BUSINESS IN THE COMMUNITY

The Prince's Responsible Business Network

HRH THE PRINCE OF WALES ROYAL FOUNDING PATRON

Report

A UNIFORM APPROACH

2021

Defining procurement principles for sustainable professional clothing

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PROFESSIONAL ASSOCIATION | CLOTHING INDUSTRY WORLDWIDE

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REPORT

IMPROVING THE SUSTAINABILITY OF PROFESSIONAL CLOTHING

The Textiles industry faces several well-documented sustainability challenges, from waste and carbon to human rights. Professional clothing such as workwear, PPE and uniforms is therefore an increasing concern for many businesses looking to manage sustainability risks in their supply chains. In response to growing demand from procurement teams, this research carried out by Business in the Community (BITC) with the professional clothing value chain, seeks to set out practical recommendations to increase the adoption of circular economy principles in this sector to manage risks and foster innovative new solutions.

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Business in the Community
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INTRODUCTION

Corporate workwear is worn by approximately 11.6 million people in the UK, making up around a third of the total workforce and amounting to around 16,000 tonnes each year. Worryingly, it is estimated that 90% of this is sent to landfill or incineration after use; a greater proportion than for clothing as a whole. Furthermore, whilst efforts to date have done well to define the issue and solutions required, they have not managed to achieve the scale and momentum required for sustained results. An opportunity remains to leverage the power of procurement to the way corporate workwear is designed, procured, used, reused, and recycled.

With the support of the PCIAW®, and as part of the Interreg North Sea Region ProCirc project, BITC has facilitated dialogue between procurers from diverse sectors as well as key decision makers in the professional clothing supply chain, providing insights into manufacturing, supplying, procurement, and recycling processes.

This report sets out our findings, sharing unique insights into what is needed to improve the sustainability of the workwear sector, as well as suggesting principles which can be incorporated into workwear procurement.

What is professional clothing?

Professional clothing refers to all garments which are issued by employers to their employees and includes corporatewear, workwear, and PPE.

- **Corporatewear** is design-driven and reflects company identity and branding in a sophisticated, elegant style. This includes high end uniforms for prestigious companies such as airlines, banks, or the hospitality industry.
- **Workwear** is designed for specialist professional sectors, featuring structured garments with technical protection and functionality to help workers carry out their jobs in industrial sectors like construction, rail, oil, and gas.
- PPE must conform to strict regulations to protect wearers from workplace dangers and hazards, particularly in the emergency services and healthcare sectors.

WHAT DOES PREVIOUS RESEARCH TELL US?

This section will summarise the findings of previous research projects which have developed an understanding of the scale, structure, and sustainability challenges of the UK professional clothing landscape.

Scale of professional clothing buying in the UK

Research by the Waste & Resources Action Programme (WRAP) estimates that in 2011 approximately 11.6 million employees in the UK were provided with professional clothing. The number of garments sold is estimated as being 39.2 million in a year, with a collective weight of 16,290 tonnes (based on 415 grams per garment) representing about a 1-1.4% share of the total UK clothing market[i].

THE UK IS ONE OF EUROPE'S LARGEST WORKWEAR CONSUMERS AT JUST UNDER 18% OF THE COMBINED EU28[ii].

The professional clothing value chain

The professional clothing value chain – as for most consumer clothing – is long and complex.

There are primarily two types of textile fibre used in professional clothing – natural, primarily cotton, and synthetic, based on petro-chemicals such as polyester. Clothing can be manufactured either from a single fibre or a combination of multiple fibre types (known as mixed fibre).

Garment technologists and designers determine the specifications of the fabric and the design of the garment. This is the stage at which crucial decisions are made which will impact the sustainability of the garment over its lifecycle, including its durability and recyclability.

According to PRODCOM data for 2015, referenced from ECAP's European Textiles and Workwear Market report[iii], around 2,000 tonnes of professional clothing are manufactured in the UK, around 2,000 tonnes are exported, and around

16,600 tonnes are imported. Therefore, while there is proportionately more professional clothing manufactured in the UK for domestic consumption than by other big European producers like Germany, Italy and Spain, the UK is still highly dependent upon foreign manufacturing.

While manufacturers tend to be located overseas, many large suppliers, wholesalers and distributors are UK-based and are often the main interface for buyers of workwear, as opposed to manufacturers themselves. Procurers have shared varied experiences from dealing with suppliers – some feel that the suppliers are not able to offer sustainable solutions when asked, but others have

shared stories of positive relationships. The variations in understanding and offering demonstrate that the market for sustainable garments is inconsistent and at an early stage.

At a garment's end of life – either when the garment is no longer usable, or when an employee leaves the organisation, and it is deemed that it cannot be reused by another employee – it may be collected for disposal or recycling. Where garments are not collected by the organisation, employees will hold onto them, which presents a security and reputational risk, as discussed in the risks section.

WHAT ARE THE SUSTAINABILITY ISSUES?

From the perspective of an organisation that uses professional clothing, waste is the most obvious and visible sustainability challenge. WRAP's analysis provides an estimate that 90% is sent to landfill or incineration after use. It is notable that this is a greater proportion than for clothing as a whole. This does not reflect well on the organisations that use professional clothing, and creates significant environmental issues associated with unsustainable disposal.

