

SKILLS FOR THE FUTURE: THE JOURNEY TO 2030



The Chartered Institution
of Wastes Management

SKILLS FOR THE FUTURE THE JOURNEY TO 2030

The next 10 years will be one of transition – a seismic shift from our current linear and sometimes recycling based economy to one which values resources and is more circular, reducing carbon emissions, prioritising natural capital and driving up social value. But as yet our sector doesn't have all the skills we need to support this transition.

This report – the CIWM Presidential Report for 2021/2022 – captures the thoughts of CIWM members and other professionals working in, or

supplying, the resources and waste sector about what the next ten years might hold in terms of sector evolution and most importantly what skills we will need to drive a more green and circular recovery.

Recommendations are provided on the skills, competencies and capabilities our sector will need in this evolving future and what government, CIWM and those working in and supporting our sector can do to actively support our transition from wastes to resources.



OUR TIME IS NOW!

If we don't lead the way as a Sector and as a Chartered Institution we face the risk of becoming increasingly irrelevant to a greener UK as our industry shrinks and as waste becomes a distant memory.

We need to upskill our workforce and attract new talent whilst collaborating with other sectors, academia and leading professional bodies to drive an effective transition to a more Circular Economy.

We must lead this evolution and create a resources revolution which sits at the heart of the green economic recovery.

Dr Adam Read - CIWM President



SECTOR SKILLS

SECTOR COLLABORATION

GOVERNMENT

CIWM

CIWM MEMBERS

EVOLUTION & REVOLUTION

The resources and waste sector is adept at change. The shift made in the last decade has been one where the sector has transitioned from managing mostly waste and relying heavily on landfill, to reaching a tipping point where we're managing more recycling/resources than waste and are extracting value from what is collected. In the next ten years we'll be transitioning again from a recycling economy to one where resources, circularity and carbon are the focus.

As custodians of resources we have slowly evolved our approaches, nudged by regulation but also an environmental and societal imperative to recycle more and waste less. The events of 2020 and 2021 have accelerated the pace of change in our sector dramatically and have highlighted gaps where we need to upskill or build additional skills to work more effectively. The global COVID-19 pandemic has driven rapid digitisation as the world has moved online, and many of us have learnt to work from home.

Net zero ambitions, circular economy plans, Plastic Packaging Tax and government consultations on Extended Producer Responsibility, Deposit Return Schemes, and consistency in household and business recycling indicate that a revolution is now underway. In the future, waste composition, arisings and how we manage it will change dramatically and we will need the skills and competencies to not only support this transition but to effectively lead the resource revolution and position our sector at the heart of building back greener in the UK.



THE ROAD TO 2030



2020

RECYCLING ECONOMY

Reaching the tipping point where our society recycles more than we waste.

RESOURCE ECONOMY

Valuing materials as resources and securing new long-term sectoral end markets whilst prioritising reuse and repair to maximise resource retention and social value.

CIRCULAR ECONOMY

Embedding circular economy systems and business models to accelerate the green recovery and change materials ownership to reduce waste from society.

CARBON ECONOMY

Decarbonising our system, taking a regenerative approach to natural capital and embedding true lifecycle thinking in all decision-making.

2030



MOVING FORWARD TOGETHER

Decisions about future skills, training and competencies are fundamentally about the future of the Chartered Institution and its membership. There will always be a need to manage some waste, particularly waste which has a hazardous element or can't be easily reused, but the focus in the future will be much more aligned to managing resources from production through use and then repurposing, as we will ultimately manage less 'waste' in the future. Managing these resources and gaining value from them will require greater collaboration, enhanced skills and a deep understanding of a number of different sectors beyond our own.

We will need to work more closely with producers and retailers, chemists and material specialists, software developers and social scientists to ensure materials, products and packaging are designed for future lives, ease of reuse and recycling etc. As such, we will need to gain new skills but also provide our knowledge of resources and waste management to other sectors to maximise resource capture, deliver decarbonisation and enhance value.

"To achieve Net Zero and have the waste and resources sector fully involved in this needs a refreshed approach to the development of skills driven by all industries and sectors who in turn need to be provided well by trainers, colleges, universities and institutions like CIWM. Nobody has that definitive route map to Net Zero and so, although we know radical change is essential and urgent, we will need to be flexible, intelligent and nimble to deliver the skills and capacity needed."

