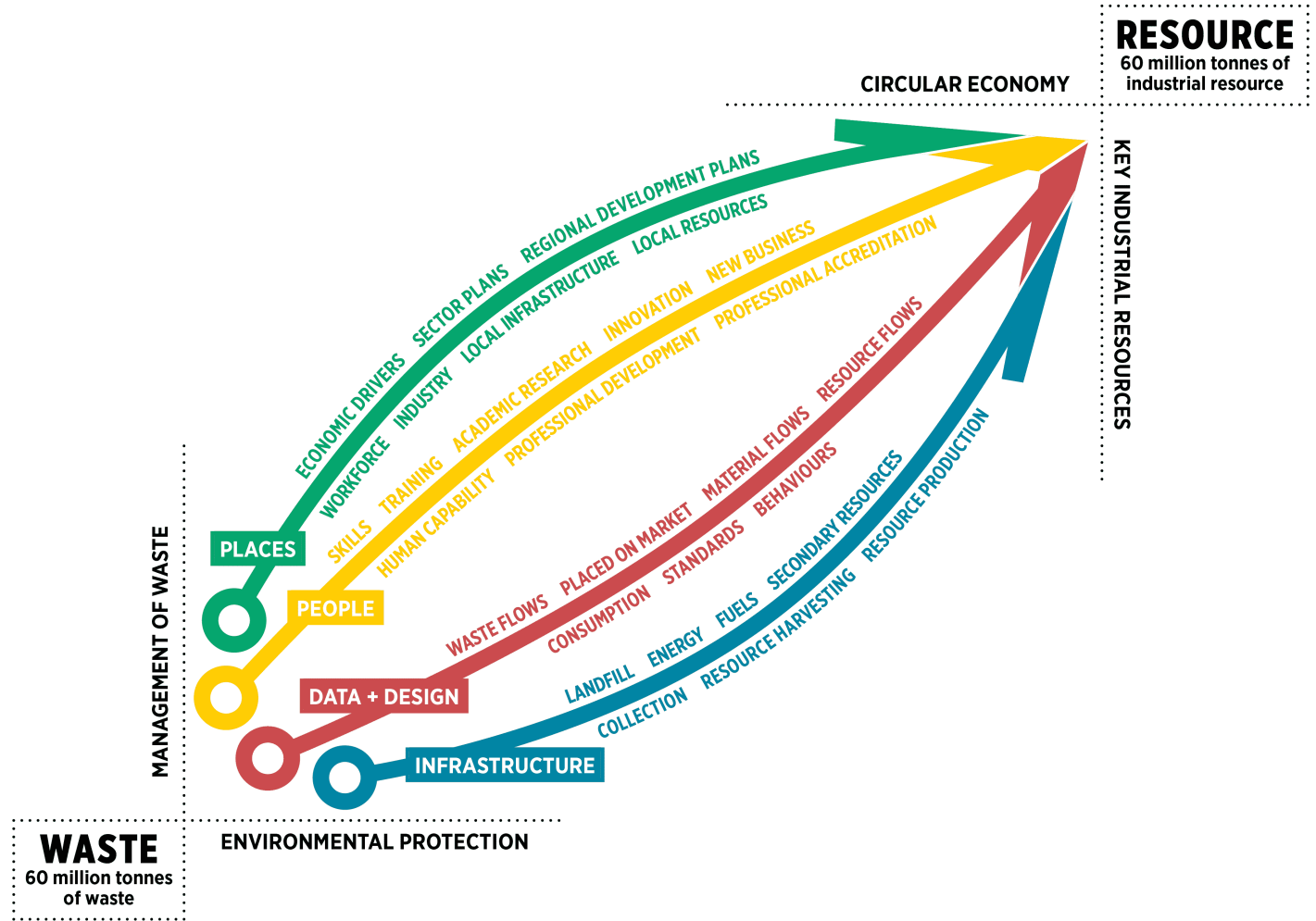
The Resources Council considers that the four workstreams complement each other, with data and design providing the foundations of knowledge required to support infrastructure development in the right places and with the appropriately trained and skilled people. The following diagram shows the manner in which the four workstreams build together to respond to the challenges that need to be addressed by the Sector Deal.

UK resource and waste sector deal
 Delivering the transition to a resource-efficient UK economy



The detail of the topics considered by each of the working groups is shown in the following diagram and this set the initial scope for the groups. None of the working groups were constrained to only these topics, but they were asked to make sure, as a minimum, they considered them all.

A sector plan to complete the move from waste to resource



Q1.0-1

To what extent do you agree or disagree with the ambitions of the UK Resources Council?

Q1.0-2

Please could you explain why you agree or disagree?



Q1.0-3

Do you think other ambitions should be added?

Q1.0-4

If yes, please could you tell us what these are?



Q1.0-5

Do you think some of the ambitions should be removed?

Q1.0-6

If yes, please could you tell us what these are?



Q1.0-7

Is there a need to prioritise the ambitions or are they all of equal importance?



Q1.0-8

If you think they should be prioritised, please pick the three options you think would be the highest priority:

1. Advise the sector on highest value opportunities
2. Improve and transform our jobs today and set ambitious outcomes for our roles in the future
3. Decarbonise our sector
4. Eliminate plastics leakage into the environment
5. Enable and facilitate others to unlock a cleaner economy
6. Identify barriers to unlocking greater value
7. Build deeper and on-going collaboration
8. Accelerate investment in resource management and recovery
9. Act today
10. Other

Q1.0-9

If other, please could you tell us why?



Section 2: Defining our Sector

The resource and waste sector has existed in many forms for centuries, delivering a range of services demanded by society, industry and governments. Today, our services range from bin collections and litter picking through to power production and the recovery of high-grade resources returned to industry for second use. The sector is also integrated with all other sectors across the economy and has a tremendous potential to add value and drive change towards multiple government and industry aspirations linked to sustainable production and consumption.

The resource and waste sector of the future will utilise innovative digital and technological solutions to deliver a low carbon and circular economy and to generate economic value for other industrial and service sectors across the UK.

It will eliminate the leakage of plastics and other secondary resources into the environment to prevent the pollution of our soils and oceans.

The resources and waste sector currently employs a direct workforce of 152,500¹, whilst an estimated 600,000 or more jobs exist in circular economy activities such as re-use, repair, leasing and other related activities, which are included in the sector definition.

Our GVA contribution, although difficult to calculate directly due to the very complexity of our integration into the UK economy, is estimated to exceed £6.7bn (2016)² for waste management, plus significant contributions to renewable power (for example, power through biogases from anaerobic digestion and landfill gas; proportions of the output from energy-from-waste plants etc.) and other services.

Our sector's GVA per hour worked was estimated at £39, well above the national average of £27.8 (2012)³.

Our sector has proven to be a significant investor in UK infrastructure and services, with over £10bn invested over the last decade, adding an estimated £41 of GVA for each tonne of waste this infrastructure treated. By doing this, we have successfully navigated our way through the financial crash of 2007/8 and the subsequent years of recession and austerity, continuing to invest in new critical infrastructure and services.

Significant investments have also been made in the creation of unique expertise to facilitate uptake of circular economy practices networks and communities of researchers and practitioners actively delivering circular economy solutions; and innovation.

¹ <https://www.euskills.co.uk/wp-content/uploads/2019/01/Waste-DI-Infographic-FINAL.jpg>

² <https://www.gov.uk/government/statistics/digest-of-waste-and-resource-statistics-2018-edition>

³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/401453/resource-management-catalyst-growth-productivity.pdf

This investment gives the resources sector in the UK a unique capability to lead change both within the UK and internationally.

Looking forward, the demands on our sector will increase significantly, particularly with carbon targets setting an expectation of net zero by 2050. With elements of the circular economy not only being defined, but starting to be rolled-out, by other sectors and wider society, and with the demands from citizens and businesses for more sustainable solutions that require better delivery of current services and new innovations/solutions, our direction of travel and challenge is clearly set out.