It is important to remember however, that the environmental impact of professional clothing extends the whole way through the value chain and includes issues such as:

- Water consumption
- Microfibre pollution
- Greenhouse gas emissions
- Modern slavery risk

Water consumption

Water consumption is one highly significant environmental issue which is directly related to the textiles industry. In 2016, WRAP estimated that the water footprint of clothes used in the UK was 8 billion cubic metres.[iv]

Cotton, in particular, requires a very high volume of water to grow and its production accounts for 69% of the water footprint of fibre production for textiles[v]. Central Asia has become an increasingly dry region due to the high water consumption of the cotton industry. Additionally, toxic substances used in fibre production can create soil and water pollution, leading to crop failure, which risks causing food shortages and the loss of livelihoods for farmers, as well as biodiversity loss.

Microfibre pollution

Increasing public awareness of ocean plastic pollution has caused concern about the potential environmental impacts of plastic microfibres released through washing garments made from synthetic fabrics. It has been demonstrated that in the worst cases, people might be ingesting around the mass of a credit card's worth of microplastic a year due to pollution.[vi]

However, research has shown that there is in fact a far greater prevalence of natural fibres in comparison to synthetic fibres in some UK waterbodies, countering the general consensus that their biodegradability reduces the environmental threat.[vii] This may be due to synthetic chemicals in dye and textiles finishes which are carried along in the fibre fragments[viii].

The creation and impact of garment-related microfibres – both synthetic and natural – is still a developing area of science, making it difficult to draw any firm conclusions as to whether one type is less damaging than the other.

Greenhouse gas emissions

The textiles industry as a whole is a major contributor to greenhouse gas emissions, responsible for an estimated 1.2 billion tonnes of CO_2e annually – more than the emissions of international flights and maritime shipping.[ix]

IF THE INDUSTRY CONTINUES ON ITS CURRENT TRAJECTORY, BY 2050 IT COULD BE RESPONSIBLE FOR MORE THAN A QUARTER OF THE GLOBAL CARBON BUDGET IN A 2-DEGREE SCENARIO.[x]

Modern slavery risk

Social factors, as well as environmental, should be considered as part of sustainability. The lack of transparency in the textiles supply chain raises serious concerns about human rights violations which may be occurring in lower supply chain tiers. The forced labour system of cotton production is endemic in nine countries producing 65% of the world's cotton: Benin; Burkina Faso; China; India; Kazakhstan; Pakistan; Tajikistan; Uzbekistan and Turkmenistan.[xi]

The sustainability issues which have been outlined here are complex, often hidden, but highly significant, and organisations that are users of professional clothing should be taking responsibility for the impacts of their purchasing-decisions.

Leveraging the power of procurement

The procurement function of organisations that buy and use professional clothing is a crucial driving force in creating demand for sustainable workwear products. While procurers in individual organisations may feel that they are constrained in their ability to create change – for example due to a lack of available options in the marketplace – as a collective, procurers hold enormous power to shift the professional clothing sector towards more sustainable approaches. This project has sought to identify ways of realising this potential, and in the How to Address Circular Workwear section, we suggest procurement criteria which can be adopted so that procurers are bringing common asks to the market.

WHAT IS THE VISION FOR CIRCULAR PROFESSIONAL CLOTHING?

The circular economy is a system designed to maximise the value of products and materials while in use, then to recover and repurpose these at the end of their lives, ultimately eliminating waste.

Applying these principles to professional clothing would maximise the utility of garments. In other words, the garments would be designed so that they do not fail under normal use and would also be designed to allow for better reuse opportunities. Suppliers would also design their services to facilitate greater reuse so that garments that are still usable do not go to waste. This would mean that less material is required overall, and the need for new virgin materials would be displaced by the increased ability to use recycled materials, which would also reduce product lifecycle emissions.

Garments would also be designed to be fully recyclable. This would require designers to understand the recycling system and to design clothes which can be recycled through a fibre-to-fibre process, so that they can be turned into new clothes rather than being downcycled, for example into insulation – a lower value product which cannot itself be recycled.

Benefits of a circular system

Adoption of circular principles into the professional clothing industry will have many benefits. As well as the positive environmental and social benefits associated with changing the current system, there are benefits for:

- **Procurers,** who will ultimately have to spend less on procuring more units if their ability to reuse and recycle improves.
- **Suppliers,** who will gain a competitive and commercial advantage as tender requirements get more stringent.
- **Users,** who are more likely to be given professional clothing that is durable, fit for purpose and with minimal impacts on their personal carbon footprint.

WHAT ARE THE CURRENT PRACTICAL CONSIDERATIONS?

Whilst embedding circular principles presents an opportunity to improve the sustainability of your business, there are also practical considerations involved in the procurement process. The following considerations were identified by many of the stakeholders that we spoke to as part of our research.

Health and Safety

Where professional clothing is used as PPE, the primary concern is keeping employees safe, and it is essential that the garment design facilitates this. Procurers rightly prioritise safety as the top priority for PPE. Design of these garments is often driven by regulations. Companies are liable for prosecution if they are determined to have done anything that might compromise the ability of PPE to protect against accident.

