

Procuring textiles made from recycled fibres

Procura+ award winning tender



Image: pixabay.com

Procura+ Participant:	Ministry of Defence of the Kingdom of the Netherlands
Contract:	Procuring towels and overalls containing at least 10% recycled post-consumer textile fibres. Awarded: 2016
Savings:	CO ₂ : 68,880kg Energy: 23,530 MJ Water use: 233,478,000 litres

SUMMARY

- The raw material inputs into textile production has a large environmental footprint - as does the vast amounts of textile waste created each year.
- The MODNL decided to explore a more circular approach to textile procurement as part of the Dutch Government's Circular Procurement Green Deal.
- It piloted textile procurement in three lots - including towels and overalls - in which it required products to contain a minimum of 10% recycled fibres.
- As a result, 100,000 towels were purchased from medium-sized firm Jules Clarysse for their low-impact 'Towel 2' product which contains 36% recycled post-consumer textile fibres.
- In addition, 53,000 overalls containing 14% recycled fibres were purchased from Seyntex, who developed a new product in order to meet the specifications set by the purchaser.

Background

The Ministry of Defence of the Kingdom of the Netherlands (MODNL) is a large public sector buyer, employing around 58,800 people across the army, air force, military police and other supporting roles. It is also one of 45 public and private parties brought together by the Dutch Government's [Circular Procurement Green Deal](#), which tasked participants with carrying out two circular procurement initiatives between 2013 and 2016 in order to increase knowledge and accelerate the transition to a circular economy.

One area of focus identified by the MODNL was textiles, due to its need to equip its large numbers of personnel with uniforms and other textile products. Textile production is linked with a number of environmental and social problems. These impacts can vary depending on the type or mix of fibre that a product is made from, but in general, the energy to transform raw materials and manufacture new fibres in the production of textiles has a significant carbon footprint, and the eco-toxicity of many industrial inputs (such as dyes) can result in water, air and terrestrial pollution, damaging ecosystems as well as risking human health (particularly for workers in the supply-chain subject to inadequate working conditions). As such, textiles are ranked as the product category with the fourth greatest environmental impact, after food and drink, transport and housing.¹

New textiles are normally derived from either natural fibres such as cotton (where water-use plus the pollution and emissions arising from fertilisers and pesticide production and use can be high) or synthetic fibres such as polyester or nylon, which are derived from fossil fuels. However, a third option - recycled fibres - also exists, and by seeking to procure textiles containing recycled content, the MODNL realised it would be able to drastically reduce the environmental impacts of its procurement, while also supporting manufacturers repurposing the vast amounts of textile waste created each year in Europe.

Procurement Approach

The MODNL began exploring the market for recycled textiles in January 2014 by publishing a Request for Information, and conducting an open meeting for sector-related suppliers. The aim of this market engagement was to assess possibilities for requiring recycled fibres to be used in the production of certain items.

The market research demonstrated that manufacturers were able to meet requirements around the use of recycled content, and that to facilitate this, the MODNL should focus on functional instead of descriptive technical specifications i.e. focus on an item's ability to perform its use rather than technical values such as tensile strength.

As a result, the MODNL decided to pilot reused fibre requirements in three lots: towels and wash cloths, overalls, and scarves and handkerchiefs.

¹ http://ec.europa.eu/environment/industry/retail/pdf/issue_paper_textiles.pdf

Criteria used in the procurement process

Subject matter of the contract

Procuring towels and overalls containing at least 10% recycled post-consumer textile fibres.

Technical specifications

Towels and overalls had to contain at least 10% recycled post-consumer cellulose fibres. Suppliers were required to demonstrate this through microscopic testing (where a microscopic search is done of the fibre length, quantity of damaged fibres and kind of fibres, from which is possible to measure the amount of recycled fibres included).

Recycled fibres was also specified to mean fibres coming from post-consumer textile material as opposed to production waste or other alternative sources.

Award criteria

Each contract was awarded to the most economically advantageous tender.

Each bid was assigned a score out of a possible 100 points (maximum) based on price, the maximum percentage of recycled content and certification of this, and data sheets demonstrating the quality and materials used.

The points for the maximum percentage of recycled content were calculated as follows:

- ≥50 % – 20 points
- 30 % – 10 points
- 10 % – 0 points

The contract was awarded to the bidder with the highest score.

Results

The contracts were awarded in June 2016, and are worth approximately €430,000 for towels and wash cloths and €1.38 million for overalls. Six suppliers submitted bids, however, only four were able to meet the tender requirements in two of the three lots. The lot for scarves and handkerchiefs received no valid bids.

Two Belgian companies now supply the MODNL with towels and wash cloths, and overalls. A high percentage of recycled fibres are processed in the new textile fibres: 36% and 14%. The parties will also learn and innovate during the four-year term, which could result in a higher percentage of recycled material later on in the execution of the contract.

As this was a pilot procedure, no limit was placed on the price per product. The use of recycled post-consumer materials in new products resulted in a 25% price increase, compared to the previous contract.

At the same time, a separate eight-year contract was also signed for reuse services, in which a third party was contracted to sort items of clothing for reuse and resale, with income being returned to

the MODNL. This will result in considerable savings for the MODNL, and the contract includes a provision to expand it to the entire central/national government.

Sustainability impacts

The 100,000 towels purchased by the MODNL contained 36% recycled post-consumer textiles fibres, and the overalls contained 14% recycled post-consumer textiles fibres. This resulted in estimated savings totalling:

- 233,478,000 litres of water use
- 68,880 kg CO₂ emissions
- 23,520 MJ of energy consumption

These savings were calculated using the ECO LCA Tool from [Modint](#).

In order to meet the requirements of the tender, manufacturing companies were challenged to find and integrate post-consumer textile resources into their production processes, thus supporting a more circular approach to (consumer) textile collection and reuse.

By using post-consumer fibres, the need for production of new content is reduced, thereby diminishing the strain production has on the environment.

Lessons learned

Circular procurement demands that suppliers find alternative inputs and new ways of working. In order to assist this innovation, the market engagement conducted by the MODNL found that functional rather than technical specifications provided the suppliers with more space to innovate and find new solutions to meeting the MODNL's material needs.

When asking the market to work with new materials or in new ways, it is also necessary to give more lead-in and response time in order to adequately consider and prepare non-traditional offers. The result is that companies are able to research and develop new products which meet higher sustainability specifications.

Finally, with specific regards to piloting, the MODNL recommend not introducing price ceilings based on existing prices and costs, as coming to a pilot with such expectations can constrain the development potential of new areas.

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About Procura+

Initiated and co-ordinated by ICLEI, Procura+ is a network of European public authorities and regions that connect, exchange and act on sustainable and innovation procurement.

Connect.



We are a network of European public authorities that connect, exchange and act on sustainable and innovation procurement.

Exchange.



Our combined knowledge and experience allows us to provide advice, support and publicity to any public authority that wants to implement sustainable and innovation procurement.

Act.



The Procura+ Network joins forces to champion sustainable and innovation procurement at the European level.

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This publication has been produced as part of the SPP Regions project, which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649718. The sole responsibility for any error or omissions lies with the editor. The content does not necessarily reflect the opinion of the European Commission. The European Commission is also not responsible for any use that may be made of the information contained herein.