Our sector will provide critical value-add to other sectors in the production and consumption supply chain from across a range of industry fields. In many instances, other sectors cannot fully deliver their ambitions for green growth or plastics reduction without an innovative resource sector capable of supporting their low-carbon, secondary materials, and resource productivity targets.

Our sector will also continue to deliver its core function of environmental protection, and will meet the essential needs of future society, through the safe and secure collection of discarded material, on to its ultimate destruction, re-use, repair, recycling or recovery.

Our sector will continue to evolve and its future activities will include the dismantling of products and buildings to provide inputs to other sectors, and more extensive remanufacture, as well as re-use and repair.

The environmental protection these services deliver will become increasingly important as populations grow and continue to stress the environment in which we live, and as climate change and resource scarcity challenge our current conventional styles of living. Helping avoid waste generation and maximising the capture and return of secondary resources, fuels, energy and chemicals will become an increasingly important focus.

The following diagram seeks to help define the sector, starting with the resources and waste sector at the centre, moving outwards to its four primary activities, namely:

- Environmental protection – managing waste such that it does not harm the environment or cause a risk to health;
- Resource and natural capital conservation – seeking to work with the whole value chain to reuse, repair, dismantle, recycle and recover energy from the resources that society discards;
- Economic activity – supporting local areas and the national economy through the people the sector employs; the services it provides and procures; the products it makes; and by driving new innovation and development opportunities for SMEs, large business and the public sector; and
- Through the investment made by the sector in R&D, new facilities and services to support a more resource efficient society.

In undertaking these core activities, the sector therefore delivers four fundamental benefits to the UK economy, these being;

- Supporting social betterment and more sustainable behaviour through a cleaner environment, through the employment provided and through the economic activity generated;
- Conserving the UK environment through pollution prevention and making better use of the resources that society consumes and discards;
- Underpinning UK industry by helping it reduce the use of resources and providing secondary resources recovered from the waste stream;
- Helping deliver UK growth through investment in research, development and innovation, in building new infrastructure and through the employment and supply chain services we procure.

UK resource and waste sector
social, economic and environmental contribution



Business as usual, however, does not require a Sector Deal.

The sector is currently busy delivering its services, building new facilities and adapting both to new policy, proposed new legislation and market demands. Significant investment has been made and is being made in terms of:

- New energy-from-waste plants, maximising heat recovery where possible, to replace landfill as the main source of treatment for residual waste;
- New recycling plants for plastics and other materials;
- Training new staff to run the services and facilities we are building;
- Creating relationships with the social sector and value chain in delivering re-use and other local activities;
- Optimising current, and developing new, methods of harvesting materials from waste producers in styles and manners that maximise their suitability for the intended end process;
- Capturing data to help inform the decisions of both customers and operators.

Q2.0-1

To what extent do you agree or disagree with the following?

"The key functions and activities of the sector are comprehensively summarised in the document."



Q2.0-2

To what extent do you agree or disagree with the following?

"The key functions and activities accurately reflect those of the present."



Q2.0-3

To what extent do you agree or disagree with the following?

"The key functions and activities accurately reflect those of the future."



Q2.0-4

Are there things you feel are missing?

Q2.0-5

If yes, please could you tell us what you feel is missing?



Q2.0-6

Are there things you feel should not be included?

Q2.0-7

If yes, please could you tell us what you think should not be included?



The current market environment is far from perfect and continues to impair some investment; while supporting some outdated or inefficient services and driving some perverse outcomes. The Defra Resources & Waste Strategy seeks to address many of these imperfect areas and the sector will respond and work with Government, and its agencies, to help deliver change to existing services and operations.

Although these are necessary, they don't need a Sector Deal to deliver the short to medium term goals. However, a Sector Deal is necessary to build the foundations on which to deliver on the longer-term goals, related to the adoption of a full circular economy and net zero carbon by 2050 and accelerate the overall transition of the sector.

Q2.0-8

To what extent do you agree or disagree with the following?

"Current business and the short-term transition should not be the main focus of the Sector Deal."



Q2.0-9

Are there elements of the current business that you consider should form part of the Sector Deal?

Q2.0-10

If yes, please could you explain what elements should be included?



Section 3: Stronger Together

In defining the sector, it became clear that the benefits of a strong Sector Deal and its delivery cannot come from our sector alone.

Part of the work required to develop the Sector Deal is to fully understand and quantify the benefits the sector can deliver if it is fully supported by both ourselves and the Government.

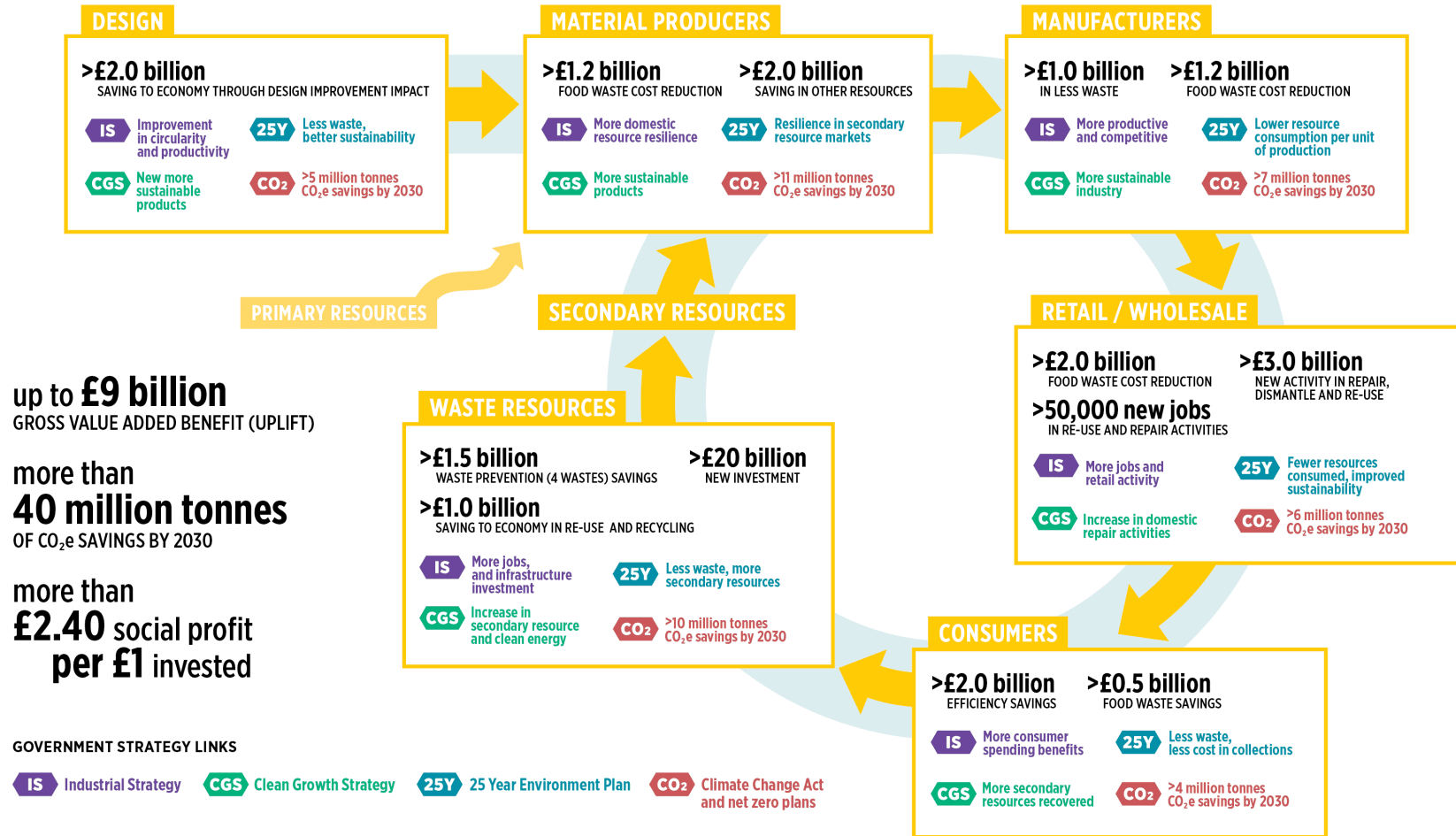
To provide scope and context, we have sought to provide a simple exploration of the interfaces we have with the value chain and to quantify the potential benefits, both financially and environmentally. This is shown in the following diagram.