Security

A major concern of many organisations that use branded workwear is that it could get into the wrong hands and allow people to pretend to be employees of the organisation, either to access the organisation's buildings or to deceive members of the public. These concerns drive organisations to prioritise processes where they can be assured of the garments being destroyed, often in the form on incineration, which can prevent other options from being considered.

Garments can also be destroyed through recycling but as this is a process that most procurers are less familiar with, they often don't consider it. With appropriate documentation and assurance, the recycling process can also provide the peace of mind of that is needed.

Forced labour and human rights violations

Unlike traditional risk management, human rights due diligence should focus on risks to people, rather than risks to the business. The complexity of textiles supply chains makes it difficult for companies to survey and audit every stage of the production process, meaning that exploitative practices go unnoticed. This is not only unethical but presents major reputational risk if human rights abuses are discovered within companies' supply chains.

Legislative

The Department for Environment, Food, and Rural Affairs' Waste Prevention Programme states that a consultation on a proposed Extended Producer Responsibility for textiles will begin by the end of 2022. There is a risk that this would drive up costs if workwear design and supply does not accommodate waste prevention.

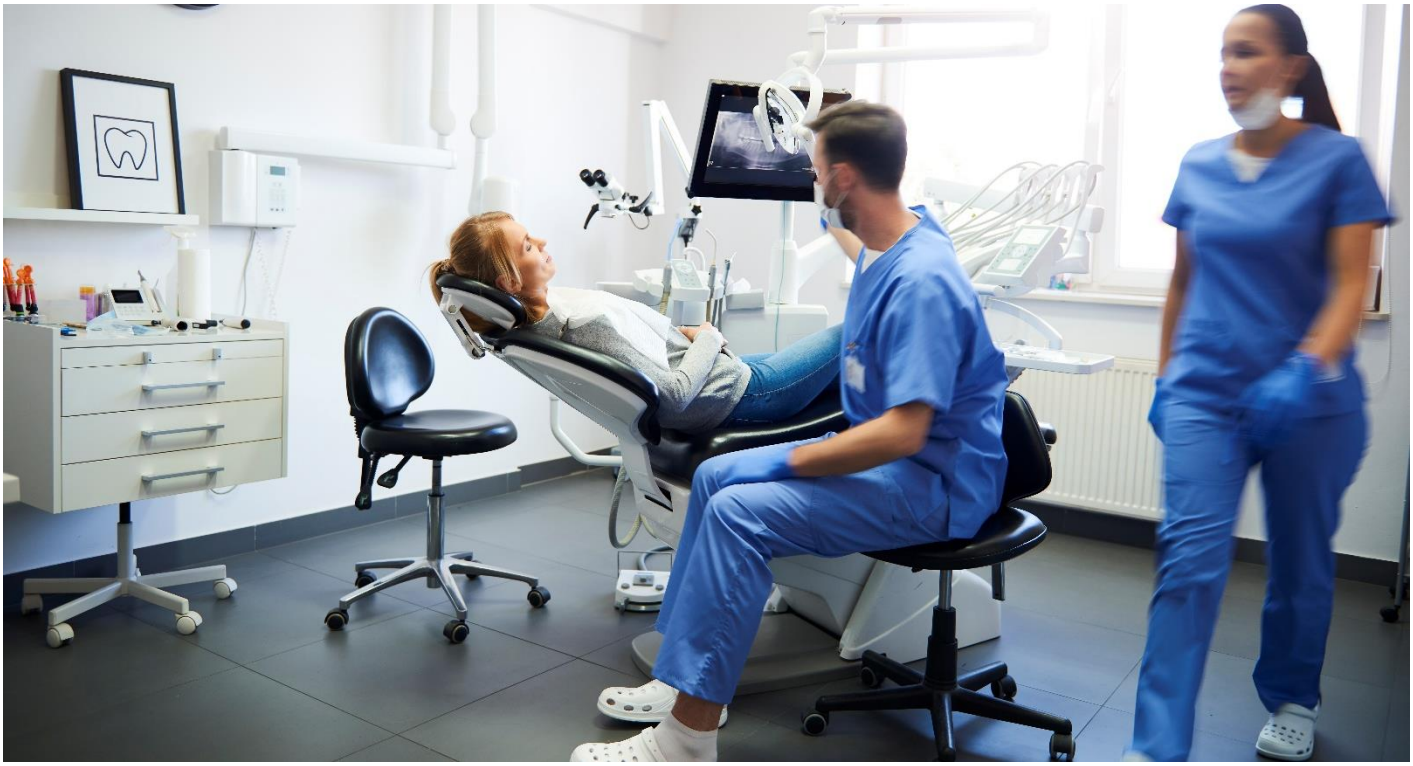
Biodiversity collapse

There is a risk that biodiversity collapse and soil erosion would lead to a reduction in fibre crop yields, potentially leading to higher prices or inability to access natural fibre-derived products.

Reputational

There is increasing public recognition of the negative impacts of fast fashion, which has led to many high street retailers putting extra emphasis on being more sustainable. For example, H&M has a 'Conscious' brand and offers to collect clothes for recycling in exchange for vouchers to spend in its shops.[xii]

It is possible that public attention will shift from retail clothing to professional clothing, and the recognisable brand identity that much professional clothing has could make organisations a target if they are not seen to be taking the sustainability of their clothing as a serious issue.