**Iain Gulland,
Chief Executive Officer of Zero Waste Scotland**

This report is the first step of the journey. The authors have spoken to over 60 professionals working in and supporting the resources and waste sector to identify which sectors we should align more closely with and what support we'd like from government to help make this happen. Also identified are the steps that CIWM (and its members) need to take to support this transition and ensure we play our role fully.

If we don't seize the opportunity now our sector will become increasingly irrelevant and marginalised as others recognise the value of materials and their ownership and move into this space. We have an opportunity to lead the way and play a key role in decarbonisation and the green recovery but we need to act quickly.

Our heritage is as a waste sector. We're not hiding from our legacy but learning from it. We have successfully adapted on many occasions, most recently from landfill to recycling and recovery. We understand the value of resources and how to keep them in productive use longer but we now have a job to do reframing waste into the resources agenda, recognising what it is – namely 'resources in the wrong place, ownership and time', championing a change in definition where appropriate, and embracing what we need to make sure that everyone from street sweepers and refuse truck drivers to CEOs have the right skill set and mindset to actively move forward.

"The next decade brings great opportunities for the waste and resources sector to embrace digitisation and contribute to the green recovery and circular economy. Skills development is vital across so many dimensions – engineering, repair and material management for example, including food waste and plastics which remain great challenges in Ireland."

PJ Rudden, Founder of Aengus Consulting and Chairman of Construction Sector Group (Innovation & Digital Adoption) at the Department of Public Expenditure and Reform, Irish Government

"Many organisations are developing a Circular Economy Strategy that will prioritise material management and reduced resource consumption – the impact on the waste sector will be to ensure it can adapt to all these changes, otherwise it may become obsolete."

Prof Fiona Charnley, Co-Director University of Exeter Co-Director of the UKRI National Interdisciplinary Circular Economy Hub

"Improving understanding of modern supply chain management will be important for CIWM and its members, opening the sector up to learning from other sectors and embracing disruption to old business models. There is an urgent need to increase the capacity of the sector to meet change head-on, and that requires innovation in the delivery and devising of skills development."

**Eric Randall,
Director of Bryson Recycling in Northern Ireland**

"As a sector we need to improve our strategic workforce planning capability. This doesn't necessarily mean planning for the next decade having absolute clarity on what skills and competencies are required at the outset. The world is changing too rapidly for that. No, we need to have strategic workforce approaches and plans with built-in agility to cope with a range of contingencies. Only if we take this approach, and work collaboratively across the industry, will the longer-term investment required to deliver the skills we need for the future provide a return on investment."

Dr Tracey Leghorn, Chief HR and H&S Officer, SUEZ Recycling and Recovery UK Ltd



WHAT SKILLS WILL OUR SECTOR NEED IN THE FUTURE?

Over the next decade our sector will face some of the biggest changes we've ever been through. Resources and Waste Managers will be at the forefront of the transition and will need a range of skills to thrive in this changing environment. Stakeholders identified the following skill areas to support the transition from waste to resources:



COMMUNICATIONS & BEHAVIOUR CHANGE

We're experts at communicating with the public on waste and recycling issues but budget cuts have meant comms cuts. With significant changes ahead to our collections and the need to raise awareness of the circular economy and carbon to influence consumer decisions we need to reinvest in these skills and demonstrate collective responsibility across our sector.



DATA & INFORMATION TECHNOLOGY

Data is a fundamental part of our industry and yet we're still having the same conversations about the lack of good quality data we collect. Data and Information Technology will underpin our transition and be central to policy reforms and we need to plug this skills gap quickly.



SOFT SKILLS

Soft skills were cited by almost every stakeholder spoken with, and skills needs covered a range of areas from project management and people management through to change management and business continuity. We need to brush up on some core skills to be ready for the transition ahead and adapt to new ways of working and learning.



REUSE & REPAIR

Keeping materials in circulation for longer will require an increased focus on reuse and repair to build local skills and capacity. There's a clear need for upskilling in this area. There are opportunities to work with local communities to drive social and environmental value and build skills (and jobs) within our communities.



CIRCULAR ECONOMY

The way in which we use resources is at the heart of the Circular Economy. We will need to upskill our workforce to understand all the opportunities it presents and enable new business models and material ownership models to come to the fore.



SYSTEMS THINKING

We can't think in silos anymore but thinking in systems and considering the types of holistic approaches required for a more circular economy will require an appreciation of systems and lifecycles.