In addition to the two headline factors of GVA and carbon quantified below, we also propose consideration of a social profit indicator which, with the other two factors, would provide a full measure of our sector's contribution to the UK economy.

Such an indicator would be designed to capture our sector's full contribution towards the well-being of people, place and the environment. Some early estimates suggest that a social profit of £2.40 per £1 spent would currently be representative of the overall sector.

UK resource and waste sector plan

Headline benefits of an industrially-embedded resource sector



up to **£9 billion**
GROSS VALUE ADDED BENEFIT (UPLIFT)

more than
40 million tonnes
OF CO₂e SAVINGS BY 2030

more than
£2.40 social profit
per **£1** invested

GOVERNMENT STRATEGY LINKS

- IS** Industrial Strategy
- CGS** Clean Growth Strategy
- 25Y** 25 Year Environment Plan
- CO₂** Climate Change Act and net zero plans

DOCUMENT REFERENCES

SUEZ reports: A resourceful future – Expanding the UK economy, At this rate – Exploring England’s recycling challenges, Driving Green Growth and Mind the Gap 2017-2030 – UK residual waste infrastructure capacity requirements. ONS economic data sets, Green Alliance report Less In, More Out report, ESA report RESOURCEFUL: Delivering a strong and competitive UK resource economy, Defra data and report Resource management: a catalyst for growth and productivity, Associate Parliamentary Sustainable Resource Group report Exporting opportunity? – Putting UK waste to work at home and abroad, WRAP reports and data sets.

Q3.0-1

To what extent do you agree or disagree with the following?

"GVA is a key indicator of the sector's contribution to the economy and should be used to measure the success of the Sector Deal implementation."



Q3.0-2

To what extent do you agree or disagree with the following?

"Carbon is a key indicator of the sector's contribution to the economy and should be used to measure the success of the Sector Deal implementation."



Q3.0-3

To what extent do you agree or disagree with the following?

"Social profit is a key indicator of the sector's contribution to the economy and should be used to measure the success of the Sector Deal implementation."



Q3.0-4

If you feel alternative indicators should be used, please can you tell us what these are and provide a short reasoning as to why they should be additional, or displace one or more of the proposed?



Q3.0-5

To what extent do you agree or disagree that £2.40 per £1 is representative of our sector's average contribution?

Q3.0-6

If you agree, please could you supply evidence to support that figure for your company or for the sector.

If you disagree, please could you suggest an alternative value with supporting evidence where possible?



Section 4: The Five Foundations for a Sector Deal

Business Environment

A key component of a successful Sector Deal will be delivering the conditions that support the huge investment necessary to achieve the longer-term ambitions of a circular and sustainable economy and net zero carbon by 2050.

Fundamental to investable conditions is data, a prerequisite of knowledge and confidence for regulator through to investor. Data on the flow of materials in and out of the UK economy; data on the materials required by industry today and tomorrow; data on markets and industries that define products, compositions and quantities; and data on materials and products placed on market, are all essential.

Our sector, however, has a primary responsibility to provide data on the flow of materials that occur after they have been consumed and discarded.

This provides knowledge of the flow of materials discarded by householders and businesses, their subsequent collection, consolidation and treatment routes; and the interim and final products made with these materials reinserted back into the wider UK economy.

Fundamental also to creating a successful business environment and the ultimate delivery of the Deal is the policy and regulatory landscape in which the transition must be delivered. Both aspects must align to facilitate and support the transition of the sector without introducing unnecessary barriers or unintended consequences that hold back innovation.

Infrastructure

Understanding what infrastructure currently exists and what new products and services will be required in the future is fundamental to understanding which facilities and technologies will be necessary.

Applying a whole system design approach through the Sector Deal, that delivers a circular and resource-sustainable economy will:

- Add significant value to UK Plc;
- Reduce its reliance on waste exports and destruction;
- Reduce the need for commodity imports; recover energy, from electricity and heat to fuels; and
- Support a range of services that keep products and materials in use far longer than at present and which reduce consumption demand or new primary products and materials.

Integrating with domestic and international supply and value chains (with many new potential markets to be explored) will help determine and deliver the right facilities, in the right place and at the right time to meet Government's longer-term objectives. This is expected to support increased investment, jobs and environmental improvement.

Place

The aim of this chapter is to go beyond 'business as usual' and deliver an ambitious, long term transformation plan that can deploy nationally significant developments which also address regional disparity.

This will align with the Industrial Strategy, Local Industrial Strategies, Transforming Cities Fund, Local Enterprise Partnerships and other regional development programs.

As we better understand where industrial and product synergies between sectors, and in material value chains, exist, the natural locations for services, logistics and infrastructure will become clear and naturally promote synergy.

These plans will build on the existing strengths in each region, as driven by the existing network of LEPs, to help identify and take up opportunities to deliver prosperity. Although regional in nature, the coordination of the LEPs supporting local governance will lay the foundation for delivering not just local action plans but also the ambition of national plans and policy.

More specifically for the resources and waste sector, this will need to align with and support further development of the National Waste Management Plan and the National Planning Policy for Waste.

People

People are essential to our sector, from skilled drivers and site operatives to the business and technical skills required for managers of effective and innovative companies, both today and tomorrow. Our success is reliant on bringing new people and skills into the sector and working better, and in a more integrated manner, with the value chain and the third sector.

Investing in our people to deliver the workforce of the future, and providing training in other industry sectors to support the circular economy, will create a more robust economy for the UK in the future, where innovation and sustainable production and consumption are better understood and managed by professional individuals and industry actors.

Delivering this vision will require skilled people working to industry recognised standards, with professional personal accreditation an essential foundation stone.

Ideas

In order to deliver decarbonisation and sustainability across the economy, the Sector Deal must create an environment where innovation and ideas are endemic and where research, development and innovation are continually fostered by academia, start-ups and our workforce. New and existing employees must be developed and empowered to bring their insight and ideas forward, supported, husbanded and deployed where they can deliver improvements or transitional change.

The Sector Deal seeks to build on the innovative nature of the resources and waste sector to accelerate the move to full resource recovery, be that in the form of materials, chemicals or fuels in response to demand from UK industry and agriculture. As part of this, our sector needs to influence the upstream design of products to raise levels of remanufacture, repair and recyclability. Supporting the development, commercialisation and investment in new techniques and technologies required to add value to secondary resources.

Q4.0-1

Do you agree or disagree with the following?

"The Sector Deal captures all of the challenges that the sector needs to overcome in order to achieve the transition to a circular economy."

Q4.0-2

If you disagree, please could you describe the challenges that have not been covered and, where possible, use a real-life example?



Section 5: Analysis & Outputs of the Working Groups

The four working groups have each met on three occasions to identify the barriers and challenges that the sector must overcome if it is to expedite the transition required to play its vital role in delivering the circular economy and net zero contribution.

The groups considered the actions both the sector could take ('the offer') and the complementary action required from the Government ('the ask') that would combine to achieve outcomes beyond 'business as usual'. The following sections set out the outputs to this point.

Business Environment

By 2025, we will have the right data at the right time to facilitate effective design, investment, regulation and policy for the UK.

The availability of comprehensive, granular and timely data is an essential foundation to improving the business environment for the sector. Better data on all areas of material use, waste and secondary resources will inform and stimulate the transition in every part of a circular economy. It will facilitate and inform sustainable product design, the market for secondary resources, and the scale and location of infrastructure required by the sector aligned with the workforce of the future, policy design and measurement.

Effective business environments require evidenced, long-term and agile policy and regulation from the Government and its agencies.