WHAT ARE THE OPPORTUNITIES?

However, as well as the risks, challenges and obstacles associated with making changes to the way in which professional clothing is procured, there are significant opportunities as well.

Employee engagement and productivity

Employees could have a greater sense of ownership of their professional clothing and pride in their organisation, and productivity could increase by reducing the number of garment failures.

Reputational and brand enhancement

The sustainability impacts of clothing are gaining greater public awareness and scrutiny, and while professional clothing has not yet been subject to the same level of public criticism as fast fashion brands, the same sustainability issues apply.

Carbon opportunity

Circular economy approaches may present an opportunity to reduce Scope 3 carbon emissions. The embodied carbon of an item (the carbon emissions that were created through its production) doesn't change once made, so the more uses each item gets (through design for durability, maintenance, and repair services) the less embodied carbon there will be per-use.

Additionally, made in UK policies, which can go hand-in-hand with a circular approach, will require less carbon-intensive logistics than a global supply chain.

Embodied carbon will vary from item to item, and we suggest that procurers work with suppliers to better understand full lifecycle emissions and how this will be impacted by circular approaches.

Greater value

While circular economy approaches to professional clothing may cost more on a per unit basis, you should consider the additional value which this can bring. Circular economy design may lead to a greater service life of garments – either because garment failures are designed out or because repair and reuse options are more prevalent. This will increase the utility of each item procured. It should also be remembered that the reputational and employee engagement benefits mentioned above will encompass a monetary value.

WHAT ARE THE CHALLENGES FOR THE SECTOR?

The research carried out also identified numerous challenges for organisations in adopting circular principles including:

- Financial pressures
- Insufficient infrastructure
- Design challenges
- Preference for new garments over recycled
- Lack of value chain collaboration
- Lack of awareness

Financial

A lot of procurement is price driven. Adopting circular economy approaches across the value chain will realistically involve more upfront costs in the short-term. Sustainable certifications such as Fairtrade cost more but deliver value in other ways by providing assurance around labour rights and fair prices paid to suppliers.

This is an investment that organisations wanting to source responsibly need to plan for. It is impossible to get sustainable clothing at fast fashion prices.

Insufficient infrastructure

There is currently no commercial option for recycling blended fibres, which is a major challenge to the industry. While chemical recycling technology looks likely to provide a solution for this, such approaches are still in development and are likely to be several years away from mainstream commercialisation.

In the meantime, fibre-to-fibre recycling is possible through mechanical recycling so long as garments are made of a single fibre type. Maximising the potential of this is an information challenge as much as an infrastructure one, requiring collaboration to make these decisions and considerations around end-of-life at design stage.

Mechanical recycling of mixed fibres is still preferable to these going to landfill or incineration, although the secondary uses for this material will be of a lower grade, such as being used to make insulation. The products created are unlikely to be recyclable themselves, so this approach essentially delays the material going to landfill rather than being a truly circular solution.

Design challenges

Many organisations that use workwear are driven by brand identity, and there is a need to educate those organisations that complex designs come at the expense of sustainability. This is due to complex designs being harder to strip down at end-of-life to recover yarn. Clothing designed for recycling would be single fibre and would therefore have less opportunity for brand identity through complexity in design.

Specifying recycled content is what many procurers think of as being sustainable design and this is a good start, but currently it is far from a closed loop. If the fibre is made from recycled PET bottles, for example, it may prevent the bottles going to landfill now but if the garment ends up in landfill at the end of its product life, then this is not circular – it is merely delaying the landfill process by a few years.

Several procurers have shared experiences of finding that sustainable designs which are currently offered are not fit for purpose. For example, Velcro patches allowing logos to be easily replaced have been considered by one organisation's protective clothing user group, but it was determined they would not stay on the garments under normal use. The suppliers of more niche sustainable garments may not currently be able to provide sufficient volume to contract with big procurers.

Sizing garments

When it comes to fitting employees with their uniforms, the industry norm today is to conduct in-person fitting sessions. These require sample size sets to be specially manufactured, and these typically need to be transported around the client locations nationwide to determine correct sizing. This process is costly, time-consuming, has a

carbon impact, and often results in a high level of returned garments due to time lag between the sizing event, manufacture, and supply.

Preference for new garments prevents reuse

A perceived barrier is that employees do not want to be issued with 'someone else's clothing' and employees can't be given previously worn footwear. This is a barrier that can be overcome if the clothes are in good condition – suppliers that provide laundry services can repackage clothing for reuse in a way that, as far as the person who receives it is concerned, it is as good as new.

Lack of awareness of the issue

Many of the procurers we spoke to personally 'get' the sustainability challenge of clothing, but others in their organisation either have not considered it at all or don't prioritise the issue. Clients also don't tend to ask about the sustainability of PPE or professional clothing. While some industries, such as construction and travel, may have more materially significant sustainability impacts which they need to address, this should not be used as an excuse for inaction. This guide sets out some of the low-hanging fruit, as well as more holistic actions which organisations can take without having to dedicate a lot of resource to this issue. It also seeks to provide a common language and articulate the opportunities that change agents can use to bring others on board. In so doing, they will raise awareness of the hidden damages of an aspect of business behaviour that has previously been considered innocuous.