"We need regulation on materials to make end of life easier and we have the opportunity for new technologies that will allow, for example, 'reverse polymerisation' - this requires new skills for the resources and waste sector."

Bridget Jackson, PWC

"The skills needed to influence/build relationships and partnerships remain important, particularly when thinking about how we work with the third sector or how we link with other players across the value chain, in particular as we move to a more circular economy."

Mickey Green, Somerset Waste Partnership

"The softer skills associated with transformation, change management and relationship development are incredibly valuable but all too often missing from the sector."

Kristy Spindler, South Gloucestershire/West of England Waste Partnership

"As new technologies are adopted in the UK, such as carbon capture and utilisation, there will be a lack of existing data and guidance available. It will be essential to collaborate with technology providers and the Environment Agency to agree approaches and gather data to support facility proposals in the absence of a defined regulatory position. Learning on the job, collaboration and negotiation skills will become increasingly important alongside technical skills."

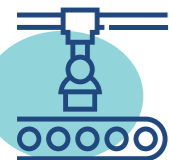
Alice Gibbs, Environmental Consultant, RPS

"I do think you'll see more 'tech' people in our sector and an overall increase in training and development focussing on the use of tech, but I also think there will be a head count reduction as we sharpen up how services are delivered."

Nick Eva, Wasterecruit

WHICH SECTORS WILL WE NEED TO COLLABORATE WITH?

We can't make the transition to a more circular economy or drive decarbonisation on our own. Our sector will need to collaborate with others to share knowledge, gain new skills and amplify our collective impact. Collaboration is key to a green recovery. The following sectors were identified as those that are central to managing the flow of material resources in the future, from products and packaging manufacture, to support services and new end markets which if misaligned will ensure our materials end up as waste. Working collaboratively with these sectors will drive more circular thinking, accelerate digitisation and bring efficiencies to the way we currently collect and manage our resources.



PRODUCERS & MANUFACTURERS

Producers are increasingly having to think about and take responsibility for the 'end of life' of their product. We can provide knowledge and skills around end-of-life processes, resource recovery and remanufacturing and support new systems.



RETAIL 2.0 & LOGISTICS

The retail sector are experts in logistics. We have traditionally used a low-tech approach to collection but as resources become increasingly important and valuable, we will adapt our approach to capturing, harvesting & managing resources.



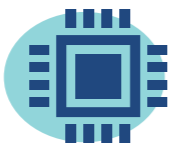
MATERIALS & CHEMICALS

The waste we need to manage is constantly evolving and we must understand what new materials are being used (carbon fibre and nanotech etc.), and what is the material and chemical legacy of current materials so that we can better retain the value from those resources at end of first life.



DESIGN

Many designers don't understand the power they have over whether a product can be reused/repaired/recycled at the end of its life. Our sector can play a role in raising awareness and influencing designer behaviour.



INFORMATION TECHNOLOGY

We need to understand what is possible. Our sector is ripe for innovation from ways in which we collect waste (just in time or scheduling) through to how we extract valuable resources and enhance system circularity to maximise value and ease of recovery.

"Vision - 2030 majority of global FMCG (Fast Moving Consumer Goods) brands to have successfully integrated and have 20 - 30% of their portfolio delivered through non-disposable means. Dream is by 2030, 75% would be achieved. This would require a huge shift in mindset and skills."

Tracy Sutton, Root

"Our material streams for management are going to change, both volumes and composition...more plastic, more WEEE, more cardboard, newspaper and magazines, shift to refillables may result in less opportunity for recycling."

Nick Cliffe, IUK

"Food waste recovery needs to be a top challenge, it needs to be mandatory as voluntary take-up is poor. Hoping that people are becoming more switched on to experiences rather than stuff... refocuses the attitude to food (will this be short term) leading to less waste generation"

Mike Hanson, Baxter Storey

"The pandemic has exposed the reliance on a just in time system we may need to rethink that! We need to introduce designers to circularity and ask them to become agents of change, they will need to work with end of life partners to ensure that aspects such as repair and disassembly are designed in from the start."

Sophie Thomas, Useful Trust

WHAT CAN GOVERNMENT DO?



The UK government has outlined plans for a 'green industrial revolution' that can support the UK in building back better, supporting green jobs, and accelerating our path to net zero.

The Queens speech (2021) also outlined future programmes for a 'skills revolution'. The resources and waste sector can play a central role in delivering against these objectives, through capturing resources that would have otherwise been wasted through the essential services we

provide and making them available in the right quality and format to support other sectors.