The need to protect the environment is a common objective for all but the challenge of change means that action is required to ensure that the infrastructure, technology and products can be developed without unnecessary regulatory or policy barriers or delays, whilst ensuring environmental standards are maintained. We cannot forget that policy and regulation often have an important role in the influence or creating of markets or market conditions that are also required for the sector to change and develop.

Here we set out a series of objectives and actions that will be needed to deliver the sector plan.

Better Data as the Foundation of the Sector Deal and the Circular Economy

Objective – to generate data from the services and work that the sector undertakes. The data must meet the necessary granularity and quality standards to allow it to be commonly shared and understood. This data becomes an integral and trusted component of the Office of National Statistics (ONS) national resources datahub. This will require information on waste arising, by volume and composition, together with information on logistics, treatment, processing and products – so that full material flows can be established and maintained.

The lack of detailed and timely data on waste and secondary resources has been a long-standing challenge for the sector and was publicly recognised in the Resources & Waste Strategy in 2018.

The strategy commits to a number of improvement actions including working with the ONS to improve datasets and to invest in projects to test the feasibility of 'smart' waste tracking.

Whilst the sector backs these actions and will support their delivery, the Sector Deal will go beyond these and deliver a step change in the speed of the transformation process. It will ensure that detailed information on the flow of resources through the economy, both before and after consumption, is available so that the secondary resources sector can respond to the demands of a circular economy.

This data will allow detailed resource flow assessments to be undertaken, matching data on resource arisings with existing capacity and future demand for secondary resources. This clarity and insight will help stimulate investment and inform decisions about the resources that are required by UK industry, where to deliver them, and the size and skills of the workforce that will be needed to operate these facilities.

Fundamentally, a greater understanding of the waste flows these resources can be generated from, in the most efficient and sustainable manner, is critical to aligning our sector with new opportunities in sectors and potential new markets for the materials we handle or produce.

The positive impact of better data is much wider than just as an evidence base for investment and decision making in the sector. The range of data uses for stakeholders are myriad and the overall economic and environmental benefits will become clearer once future innovations, fuelled by the availability of 'big data', create significant changes in the market.

In the near term, having better data and a better data management system will save costs during data capture, enabling product designers to design for sustainability, including the use of bio-based and secondary materials and design with the re-use, dismantling and remanufacturing infrastructure in mind.

Designing out waste will be critical to meeting UK ambitions on waste prevention. Further, it will allow policy makers to identify interventions, set informed targets and monitor progress as required for Extended Producer Responsibility (EPR) regulations, whilst also assisting regulators to identify and tackle waste crime and poor performance.

This, combined with the evidence base for the secondary resources sector, will be transformative for the environmental sector as well as UK industry and trade.

Policy and Regulation which Facilitates and Supports the Transition

Objective – to meet the ambitions of the Government and the sector on both the quantum and speed of transition will require review and reform of the current policy and regulatory systems. Sustaining the pace of transformation will require approaches that provide agility, flexibility and vision.

Currently, the environmental permitting process can unnecessarily delay the delivery of new reprocessing and treatment capacity. This adds cost and uncertainty for capital investments which can slow the delivery of the new infrastructure in the UK and add costs that inhibit business cases.

Differences in the permitting system in each nation of the UK also adds to the complexity for businesses operating across the country and should be avoided where possible.

End-of-waste determinations will become more important as the industry transitions to novel technologies, which will create an even wider range of products such as fuels and chemicals.

As such, certainty around product standards, for both current and future outputs is essential to provide a foundation of planning for infrastructure and markets going forward.

Given that the sector is calling for, and would benefit from, a more agile approach to regulation and a reformed, transparent and consistent approach to permitting for the UK as a whole, we propose establishing a working group with Defra and regulators in each nation. These groups would provide a forum in which current and future plans can be raised and discussed, thereby allowing issues to be declared, explored and resolved quickly.

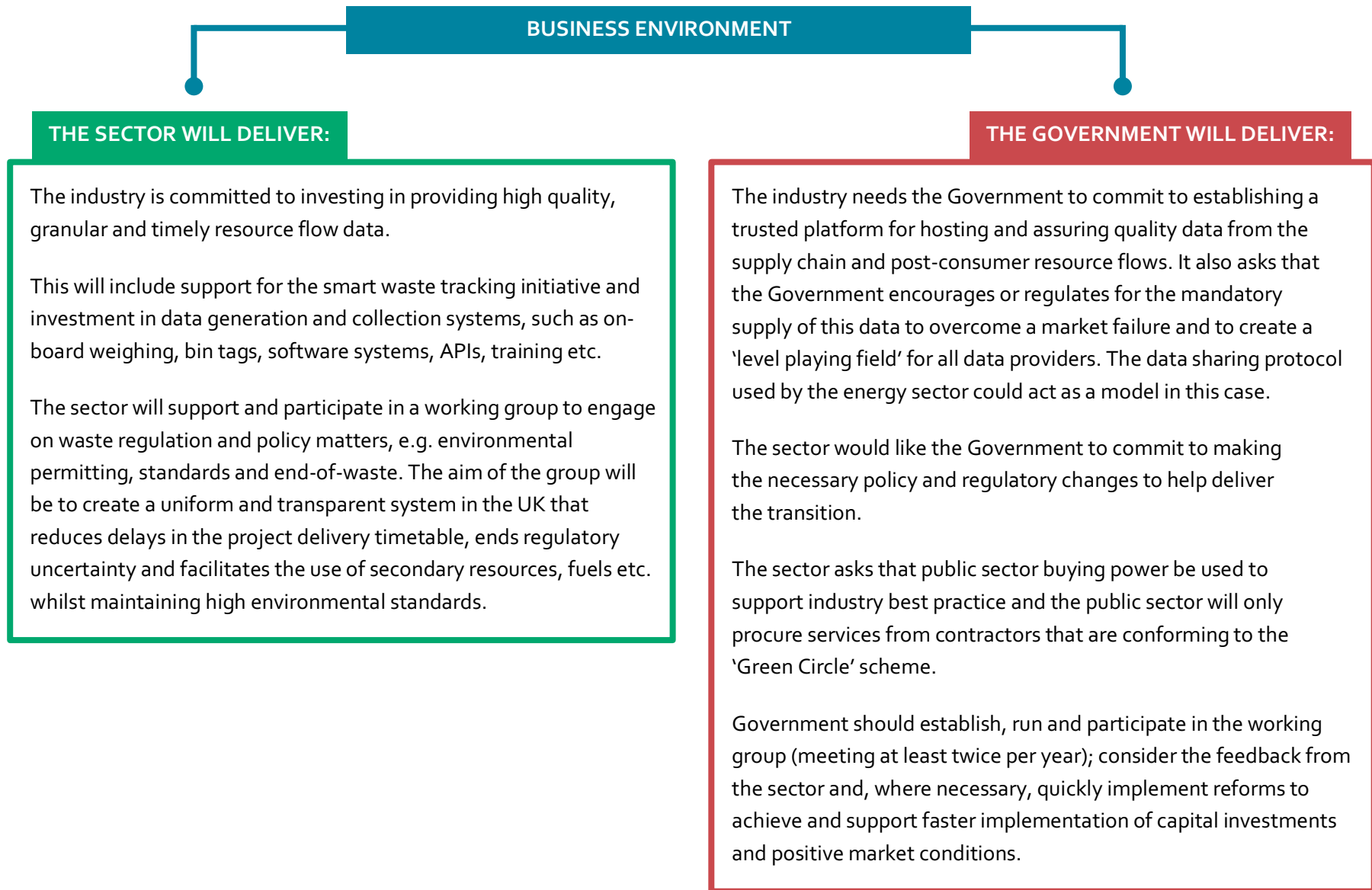
Promoting close working between the sector, policy makers and regulators to ensure the transition can be delivered quickly, whilst ensuring high standards of environmental protection, will be essential.

This joint working should result in a more predictable development timetable and thus improved levels of confidence amongst the investment community, delivering faster growth in reprocessing capacity and associated benefits to the regions, such as increased employment, an increase in GVA and further carbon reductions.