Value chain collaboration

Collaboration and the sharing of sustainability information across the value chain is lacking and prevents sustainability challenges from being identified and overcome. This is both the responsibility of, and will benefit, all stakeholders involved in the life of a product, including suppliers of raw materials, manufacturers, consumers, and end-of-life disposal companies.

One example of this, which we have touched upon already, is for the design process to have a greater awareness of end-of-life recycling infrastructure and to design garments which can be effectively recycled by this process. Awareness of circularity must start at the educational level, with technical colleges and universities embedding textiles circularity in curricula.

This if not only a design issue. Improved collaboration between suppliers, procurers, and disposal companies could greatly improve the logistics that would allow more garments to be collected and put into the recycling stream. A garment that is designed to be fully-recyclable will still end up going to landfill or incineration if the right collection infrastructure is not in place.

Internal collaboration

Even within procuring organisations, it is difficult to collaborate across departments. There is clearly a need for greater understanding of shared risks and benefits. For example, there might be an internal separation between the sustainability team who are focused on reducing the negative environmental and social impacts of the business and buyers who are more focused on cost.

HOW TO IMPLEMENT CIRCULAR WORKWEAR

This section provides practical recommendations across the following themes:

1. Optimising use
2. Buying better
3. Engaging suppliers and stakeholders

1. Optimising use

Garment management

Firstly, think about how to reduce the amount of professional clothing being allocated. If standard practice is to issue three jackets, for example, could this be reduced to two?

It is also essential to have a monitoring process for garments that are distributed to employees. This will allow you to know which employees have been issued with what items, and therefore what needs to be collected, so that you can ensure clothing does not leak from the system. You will also be able to record data such as product failures and how long each item lasts, which can be fed back to suppliers. Recording garment condition when returned may help to identify reuse possibilities.

Employee engagement to improve collection

Even if there is a system in place, you are reliant on employees returning their garments. Businesses need to make it easy for them to do so and engage them in the positive sustainability story in the process. Use professional clothing as a very visible part of your organisation's sustainability message, as something that the employees engage with every day, and then show how this links to other aspects of sustainability which may be more material.

By applying profit and loss statements at store level, plus training staff members on waste management, a high-street takeaway food retail chain developed a culture of low/no waste across its store portfolio in order to reduce cost. Managers actively ask employees who are leaving to return their uniforms; they are then laundered by the company and kept so that new employees don't need new items issued each time.

Finding opportunities for collected garments

Ideally, finding reuse and recycling opportunities would be considered when setting up a contract with a supplier, as discussed in the next section, but if you are within a contract and have just started looking for an alternative to landfill or incineration with the items you collect, here are some ideas.

Firstly, contact your supplier to see if they can support. They may already work with reuse or recycling organisations that can take your garments. Depending on the type of professional clothing you have, there may be reuse opportunities.

In one of Hunter Apparel Solutions' contracts with a prime Railway account, it worked with the Salvation Army who take in outerwear items with no brand/brand removed, to be distributed to homeless people to keep them warm in winter. Hunter simply delivered the items to the Salvation Army, who carried out the onward distribution.

If reuse is not an option for all of the clothing, investigate opportunities for a mixture of reuse and recycling. As previously mentioned, fibre-to-fibre recycling is preferable but this will be dependent on the garments being made of a single fibre. If the garments are mixed fibre, recycling for other uses is still preferable to incineration or landfill.

PwC piloted a uniform take-back scheme with three contract services suppliers that operate in its offices in which the uniforms were sent to a textiles recycling company which sorted items based on their condition. Over a two-year period, approximately 20% of items were able to be sent overseas for retail in their original state, 60% were reused as industrial rags, and 30% were shredded to be made into other products such as sound insulation for cars. For more information see PwC's publication.

The recycler Field Textiles operates a similar scheme for Royal Mail, which includes de-branding of collected items where required. Depending on condition, the items, including footwear as well as garments, are either resold, recycled or landfilled (less than 1%) and a monthly report is prepared for Royal Mail showing the destination of the items. For further information see this case study produced for the Uniform Reuse project.

2. Buying better

Procurers, both of public sector organisations and of large corporates, hold a balance of power in shaping the future of sustainability in the workwear industry.

Several of the challenges mentioned previously in this report can be influenced at the procurement stage, including:

- **Professional clothing design:** by specifying and investing in circular approaches, procurers can set the direction for organisations down the supply chain to bring circular approaches into their product and service offerings. In the long-term, increased demand for circular products and services may drive down the price of this currently niche offering.
- **Infrastructure:** Increased demand for recycled content is a factor which will influence investment in new infrastructure.

It is important to engage with suppliers early in the procurement process. The PCIAW® Uniform Buyers Network runs a Match Making Service and can pair you with suppliers of workwear, corporatewear, personal protective equipment (PPE) and accessories based on your procurement aspirations. The suppliers can use their knowledge and experience to help you refine your aspirations.

However, a poor practice in tendering is having stated aspirations or goals which are not properly weighted in tender scoring. One sustainable clothing supplier shared an experience of having positive engagement with a corporate sustainability team ahead of a tender, only to find that the tender itself was run as an eAuction which did not reward the consideration of environmental issues. Instead, we encourage companies to add sustainability as an appropriately weighted element of their tender requirements.

