

a GARMENT

Men's T-shirt White	S	M	L	XL	XXL	Agg.
Initial Carbon	5.839	6.031	6.574	7.016	7.694	6.631
Reduction (Kg)	-5.244	-5.417	-5.903	-6.299	-6.909	-5.954
Reduction (%)	89.810	89.819	89.793	89.781	89.797	89.800
Final Carbon	0.595	0.614	0.671	0.717	0.785	0.676
Men's T-shirt Black	S	M	L	XL	XXL	
Initial Carbon	5.944	6.139	6.691	7.143	7.833	6.750
Reduction (Kg)	-5.339	-5.515	-6.009	-6.413	-7.034	-6.062
Reduction (%)	89.822	89.835	89.807	89.780	89.800	89.809
Final Carbon	0.605	0.624	0.682	0.730	0.799	0.688
Women's T-shirt White	XS	S	M	L	XL	
Initial Carbon	4.119	4.432	4.979	5.158	5.567	4.851
Reduction (Kg)	-3.698	-3.978	-4.473	-4.628	-5.001	-4.356
Reduction (%)	89.779	89.756	89.837	89.725	89.833	89.786
Final Carbon	0.421	0.454	0.506	0.530	0.566	0.495
Women's T-shirt Black	XS	S	M	L	XL	
Initial Carbon	4.193	4.512	5.068	5.252	5.666	4.938
Reduction (Kg)	-3.765	-4.050	-4.553	-4.713	-5.091	-4.434
Reduction (%)	89.793	89.761	89.838	89.737	89.852	89.796
Final Carbon	0.428	0.462	0.515	0.539	0.575	0.504
Polo shirt White	S	M	L	XL	XXL	
Initial Carbon	10.496	11.450	12.127	12.730	13.110	11.983
Reduction (Kg)	-9.436	-10.295	-10.904	-11.446	-11.788	-10.774
Reduction (%)	89.901	89.913	89.915	89.914	89.916	89.912
Final Carbon	1.060	1.155	1.223	1.284	1.322	1.209
Polo shirt Black	S	M	L	XL	XXL	
Initial Carbon	10.953	11.920	12.496	13.080	13.500	12.390
Reduction (Kg)	-9.847	-10.718	-11.236	-11.762	-12.140	-11.141
Reduction (%)	89.902	89.916	89.917	89.924	89.926	89.917
Final Carbon	1.106	1.202	1.260	1.318	1.360	1.249
Men's Pullover Hoody	S	M	L	XL		
Initial Carbon	26.939	27.248	27.520	27.789		27.374
Reduction (Kg)	-24.085	-24.362	-24.606	-24.847		-24.475
Reduction (%)	89.406	89.408	89.411	89.413		89.410
Final Carbon	2.854	2.886	2.914	2.942		2.899
Women's Pullover Hoody	XS	S	M	L		
Initial Carbon	19.626	19.893	20.449	20.679		20.162
Reduction (Kg)	-17.512	-17.751	-18.267	-18.473		-18.001
Reduction (%)	89.229	89.232	89.330	89.332		89.281
Final Carbon	2.114	2.142	2.182	2.206		2.161

B UK transport

Volumetric Capacity of 44 Tonne Container Lorry	68	m ³	http://www.freightraders.co.nz/containerspecs.html
Fuel consumption of 44-tonne lorry	0.448	L/km	DEFRA 2005 (100% laden – worst case)
CO2 Emissions for Diesel	2.63	kg/CO2(e)/L	DEFRA 2005
Aggregated garments per box	130		
box weight	10	kg	
boxes per lorry	68		
Garments per lorry	8160		

D.a. Embroidered (London to Bembridge)	162	km	google maps
D.b. Printed (London, Notts, Bembridge)	531	km	google maps

Per Garment Carbon (Embroidered Route)	23.391529	g/CO2(e)
Per Garment Carbon (Printed Route)	76.672235	g/CO2(e)

FINDINGS

Men's T-shirt		Women's T-shirt		Polo shirt White		Men's Pullover		Women's Pullover	
Initial Carbon	6.690	Initial Carbon	4.895	Initial Carbon	12.186	Initial Carbon	27.374	Initial Carbon	20.162
Reduction (Kg)	-6.008	Reduction (Kg)	-4.395	Reduction (Kg)	10.957	Reduction (Kg)	24.475	Reduction (Kg)	18.001
Reduction (%)	89.804	Reduction (%)	89.791	Reduction (%)	89.914	Reduction (%)	89.410	Reduction (%)	89.281
Carbon to London	0.682	Carbon to London	0.500	Carbon to London	1.229	Carbon to London	2.899	Carbon to London	2.161
Total CO2	0.68	Total CO2	0.50	Total CO2	1.23	Total CO2	2.90	Total CO2	2.16

Supply Chain Aggregate Per-Garment CO2 Reductions (Base-Case vs. Rapanui 2010)

89.64%

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Sources –