Number/code: OM/E13

Title: LIFE EXTENSION FOR STAFF UNIFORMS

Guidelines section:

[ ]	Governance	[X]	Operational management

[ ]	*Context of the event*	[ ]	*Procurement*
[X]	*Event*	[ ]	*Mobility and logistics*
[ ]	*Stadium management*	[ ]	

Description

Easily overlooked, yet textiles contribute hugely to landfill waste. Some organizations produce waste that is extremely valuable to other organizations. One of this kind of waste are staff uniforms.

A 2013 research from the Scottish Government suggests that 50% of uniforms and textiles disposed of by organisations are reusable without repair[1].

If your staff wear uniforms, you should consider setting up a proactive return-of-uniform policy for when individuals leave your employment.

This will increase the supply of uniforms for re-use and the company can save money on purchasing new uniforms. In addition, a periodic repair policy is also beneficial for extending the lifetime of staff uniforms.

If a company has uniforms that it no longer needs, instead of sending them to landfill, it can donate them to the growing number of charities that offer re-use services for textiles, saving on landfill costs.

Recycling is the third most sustainable option for managing waste materials.

Environmental benefits

The environmental benefits of this practice relate to the reduction of the environmental footprint of the uniforms and promotes waste reduction.

Economic benefits

Longer duration of the uniforms implies the postponing of new purchases and the amortization of the investment in a longer period.

[1] Resource Efficient Scotland, "How to plan & deliver environmentally sustainable events", p. 21 https://energy.zerowastescotland.org.uk/sites/default/files/How%20to%20plan%20&%20deliver%20environmentally%20sustainable%20events.pdf

Applicability and replicability potential

The practice can be easily replicated.
However, as highlighted by the UK-based organization Uniform Reuse, a major drawback of uniform reuse relates to the fact that usually corporate clothing is highly branded. Not only the presence of a logo could be a deterrent to secondary markets - as people are unlikely to want to be seen sporting an outfit with a company name across it – but there are also security risks associated with reuse of branded workwear (this is particularly true in the case of secure facilities and forces, such as banks, prisons, police service etc; for instance, some companies will not allow their workwear to be reused simply to protect their brand reputation, as they have no control over activities of non-staff members seen wearing their garments). Therefore, most companies want to ensure that their logos are removed when the uniforms are disposed of at end-of-life. However, logo removal can be costly and resource intensive, and in some cases causes enough damage to inhibit reuse entirely. One idea worth considering is to disassemble the garments, which allows whole panels of fabric to be reused, with only the logoed panel needing to be replaced. One option is heat bonding, in which adhesive and pressure are used in a reversible technique that could make disassembly easier[2].

On the contrary, with regard to sports uniforms, usually the presence of a team's logo is positively embraced due to the emotional value attached to it.

Case studies

PWC'S UNIFORM TAKE-BACK PROGRAM[3]

PwC UK has six suppliers that provide services at their various locations – such as catering, security, hospitality, cleaning, etc. Together, they employ around 675 non-PwC people to work on site, most of whom are provided with PwC uniforms, to present a professional image of the company. This was estimated to account for some 3,300 items of clothing every year, weighing just under one ton.

Through their "Take-back program", they have engaged these suppliers in a take-back scheme, so that old uniforms are returned when new uniforms are distributed, and find better, more circular, end-of -life destinations.

PwC identified a specialist textile recycling company which assesses and categorizes uniforms according to their condition. The result is that some uniforms are sold on to second hand markets, some turned into industrial rags and some shredded for use as automotive insulation. In addition, buttons and zips are removed and sold back into the fashion sector, where they can be used in new manufacturing.

So far, they have learnt that just under 20% of the items can be reused in their original state. Around 60% can be reused as rags. Approximately 20% have to be shredded. All can be used for some other market, reducing environmental impacts by eliminating the need for virgin materials.

In addition, they realized that integral logos mean uniforms can't be reused. As a next step, therefore, all corporate logos are removed and destroyed providing security and brand protection.

PwC also provides instructions to supplier staff on how to extend the life of their uniforms through proper care. Moreover, it provides them with a leaflet on caring for their new uniform, which

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[2] http://www.uniformreuse.co.uk/reports-case-studies.php?report=7

[3] PwC UK (2016), *Corporate Sustainability Lessons Learned Going circular: Towards 100% reuse and recycling*: https://www.pwc.co.uk/who-we-are/corporate-sustainability/assets/documents/lessons-learned-going-circular-towards-100-reuse-and-recycling.pdf

encouraged them to wash at 30 degrees and to dry on a line (rather than tumble drying), to help reduce the clothes' in-use environmental impacts.