Through our dialogue with the workwear supply chain and procurers, BITC has developed a set of circular procurement principles which can be adopted by procurers, providing a set of clear asks to the supply chain.

Our framework below covers seven key principles, three of which relate to the overall tender design and evaluation, while four suggest criteria which can be adopted for the assessment of the tender.

The grid on the following page explains the opportunity that each of these principles provides and offers examples of organisations that are currently adopting each approach.

Our suggestions for how to incorporate these principles in professional clothing procurement are provided in APPENDIX 1.

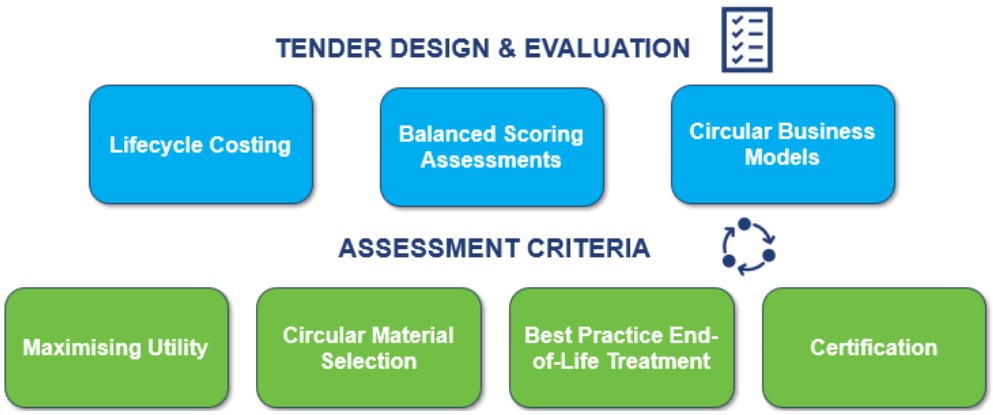


Image 1: *The seven principles of circular professional clothing*

Examples of the seven principles of circular professional clothing procurement

PRINCIPLE	OPPORTUNITY	EXAMPLE
LIFECYCLE COSTING	Assessing a garment's true cost by factoring in lifetime, disposal, replacement, and repair costs alongside its unit price.	The materials science and fabric manufacturing company W.L. Gore commissioned Intertek to create an example methodology that could allow public bodies to use lifecycle costing to purchase higher performing products at a lower overall cost per year – see the info box in Appendix 1 for more information.
BALANCED SCORING ASSESSMENTS	Using a balanced scorecard where social (e.g., modern slavery, inclusion) and environmental (e.g., circularity, carbon) factors are scored alongside price.	United Utilities has included sustainability questions at PQQ which make up 25% of the overall award criteria. The questions are based on processes in place, commitment to social responsibility, waste, energy & CO_2, materials and human rights.
CIRCULAR BUSINESS MODELS	Circular business models are where circularity is included as part of a supply contract. Leasing/rental is not inherently circular but can provide a good contractual basis for circularity being integrated into it.	ACS Clothing are a B2B service provider supporting the shift from 'ownership' to 'usership' by operating rental services for retail brands in menswear, womenswear, and babywear. The service includes garment refurbishment (restoring non-usable returns to as-new condition for recommerce) to extend garment life. This consumer-facing example may provide a model for the professional clothing sector.
MAXIMISING UTILITY	Maximising value from each garment item through designing in durability, suitability for reuse, and process innovation to reduce wastage.	Hunter Apparel recognised the value of innovation to improve the efficiency of the garment sizing process through using Sizer Technologies' digital sizing solution which can be downloaded as an app on its customers' mobile phones. This replaces the need for fitting sessions, and for sample garments to be created.
CIRCULAR MATERIAL SELECTION	Designing garments to make them highly recyclable.	Each garment which Project Plan B make is made from recycled polyester which, at the end of wearable life, will be turned back into raw polyester before being spun into the fabric of new garments; closing the loop to create a circular polyester cycle.
BEST PRACTICE END-OF-LIFE TREATMENT	Including end-of-life treatment within a supply contract.	Keen to be at the forefront of recycling technology, the infrastructure company Amey plc has been trialling chemical recycling technology through Stuff4Life, a start-up that is working with Teesside University to develop a closed-loop solution for commonly used items of PPE. Chemical recycling is still at an early stage of development, but in future such approaches may be able to be offered as part of a supply contract.
CERTIFICATION	Requesting robust certification or assurances from suppliers for garments.	OEKO-TEX provide a variety of textile product certifications for manufacturers and individual products, including testing for harmful substances and sustainable production conditions.

3. Engaging suppliers and stakeholders

As your approach matures, we would encourage responsible businesses to go above and beyond our previous suggestions to play a bigger role in driving system change.

Rather than only addressing sustainability at the point of appointing a supplier, create space for suppliers to innovate within a contract. Add sustainability to the agenda of regular contract review meetings and allow suppliers to adapt their offer to provide greater sustainability, even if this may lead to changes in other elements of the contract such as delivery frequency.