Our sector can also transfer knowledge and skills to other sectors that need to make the transition to a more circular economy and championing the green recovery through job creation and boosting the attractiveness of the environmental sector as a whole. We look forward to enabling the circular economy ambitions of Ireland, Northern Ireland, Scotland, Wales and England and ask that the following government support is provided:



1

VISION & TRANSITION

Providing a clear vision and a transition plan for a green recovery that has skills at its heart and sectoral plans that are clear on priorities and timeframes.

2

PRIORITY SECTOR RECOGNITION

Recognising that the resources and waste sector is a priority sector that can support a green recovery. Working with CIWM as the leading professional body to enable widespread adaptation.

3

SECTOR ATTRACTIVENESS

Increasing sector attractiveness by promoting the resources and waste sector (and others in the green sector) as an attractive option for future jobs and careers at schools and colleges.

4

COLLABORATION

Driving collaboration – cross department / governments / sectors and with regulators, academia and training institutions. Getting the skills where we need them at the right time!

5

THE RIGHT CONDITIONS FOR INVESTMENT

Providing the appropriate investment, policy drivers and conditions for long-term investment in the sector which will deliver new training programmes and new jobs.

In January 2021 CIWM, WAMITAB and the UK Resources Council provided a joint response to a UK government Call for Evidence on Green Jobs. To support the evidence, estimates on the scale of green jobs in two areas of the resources and waste sector in England were included along with the support training requirements.

CONSISTENT COLLECTIONS & FOOD WASTE

If those local authorities in England currently using a comingled collection for their dry recyclables changed to a source segregated collection (which would deliver greater recycling quality) and collected food waste this could generate thousands of new green jobs. In England alone this is estimated to be:

- 6,000 - 7,000 additional frontline jobs collecting source segregated materials
- 2,500 - 3,500 additional frontline jobs collecting food waste
- 1,000 additional jobs involved in the bulking and handling of material for reprocessing

REUSE & REPAIR

If each local authority in England invested more in reuse and repair activities, to take these materials out of the waste stream earlier, there could be an estimated:

- 1,000 - 1,500 additional jobs created at HWRCs which develop reuse shops
- 300 - 500 additional jobs in local authority support teams
- 12,000 - 15,000 additional jobs in the community, with the staffing of reuse shops and supporting repair, refurbishment and remanufacturing activities.

TRAINING & LEARNING

Currently the 351 WAMITAB approved trainers can support over 10,000 learners (using a ratio of 1 trainer to 30 learners). However, to meet the predicted skills capacity gap, just based on the c20,000 additional jobs identified in the examples provided above, our sector will need to invest in 700+ new trainers, and in new materials that are better aligned with the skills and competences required in these new roles.

This will require significant investment including new centres to be developed across the UK to meet specific regional requirements. Additional investment will also be required to upskill existing professionals and help them adapt to the predicted transition.

WHAT CAN CIWM DO?

CIWM has an important and time critical role to play in this transition to a more circular economy. It must be the guiding light for the sector – championing the transition and leading the way.

The Chartered Institution is already looking at the steps needed in making the transition to a resource-focused sector, and how it can better align with the changing and growing number of members at different levels and experience. It must 'own' this space or the relevance of the Institution will decline as focus turns from waste to resource.

The time to act is now and the members of the Institution will need to be challenged about the direction of travel and supported on the journey.



REPOSITION

Reposition itself and drive the sector and government to focus on resources.

Become the Professional Body that leads on circular economy.

DRIVE INDUSTRY SKILLS

Set an industry agenda for skills development and create a new transferable skills framework.

Recognise that a long-term view is needed to support the transition and keep the agenda live.

SUPPORT

Continue to invest in skills development for members, particularly for the 'new' skills identified that are essential for the transition.

COLLABORATE

Collaborate widely with other sectors and develop relationships with other professional bodies which will support the green recovery.

OWN

Own this space – determine how many people work in the sector, what the sector is, what the skills gaps are and how they should be filled etc.

Produce an annual skills map.

Continue to monitor skills needs, recognising that they change as new technology, policy, practices and working patterns impact the sector.

"In looking at the skills we need moving forward, service providers need to really think about what it is they want to achieve; this level of clarity really matters if we are seeking buy-in for upskilling."