The sector actively supports the development of a new 'Green Circle'⁴ scheme, which will raise the industry performance beyond regulatory compliance to deliver best practices in operational management and materials supply chain transparency. As well as regulating and driving better practices across all industry actors, this scheme will also create a competency and professional development framework against which to train and develop the workforce of the future.

⁴ Working title

SUMMARY OF THE OFFER FROM THE SECTOR AND THE ASK FROM GOVERNMENT



Q5.0-1

To what extent do you support or not support the following?

"A proposed industry offer to invest up to £200m in order to provide high quality, granular and timely resource flow data."

Q5.0-2

Please explain why you support or do not support the proposed investment.



Q5.0-3

To what extent do you support or not support the following?

"A proposed industry offer to participate in and support a working group to engage on waste regulation and policy matters."

Q5.0-4

Please explain why you support or do not support the proposed offer.



Q5.0-5

To what extent do you support or not support the following?

"The introduction of the Green Circle scheme."

Q5.0-6

If you support this, do you have suggestions for how this should be managed? If you do not support this, please tell us why.



Q5.0-7

To what extent do you agree or disagree that this chapter captures the key elements that would deliver a favourable business environment, in which the sector can deliver the long-term changes required?

Q5.0-8

If you disagree, please could you give your opinion on what might be missing and why?



Q5.0-9

Can you provide a real-life case study for the Business Environment section that could be used in the Sector Deal? This could illustrate the barriers faced by the sector or the benefits that can be achieved if they can be overcome.



Infrastructure

A whole-system inspired UK waste and resources infrastructure that increases resource productivity, enhances our natural capital and delivers a growing proportion of the UK resources footprint from secondary, waste derived commodities in line with UK industry demand.

The provision of waste and resource infrastructure of the right type, at the right scale and in the right place is essential to the sector's transformation into a significant resource provider for UK industry.

A resource led infrastructure will generate Clean Growth and contribute to the decarbonisation of the supply chain and Government Climate Change targets.

The delivery of new infrastructure requires a business environment that creates investable conditions covering a well understood and stable policy and regulatory framework, accessible and competitive finance environment as well as an active industry sector pushing for resource led infrastructure to support UK industry.

Due to the long lead times and payback period for waste and resources infrastructure investment, this requires better data on feedstock quantities and composition as well as secondary resource needs from the wider economy to inform technology design and demand from UK industry.

Investable conditions are defined as:

1. Sufficient policy visibility and stability to allow time to earn enough revenue and profit margin to support the level of investment being made and the asset longevity.
2. A market place where competition thrives through;
 - a. Minimising crime and fraud, including the provision of minimum barriers to entry for participants in the services the sector delivers;
 - b. Delivering a competitive level playing field for participants, with equal treatment for all;
 - c. Promoting a balance in markets through policy barriers/drivers and taxes/incentives, thereby ensuring that materials placed on market, collected and recycled have viable offtake markets for the secondary resources produced.
3. Proportional regulation that balances intensity of regulation against risk, and that matches enforcement and fines against a scale of infringement or environmental harm, as well as incentivising sustainable behaviour and best practice.

4. An intent to work with the sector to design the transitions necessary to enable a planned, affordable and practicable change in the necessary sector areas or in the development of new market solutions.
5. The provision of sufficient good quality data both through regulation and good practice to allow investors to make informed decisions.
6. Support for investment in research, development and innovation, programs in academia and industry to develop the improvements or new services and solutions demanded. This includes the use of grants, match funding, tax relief and other financial instruments.
7. The provision of courses and training establishments that meet the needs of the sector and which build a skilled and motivated work force.

A Waste Technology Roadmap

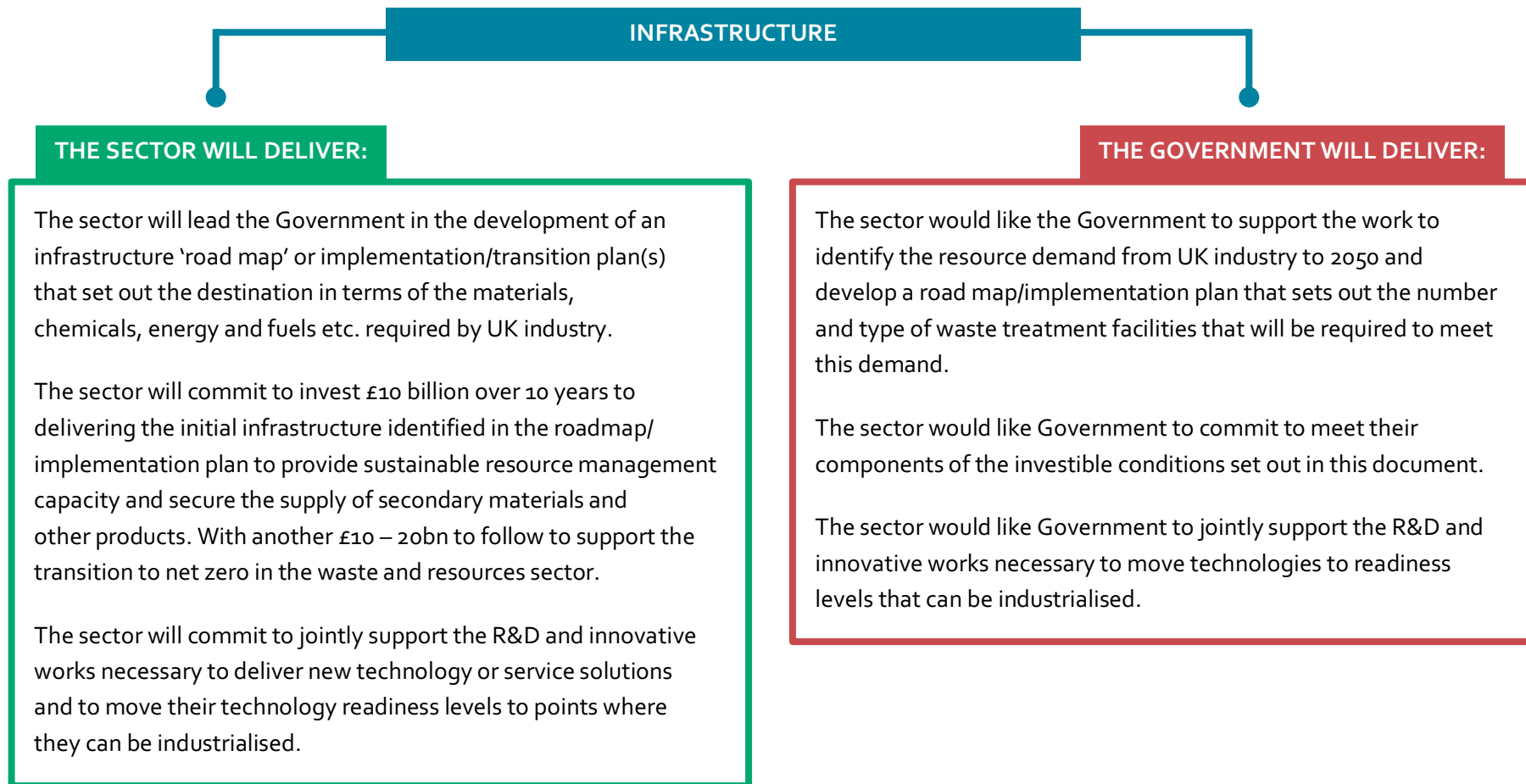
Objective – to secure current, and identify future, opportunities for using products derived from waste as an industrial and manufacturing feedstock; and to develop a practical timeline to bring forward innovative technologies able to efficiently produce new target resources from wastes and residues. This, combined with long term regulatory and policy certainty and good data, will lay the foundations for the necessary investment of finance, knowledge and man-power in a transformative new infrastructure.

As part of the Sector Deal, UK industry and Government should identify the priority resources for the UK and, from there, the resources sector will develop a 'road map' against which new infrastructure can be delivered, taking into account the commercial readiness of innovative and emerging technologies as they develop.