Establish dialogue with different players in the supply chain, such as yarn manufacturers, designers and recyclers, rather than relying on the supplier as the only point of contact. There are also voluntary textile sector agreements which, as a procurer of professional clothing, you can sign up to, including the Professional Clothing Industry Association Worldwide and WRAP's Textiles 2030 project. Businesses can also join BITC's Circular Economy Taskforce to start to solve problems beyond their own value chains.

Either through sector groups or individually, procuring organisations can be active in engaging government to accelerate good legislation. The Department for Environment, Food and Rural Affairs has indicated that it will be opening its consultation on a proposed Extended Producer Responsibility scheme for textiles by the end of 2022. Taking part in this consultation and encouraging government to bring this legislation into effect will help to create a more level playing field for garment suppliers and manufacturers to offer more sustainable products.

Finally, large users of professional clothing can play a more active role in developing more circular solutions by being active in commissioning research into this issue or investing in and adopting early-stage technology. For example, the infrastructure engineering company Amey plc has been segregating polyester-based PPE for chemical recycling trials by PPE4Life.

WHAT ARE THE NEXT STEPS?

BITC is a partner in the Interreg funded ProCirc project which seeks to support circular procurement pilot projects. This involves real procurement activities which are adapted to support a circular economy and lead to reductions in material use, waste generation, or carbon emissions. As such, we can provide further support for organisations that are interested in adopting the recommendations and help to profile these success stories.

We can support pilot projects which take place between June 2021 and April 2022 in which an organisation that uses large volumes of workwear wishes to change its procurement criteria or process, or to collaborate with an existing supplier, to develop circular approaches.

Contact peter.ramsey@bitc.org.uk at Business in the Community to discuss this opportunity further.

WE EXTEND OUR THANKS TO THE ORGANISATIONS THAT PARTICIPATED IN THE EVENTS AND RESEARCH WHICH HAVE INFORMED THIS REPORT

- Addenbrooke's Hospital
- Amey plc
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- Deloitte
- Dimensions
- Dwr Cymru Welsh Water
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- EMCOR
- Enterprise Rent-A-Car
- Eurovia
- Fristads
- Greggs
- Hunter Apparel Solutions Limited
- IHG Hotels and Resorts
- Incorporatewear
- ISS UK
- John Liscombe Limited
- Mitie
- MWH Treatment Ltd
- Northampton General Hospital NHS Trust
- Novus Property Solutions
- PCIAW®
- Project Plan B
- Severn Trent
- Sizer
- Sodexo
- Stuff4Life
- W.L. Gore & Associates
- Walgreens Boots Alliance
- WISE Worksafe
- WRAP
- Yorkshire Ambulance Service NHS Trust

APPENDIX 1

Circular professional clothing procurement principles

Through our dialogue with the workwear supply chain and procurers we have developed a set of circular procurement principles which can be adopted in the design of tenders and to set circular criteria which suppliers are asked to deliver.

These are only suggestions, and the suggested criteria won't be relevant to all garment types. We would recommend that procurers speak to suppliers before tendering to determine what would be suitable criteria for your particular tender.

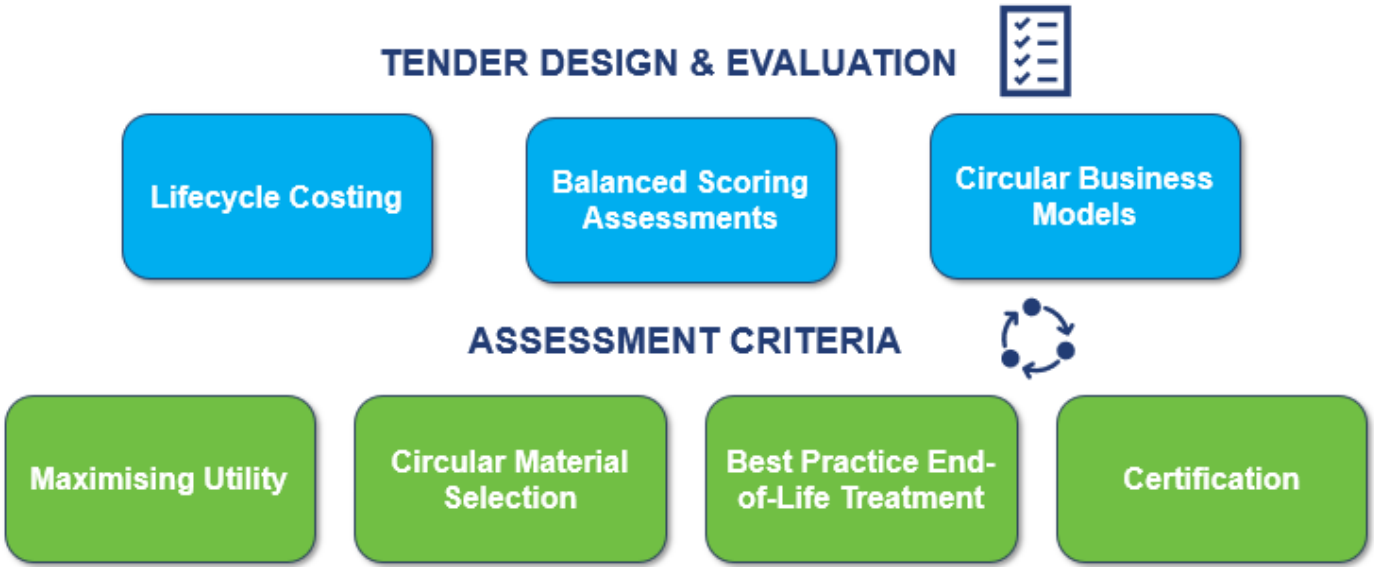

Image 1: *The seven principles of circular professional clothing procurement*

CASE STUDY I EXAMPE OF LIDFE CYCLE COSTING METHODOLODY

W.L.Gore & Associates commissioned Intertek to create an example methodology that could allow public bodies to use life cycle costing to purchase higher performing products at a lower overall cost / year. The example is specifically focused on military battledress clothing.