Costs: PwC estimated that this program costed so far 5-15 pence per person per year. Even though the textile recycling service is free, this is due to the costs of transporting the old uniforms to the specialist recycling provider, and to the fact that there is no offset through reduced landfill, as the uniforms were previously disposed of by our suppliers' employees. This was considered by PwC as a small price to pay to know that uniforms carrying their brand are being securely and responsibly disposed of, as well as in terms of the positive image that the company gains through this practice.

Benefits of this program:

- Supplier employees were pleased to participate in the program as they felt they were contributing to an environmental solution.

- Complete certainty of where uniforms are going and that all logos are properly removed, avoiding impersonation of PwC personnel.

- Energy, water and greenhouse gas emissions reductions, by avoiding the need for new clothing or industrial cloths though the reuse of some uniforms or part of them (eg. buttons) and extended life time thanks to the educational program aimed at improving uniform maintenance.

OFFICE DEPOT[4]

Office Depot operates four distribution centers and six transport hubs in the UK and Ireland. The Office Depot brand supplies offices through large-scale contracts, while the Viking brand services SMEs and schools. 1,300 of the company's 2,200 employees wear a uniform that is eligible for replacement each year. Each employee is issued with five polo shirts, five short-sleeved shirts, three T-shirts, two pairs of trousers and one fleece. Office Depot initially struggled to identify recycling and re-use options due to the sewn-in company logo. Through the National Industrial Symbiosis Programme (NISP), it identified a local social enterprise company that was able to collect the uniforms and cover over the logos before distributing the clothing to its volunteers. The social enterprise operates an ongoing arrangement with Office Depot, making collections once a year. Each ton of clothing removed saved Office Depot around £70 in landfill costs.

GREENCOACH PROJECT[5]

ERASMUS+ SPORT GREENCOACH "Incorporating sustainability in the governance of sport organisations" addresses grassroots sport organisations and aims to improve their environmental impacts by incorporating monitoring and benchmarking activities and sustainability as a cross-cutting element in their daily management. It also aims at promoting healthy lifestyles at individual and community levels, especially among young athletes. Within the project, an environmental footprint calculation of the main activities conducted by grassroots football clubs was carried out to identify environmental improvement opportunities. This analysis aimed at identifying the most impactful processes, so-called "hotspots", associated with the activities of the grassroots football clubs.

Considering the activities connected to the life cycle of a football match, sportwear and equipment are the most relevant and impactful categories. In particular, leather football shoes production is by far the most impactful, followed by sport suit and sports bag.

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[4] Resource Efficient Scotland, *Save money on waste – Advice and support for organisations in Scotland,* p. 20: https://energy.zerowastescotland.org.uk/sites/default/files/SaveMoneyOnWaste%20100614.pdf

[5] https://www.greencoacherasmus.eu/

The project calculated the expected benefit of reusing for more years a football kit (sport suit in polyester+shirt+socks+shorts) and of made jumpsuits in polyester instead of cotton.

Life extension (2 and 3 years) for football kit (per person)

IMPACT CATEGORIES	Climate change	Water scarcity	Resource use, energy carriers	Total Environmental Footprint
ACTIONS	kg CO_{2-eq}	m^3 depriv.	MJ	mPt
Baseline: 1 football kit (sport suit in polyester+shirt+socks+pantaloncini) each year per player	30,435302	10,441406	446,55219	9,8622058
Improvement 1: the football kit lasts 2 years	15,217651	5,220703	223,27609	4,9311029
Improvement 2: football kit lasts 3 years	10,145101	3,4804686	148,85073	3,2874019
Improvement 3: football kit lasts 5 years	6,0870605	2,0882812	89,310438	1,9724412
Difference improvement 1/baseline	**-40%**	**-40%**	**-40%**	**-40%**
Difference improvement 2/baseline	**-67%**	**-67%**	**-67%**	**-67%**
Difference improvement 3/baseline	**-80%**	**-80%**	**-80%**	**-80%**

Jumpsuit in cotton vs jumpsuit in polyester (per jumpsuit)

IMPACT CATEGORIES	Climate change	Water scarcity	Resource use, energy carriers	Total Environmental Footprint
ACTIONS	kg CO_{2-eq}	m^3 depriv.	MJ	mPt
Baseline: jump suit made of 100% polyester	4,5961417	2,0296678	78,147054	0,44493392
Improvement 1: jump suit made of 50% polyester/50% cotton	9,6804004	86,249844	111,15944	1,7778377
Improvement 2: jump suit made of 100% cotton	14,764659	170,47002	144,17184	3,1107416
Difference improvement 1/baseline	**111%**	**4149%**	**42%**	**300%**
Difference improvement 2/baseline	**221%**	**8299%**	**84%**	**599%**