From this work we will be able to set out transition plans for each of the targeted materials and products and help Government and industry meet their targets by investing in and providing the appropriate facilities.

The infrastructure road map will use a whole system approach (being led by resource-need and prioritisation) and will apply a 'technology readiness level' (TRL) approach to build a transformative infrastructure over time. This means, in the short term, looking to provide infrastructure based on proven technology to meet the existing policy targets of the Resource & Waste Strategy, Clean Growth Strategy and the UK's Climate Change Strategy. In parallel, to meet medium and long term ambitions, the road map will enable the development of pilot plants and testing of emerging technologies to future alternatives that can be commercialised and industrialised to provide resources required by UK industry – accelerating technologies that prove viable and sustainable in meeting the UK needs. The support for innovation is described in the 'Ideas' chapter.

SUMMARY OF THE OFFER FROM THE SECTOR AND THE ASK FROM GOVERNMENT



Q5.1-1

To what extent do you agree or disagree with the following?

"I will commit to supporting the development of the infrastructure roadmap."

Q5.1-2

If you agree, please tell us the kind of contribution you would make in the future – e.g. financial, participation in meetings, data and information, technology knowledge etc.

Q5.1-3

Please could you also tell us about contributions you currently make?

Q5.1-4

If you disagree, please tell us why.



Q5.1-5

To what extent do you agree or disagree with the following?

"I will commit to invest in the infrastructure identified by the roadmap."

Q5.1-6

If you agree, please tell us how you will commit. If you do not agree, please give your reason why.

If you are not an infrastructure provider but are a stakeholder in the industry, please describe any assistance you could give and would commit to.



Q5.1-7

To what extent do you agree or disagree with the following?

"This chapter captures the key elements that would deliver the infrastructure required."

Q5.1-8

If you do not agree, please give your opinion on what might be missing and why.



Q5.1-9

If possible, can you provide a short, real-life, case study for the Infrastructure chapter that could be used in the Sector Deal? This could, for example, illustrate the barriers faced by the sector or the benefits that can be achieved if they are overcome.



Place

Building on regional strengths, to connect the industries of the future with the suppliers of secondary resources. Creating opportunity and prosperity through improved productivity.

Today's resource and waste sector is diverse, incorporating both highly sophisticated facilities for sorting co-mingled household recyclables, to long-established amenities into which householders and business can deliver their waste. Currently, the planned or required growth of the sector is potentially misaligned with the existing long-term regional and local economic development work, as coordinated by LEPs and other sub-national bodies. This Sector Deal seeks to overcome this by facilitating growth in locations where there is synergy between the demands of the regional economy and waste arisings. It seeks to prepare for and harness the major changes predicted in technology and services (such as artificial intelligence) and to increase the capacity for reprocessing in the UK. This will support the regional and national economy, maximising value from those resources currently being exported, or delivering resources required for industry of the future.

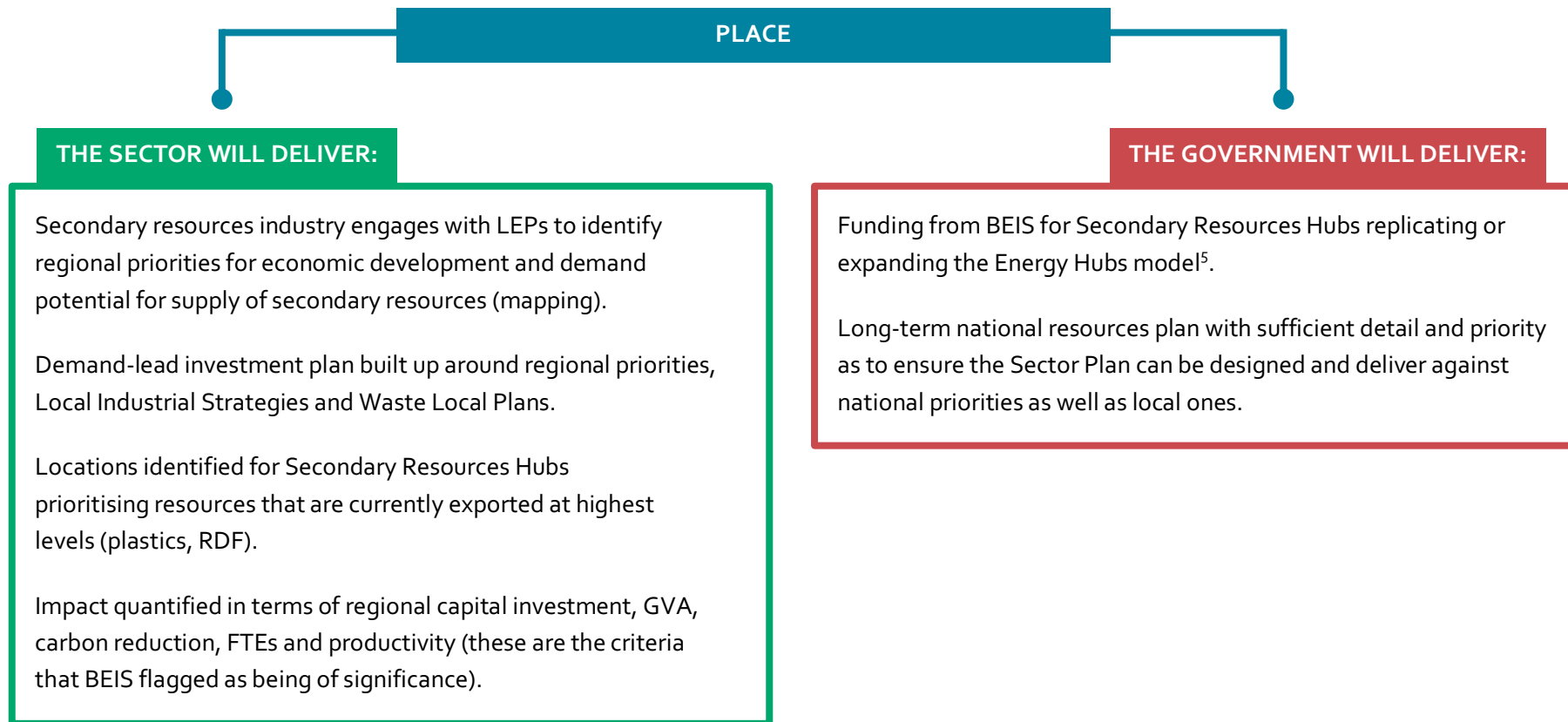
Secondary Resources Hubs

Objective – to establish secondary resources hubs across the UK that can act as focal points for major capital investment in concert with the economic development priorities of each region. The locations of these secondary resources hubs will be determined by a process of mapping the industries of today against the industries of the future. This will identify existing initiatives (national funding opportunities and regional programmes) open to secondary resources as well as defining new ones that will be necessary to support the transition.

Where there are obvious established points of industry production (such as with industrial chemicals) the planning for secondary resource hubs will be centred around delivering the best business case to feed these locations with the secondary resources they need.

Secondary resources hubs for new materials will provide a geographical focus for testing the business case for co-locating secondary resource processing and utilisation. It will also offer the opportunity to test how scale can be achieved through the co-ordination of work between several neighbouring LEPs. The secondary resource hubs will capitalise on the existing strengths in each region building upon the model adopted by the existing energy hubs. This will not only enable additional synergies between waste and energy to be realised, but will also provide a working structure to quickly and efficiently establish a recognised presence.

SUMMARY OF THE OFFER FROM THE SECTOR AND THE ASK FROM GOVERNMENT



⁵ <https://www.sustainabilitywestmidlands.org.uk/wp-content/uploads/Michael-Gallager-Midlands-Energy-Hub-29.11.18.pdf>

Q5.2-1

To what extent do you agree or disagree that the establishment of secondary resources hubs with a national materials priority matrix will **help to identify local resource needs in each region?**

Q5.2-2

To what extent do you agree or disagree that the establishment of secondary resources hubs with a national materials priority matrix will **enable work with Local Enterprise Partnerships?**

Q5.2-3

To what extent do you agree or disagree that the establishment of secondary resources hubs with a national materials priority matrix will **identify the key opportunities for the resources and waste sector to provide the required resources for industry?**

Q5.2-4

If you do not agree that the secondary resources hubs will help to achieve these outcomes, please explain why and provide your ideas on how this could be improved.