The methodology is based upon the rates of different types of historical product failures rates, as entered by the procurer. Garments under consideration are then tested as new, and after artificial aging, in a lab to replicate the product failures seen in real life, with the results recorded. The results are then summarised to provide a relative lifetime for each product.

To determine the lifecycle cost, the unit cost is divided by Weighted Relative Life. This means a product with unit cost of £100 and Weighed Relative Life of 1 will have Relative Lifecycle Cost of £100. Another product with Unit Cost of £80, and weighted Relative Life of 0.5 (i.e., lasts half as long as the product with Weighted Relative Life of 1), would have a relative lifecycle cost of £160. After taking into consideration other variable costs, such as distribution costs, the procurer can then identify the most economically advantageous product.

Please contact BITC for further information on this methodology.

Lifecycle costing

Assessing a garment's true cost by factoring in disposal, replacement, and repair costs alongside it's unit price can help identify more sustainable products with higher value over their lifetimes. This factor is likely to me most useful where the limiting factor for product life is garment failure, rather than the garment no longer being required.

Starting	Leading
• State intention to suppliers that lifecycle costing will be phased in for workwear procurement within the next 3 years (focusing on high impact categories)	• All workwear categories procured based on full lifecycle cost.

Tender evaluation

Tender design and bid evaluations should reflect the need for product sustainability to be considered alongside basic unit price. Using a balanced scorecard where social (e.g. modern slavery, inclusion) and environmental (e.g. circularity, carbon) factors are properly assessed will incentivise innovation within the supply chain and reward more sustainable suppliers.

Procurers that have a prequal stage may decide to apply sustainability scoring at that stage rather than at the tender stage.

Starting	Leading
• Robust balanced scorecard informed by engagement with your supply chain includes sustainability issues (see criteria below)	• Sustainability criteria are given equal or greater weighting than unit price

Circular business models

Circular business models are where circularity is included as part of a supply contract. Leasing itself is not an inherently circular model, however circular approaches can be seamlessly embedded within a leasing or rental contract. For example, the supplier can take back the product when the contract expires and should be transparent about whether they extend its life, refurbish it, or use its parts in another product.

Starting	Leading
• Supplier offers repair and/or laundry service to extend life of garments	• Garments are provided through rental / leasing models which incorporate circular elements such as repair / laundry services to extend product life

Maximising utility

This is about getting the greatest amount of value out of each garment item through designing it to be durable so that garments need to be replaced less frequently, and design garments in a way which makes them more suitable for reuse. As well as innovation in the garments themselves, innovation in the supply process can reduce wastage. Improved utility will reduce overall demand for new products.

Starting

- Performance related guarantee (e.g. item will last for minimum of two years under normal use)
- Digital sizing negates the need for sample garments to be manufactured

Leading

- Garments are designed to be repaired over the course of their life (e.g. hard wearing parts can be replaced)
- Material innovation enables much longer lifespans for garments

Circular material selection

For garments to be reused or recycled end of life, they must be designed with that in mind. Single fibre garments are much easier to recycle back into textiles, whilst fabrics containing some recycled content offer a more sustainable alternative to virgin material.

Starting

- Minimum 20% percentage recycled content
- Single fibre or recyclable material (excluding zips / buttons etc.)

Leading

- Entire garment is single fibre or recyclable material (including zips / buttons etc.)
- 100% closed loop recycled fibre content (from fibre-to-fibre recycling)

Best practice end-of-life-treatment

Attention should be paid to the end-of-life options for different items. Solutions focused higher up the waste hierarchy – such as repair and reuse – should be prioritised. Recycling garments back into textiles is more favourable than 'downcycling' them into other products. For non-recyclable waste, incineration is preferable to landfill. Waste management processes should be properly audited.

Starting

- Supplier can offer collection and downcycling support for end-of-life garments (e.g. recycling for insulation etc.)

Leading

- Supplier can offer collection and closed-loop support for end-of-life garments (e.g. fibre-to-fibre)
- Supplier assesses product failure data to inform design improvements.

Certification

Requesting robust certification or assurances when contracting, and applying standards fairly, will favour suppliers who have genuinely invested in sustainability. Third party certifications like ISO14001 carry more weight than in-house assessments. Textile specific standards like OKEOTEX and Bluesign offer further assurance of product sustainability.

Starting	Leading
• Suppliers are required to have ISO14001 (or third party certified equivalent e.g. BS8555)	• Product level sustainability certification e.g. Bluesign, OKEOTEX

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