Madeleine Gorman,
East Sussex Waste Partnership

"Capacity is a big issue in delivering skills required, everyone is under pressure and being squeezed, so having support from different bodies is essential."

Richard Pearn, Peterborough/RECAP

"Collaboration will be critical to the future development of the sector. We need to look at what other industries and organisations are doing and learn from them. How has IT transformed other industries and how did they develop these skills?"

Stuart Henshaw,
Business Development Director,
Integrated Skills

"Recruitment is such a challenge, we don't seem to get the message across to graduates and those with skills we desire, to see that working in waste is a great opportunity to bring about change, particularly in local government; we need to work together as this needs to change."

Annette Dentith, Devon County Council

WHAT CAN CIWM MEMBERS DO?

Over the next decade our sector will face some of the biggest changes we've ever been through.

CIWM members need to seize the opportunities presented by this transition by reflecting on what new skills they require and re-assessing what their role might be, whilst using the support provided by CIWM (and others) to prepare for this future.



1 EMBRACE THE CHANGE

Change can be challenging, some of us will need to adapt and evolve to make the transition from waste to resources.

2 DO A SKILLS AUDIT

Recognise the skills you and your colleagues will need for the future. Conduct a skills audit to determine where the gaps are and how you might fill them.

3 GET SUPPORT

Take advantage of the existing support provided by CIWM including the [Mentoring Platform](#), [Community Connect](#), [Webinars](#) & [Training Courses](#). Don't be afraid to ask for help.

4 SHARE YOUR KNOWLEDGE

Share your knowledge and skills with others within your organisation or with the wider CIWM membership. Write an article for [circular magazine](#), present at a webinar, join a [Special Interest Group](#) or share your knowledge on [Community Connect](#).

5 NEVER STOP LEARNING

Over the next decade our sector will face some of the biggest changes we've ever been through. This evolution will be supported by new knowledge and skills. Dedicate time and planning to learning and invest in your continuing professional development.

"We need to keep looking and learning, thinking about whether there is a better way of doing things, lift our heads up and be brave in challenging what we think we know."

John Enright, Local Partnerships



NEXT STEPS...

We have a significant opportunity to amplify the impact of the sector, by ensuring that we have the right skills to identify and deliver this transition, and where we don't have specific skills within the sector, that we're working with the right partners to drive the changes.

JUNE 2021

Report launch at CIWM skills conference.

SUMMER 2021

Findings from the report are used to inform the CIWM Learning and Development Strategy.

WINTER 2021

The report is tested with key stakeholders within the sector and those in aligning sectors and reported back at Presidential Dinner (October).

2022

CIWM Learning & Development Strategy is adapted. New collaborative training and support programmes are created. We are working seamlessly with collaborators on green recovery initiatives.



IMAGE COURTESY OF RECYCLEVE

ABOUT CIWM

CIWM is the leading professional body for the resource and waste management sector representing around 5,700 individuals in the UK, Ireland and overseas. Established in 1898, CIWM is a non-profit making organisation, dedicated to the promotion of professional competence amongst waste managers. CIWM seeks to raise standards for those working in and with the sector by producing best practice guidance, developing educational and training initiatives, and providing information on key waste-related issues. It uses the body of knowledge represented by its membership to inform and influence policy and regulation on resources and waste management to increase resource efficiency and productivity and promote sustainable development.

CIWM is recognised as the foremost professional body representing the complete spectrum of the waste and resources sector. This gives the Institution the widest possible view and, perhaps more pertinently, an objective rather than partial view, given that our goal is for improvement in the management of all wastes and resources.

SKILLS FOR THE FUTURE: THE JOURNEY TO 2030

CIWM PRESIDENTIAL REPORT 2021
EXECUTIVE SUMMARY

Report authors:

Sarahjane Widdowson, Intelisos,
Dr Jane Beasley, Beasley Associates,
Dr David Greenfield, SOENECS,
Ray Georgeson MBE, Ray Georgeson Resources Ltd

Report design:
SOENECS

Full report available at:

<https://www.ciwm.co.uk/ciwm/news-and-insight/reports-and-research/ciwm/news-and-insight/reports-and-research.aspx?hkey=5a0d3400-7454-438a-8c41-1505882aca9e>

Thank you to everyone that shared their thoughts and experiences as part of this research.



The Chartered Institution
of Wastes Management

General enquiries
Telephone: 01604 620426
Email: ciwm@ciwm.co.uk