Q5.2-5

To what extent do you agree or disagree with the following?

"I commit to working with the secondary resources hubs to identify opportunities to meet the local demands for secondary resources and promote their use."

Q5.2-6

If you agree, would you like to explain how you will work with the hubs?

If you disagree, please tell us why.



Q5.2-7

Are you aware of energy hubs or similar schemes at either a local, regional or national level?

Q5.2-8

If yes, please can you provide a brief description of what these are?



Q5.2-9

To what extent do you agree or disagree that energy hubs could play a role for waste and resources?

Q5.2-10

If you agree, do you have a suggestion for where in the UK these should be located? If you disagree, please explain why.



Q5.2-11

To what extent do you agree or disagree with the following?

"This chapter captures the key elements that would meet the vision for Places."

Q5.2-12

If you disagree, please tell us how this can be improved.



Q5.2-13

If possible, can you provide a short real-life case study for the Place chapter that could be used in the Sector Deal? For example, this could illustrate the barriers faced by the sector or the benefits that can be achieved if they are overcome.



People

To be an inclusive, and world leading, employer of highly motivated and efficient professionals who are equipped with the skills to deliver excellence and innovation to maintain a resilient, competitive, and circular economy in the UK.

The ESA has estimated that the circular economy could deliver 50,000 new jobs and boost UK GDP by £3bn⁶. To deliver this potential, the industry needs to recruit and retain people with a wide range of skills from different disciplines including tech, logistics, engineering, product design and behaviour change to deliver the circular economy vision and net zero 2050 targets. We need to establish strategic leadership to develop the standards and training for the future and to promote the sector as an attractive place to develop a long-term career. To realise this vision we will need to create a joined up approach to achieving high-quality, relevant training from Level 2 and beyond, which builds on the existing foundations and traditional skills for which there will be an ongoing need.

A Sector Skills Plan

Objective – to create a sector skills plan, overseen by a single industry ‘body’, which will provide a platform for partnership between Government. This will collectively support the continual learning systems to deliver excellence in design, manufacturing, engineering, digital, business, entrepreneurial and customer services, and sustainability skills.

The plan will create a framework for the sector to anticipate and adapt for the future workforce requirements such as an aging population, and to be nimble and responsive to changes in emerging technologies, business processes and product/materials design.

This will make the sector more attractive in the global market place, helping to attract the right people. Employment retention will also increase the competitiveness and effectiveness of UK business.

The increased understanding of sustainable production and consumption will stimulate secondary commodity markets and collection/reprocessing systems, changing the economics and enabling the sector to invest in the human resources it employs.

⁶ http://www.esauk.org/application/files/6715/3606/7843/Circular_Economy_Report_FINAL_High_Res_For_Release.pdf

Lifelong Learning

Objective – to create, in partnership with Government and other industry sectors and leading think tanks, a more inclusive life-long learning programme for professionals in the circular economy at all operational and leadership levels; by creating a network of “Beacon Centres” of excellence across the country. These will deliver best practice training, innovation and research where it is most needed to deliver against the Government’s regeneration and societal priorities.

Building on the strong foundation that currently exists through Catapult centres, Universities and sustainability park incubators etc. and developing new facilities, these centres will create an integrated opportunity to increase the skills level within the industry and deliver R&D, while the alumni network will create a legacy for inspiring the innovation of the future.

The centres will be created in two phases, each of which generates different benefits:

- **Phase 1**, to develop existing centres, which will provide additional learning capacity from L1 to Masters Degrees.
- **Phase 2**, to build new centres, which will provide further learning opportunities, but will also generate jobs in sustainable design and construction within the built environment and facilities management sectors, and new employment opportunities for training and site operational staff. Collectively the Beacon Centres will provide significant development opportunities over their lifetime.

SUMMARY OF THE OFFER FROM THE SECTOR AND THE ASK FROM GOVERNMENT

PEOPLE

THE SECTOR WILL DELIVER:

The industry is committed to a growth in training spend of 25% by 2030 to meet compliance and professional development learning needs of the future workforce. This will include a doubling of the current apprenticeship levy commitment to 1% of payroll costs, with 25% of that being made available to SMEs in the waste and resources sector supply chain, under the terms of the current government guidelines.

This spend will be used to meet the needs of the Green Circle best practice standard and achieve excellence, with a focus on training at levels 2&3 to increase literacy in ethnically diverse and/or disadvantaged areas of the UK and train local workforces that are representative of the populations that our sector services. It will also support on going investment at levels 5 to 8, to stimulate innovation.

The commitment to training will also directly benefit other sectors, such as logistics, manufacturing, and engineering, who will be involved in new courses and ongoing support programmes.

In addition to this investment the sector will provide will generate supporting materials for learning, access to technology and facilities for learning and training development, work placements and apprenticeships, and STEM ambassadors.

THE GOVERNMENT WILL DELIVER:

The industry would like an opportunity to contribute, with Government, to the creation of a more joined-up learning framework that considers responsible citizenship, circular economy and sustainable production and consumption throughout the life-long skills development process. This would include input to different curriculum planning activities for the future in primary to tertiary education to create a strong understanding of resources and materials management across a range of learning disciplines such as sciences, geography, ICT, logistics, engineering, apprenticeships and PSE.

The industry would like to see 5% of the funds from new EPR policies (including DRS), and/or taxation schemes (e.g. landfill and plastic taxes) be ring-fenced to support skills development administered through the network of beacon centres of excellence. We would also like to see UKRI budget secured for circular economy skills development.

The industry asks that the local authorities, the regulators and other public sector actors that interact with the sector receive funds for training of their core team members, that can be delivered through the network of beacon centres.

Q5.3-1

To what extent do you support or not support the industry's offer to invest and/or create additional funding for training to increase the skills in the workforce for the future?

Q5.3-2

If you support this, please describe how.
If you do not support this, please explain why.

If you're not directly involved in resource or waste management but are a stakeholder in the sector, please describe any assistance you would give and will commit to.



Q5.3-3

To what extent do you support or not support the commitment to provide the following?

- Supporting materials for learning;
- Access to technology;
- Facilities for learning and training development;
- Work placements and apprenticeships;
- STEM ambassadors.

Q5.3-4

If you support this, please describe how.
If you do not support this, please explain why.



Q5.3-5

To what extent do you agree or disagree that this chapter captures the key elements required to meet the vision for People?

Q5.3-6

If you disagree, can you suggest what might be missing?



Q5.3-7

To what extent do you agree or disagree that skills should be managed by a single industry body?

Q5.3-8

If you disagree, can you explain why?
Do you have an alternative proposal you would like to share?



Q5.3-9

If possible, can you provide a real-life case study for the People section that could be used in the Sector Deal? For example, this could illustrate the barriers faced by the sector or the benefits that can be achieved if they can be overcome.



Ideas

To identify and foster innovation in the recycling and recovery of secondary materials, to maximise the quantity, quality and range of raw materials, energy and fuels that the waste and resources sector can supply to industry.

In order that the secondary resources sector can meet the demand for secondary resources, energy and fuels from UK industry, new and innovative processing technologies and services must be developed, tested and commercialised.

Current investment barriers can slow or stall this process and there is a clear case for the sector and Government to work together to overcome them, creating investment-ready conditions and ultimately stimulating the transition to a resource efficient economy.

We have described “investable conditions” within the infrastructure section of this report, but an essential component of this is the investment in research, development and innovation.

This requires:


- Systems to capture and husband ideas.
- Systems to share data and allow the widest possible stakeholder groups to interrogate that data and identify opportunities contained within it.
- Programmes to support early stage research (academic or industry).
- Programmes to support the development of ideas through industrial or lab-based testing.
- Investment support mechanisms to help deliver pilot and first commercial trial facilities or services, and deliver industrially fundable technical and service solutions.

Creating Investment Ready Conditions to Deliver New Infrastructure

Objective – to create investment ready conditions for waste infrastructure delivery and the secondary resources sector to meet Government targets, by supporting the development, testing and commercialisation of new waste treatment technologies with appropriate policy, regulation and market drivers.

Waste treatment technology is evolving, and new and emerging techniques may be required to produce high-quality secondary materials, chemicals, energy and fuels.

To ensure that new technology can be put to use as soon as possible, current market failures associated with scaling and early adoption, and investment conditions, must be addressed.

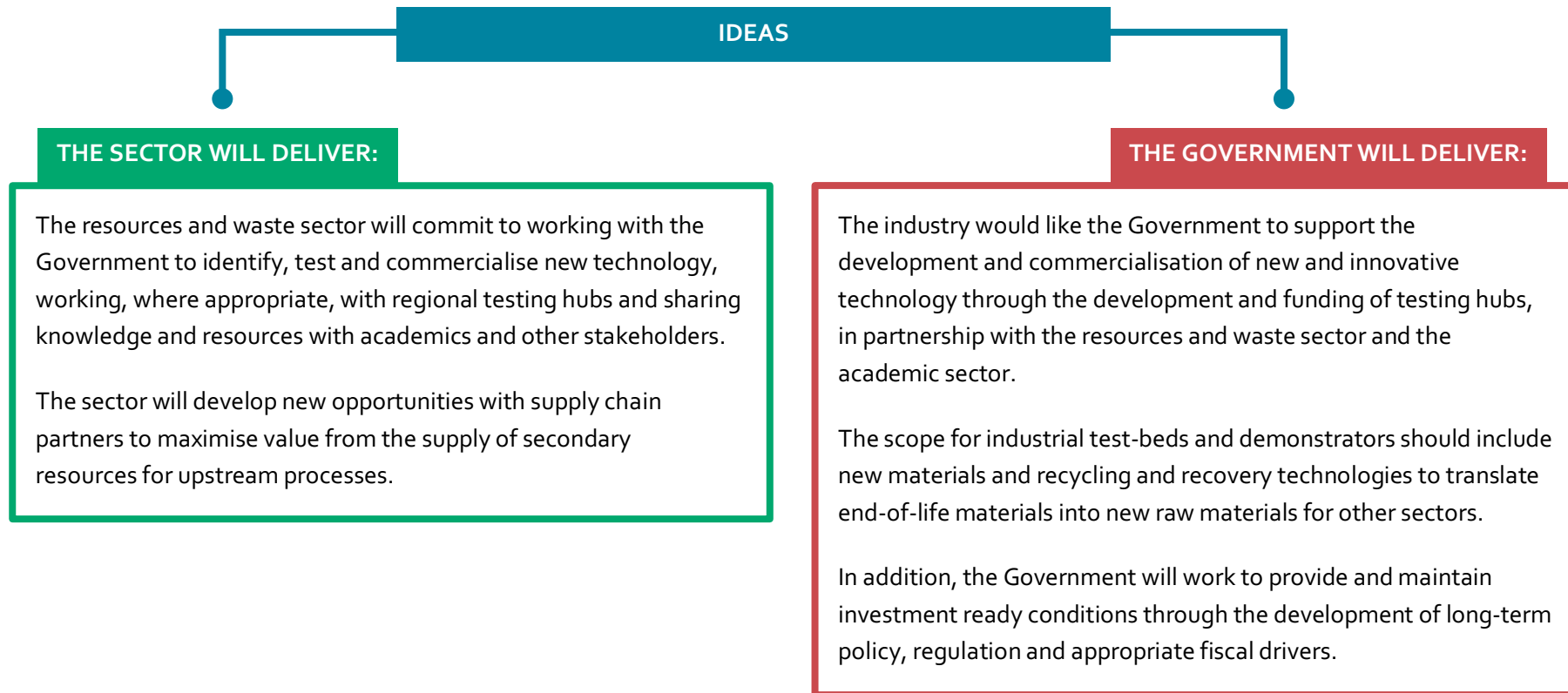


This can be achieved by Government support to build pilot plants and test emerging technologies, accelerating the early commercialisation of those that prove viable through existing organisations such as Innovate UK.

Transparent and long-term policy, regulation and market drivers from Government will support the investment in these new technologies, as it will create predictable market conditions for waste feedstock and product markets. This will include consideration of secondary commodity standards and a clear and flexible pathway to end-of-waste status for some materials, that consider market-demand, whilst maintaining environmental standards.

It will be vital to engage fully with the Catapult network and the academic research sector to make this a reality.

SUMMARY OF THE OFFER FROM THE SECTOR AND THE ASK FROM GOVERNMENT



Q5.4-1

To what extent do you agree or disagree with the list of research, development and innovative support mechanisms that the sector needs to make the transition?

Q5.4-2

If you disagree, please can you explain why and, if possible, suggest any additions or amendments as appropriate?



Q5.4-3

To what extent do you support or not support the following?

"To work with the Government to identify, test and commercialise new technology and service-based solutions."

Q5.4-4

If you support this, please tell us how. If you do not support this, please tell us why.



Q5.4-5

To what extent do you support or not support the following?

"To work, where appropriate, with regional testing hubs and sharing knowledge and resources with academics and other stakeholders."

Q5.4-6

If you support this, please tell us how. If you do not support this, please tell us why.



Q5.4-7

To what extent do you agree or disagree that this chapter captures the key elements that would meet the vision for Ideas and foster investment-ready conditions?

Q5.4-8

If you disagree, please can you give your opinion on what might be missing and why?



Q5.4-9

If possible, can you provide a real-life case study for the Ideas section that could be used in the Sector Deal? For example, this could illustrate the barriers faced by the sector or the benefits that can be achieved if they can be overcome.



Conclusion

Thank you very much for taking the time to read this document. Your responses are a valuable and vital component of a well-considered Sector Deal. Responses can be submitted through the dedicated consultation portal available at:

<https://sectordeal.anthesis.network/event-survey/ukrc-wider-consultation-for-the-resources-and-waste-sector-deal>.

Please don't hesitate to get in touch with the team at Anthesis if you have any queries about this consultation and how to respond. Dedicated email support is available by emailing **sectordealsurvey@anthesisgroup.com**.

The consultation period runs for six weeks and is due to close on **Thursday 26th September 2019 at 6pm (GMT)**. Stakeholders' input will be used to inform the development of more detailed proposals for a Sector Deal which the Resources Council will aim to complete by the end of 2019.

Further opportunities for stakeholders to contribute will then arise during 2020 as the Resources Council negotiates a deal with BEIS Ministers and officials.



About the UK Resources Council

The UK Resources Council (UKRC) was assembled to represent a broad range of expertise from across the resources sector and is chaired by David Palmer-Jones, CEO of SUEZ recycling and recovery UK. The Environmental Services Association (ESA) is responsible for overseeing and administering the work of the council.

The UK Resources Council is:

- Sophie Thomas, Founding Director, Thomas Matthews
- Mike Salter, R&D Facilitator, AB Agri
- Andy Whyte, Sustainability Practitioner, Ricoh
- Dick Elsy, CEO, High Value Manufacturing Catapult
- David Palmer-Jones, CEO, SUEZ recycling and recovery UK (Chair)
- Roger Morton, independent consultant (formerly Managing Director, Axion Recycling + S Norton metal recycling)

- Phil Piddington, Managing Director, Viridor
- Richard Kirkman, Chief Technology Officer, Veolia
- Paul Booth, Chairman, Tees Valley LEP
- Prof Sir Ian Boyd, former Chief Scientific Advisor, Defra
- Julie Hill, Chair, WRAP

Observers:

- Emma Howard-Boyd, Chairman, Environment Agency
- Maya de Souza, Head of Resource Efficiency and Circular Economy, Defra
- Paul Henderson, Head of Bioeconomy and Plastics, BEIS

