

**BEST PRACTICE REPORT**



**Circular Procurement**

# Circular Procurement Best Practice Report

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**About SPP Regions:** SPP Regions promotes the creation and expansion of 7 European regional networks of municipalities working together on sustainable public procurement (SPP) and public procurement of innovation (PPI). The regional networks are collaborating directly on tendering for eco-innovative solutions, whilst building capacities and transferring skills and knowledge through their SPP and PPI activities. The 42 tenders within the project will achieve 54.3 GWh/year primary energy savings and trigger 45 GWh/year renewable energy. More information: [www.sppregions.eu](http://www.sppregions.eu) Email: [info@sppregions.eu](mailto:info@sppregions.eu)

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## Contents

Introduction.....	1
What is circular procurement?.....	1
Why circular procurement? .....	10
Best practice examples.....	10

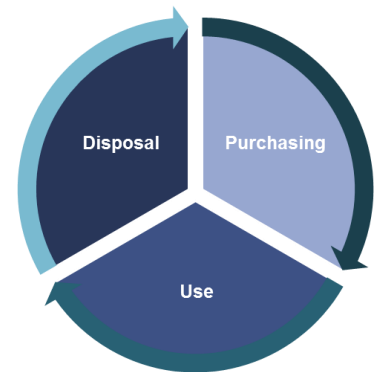
## Introduction

Circular economy is gaining growing attention as a potential way for our society to increase prosperity, while reducing demands on finite raw materials and minimising externalities. It is a response to the traditional linear “take, make, dispose” model that starts with resource extraction and ends with waste. Circular economy is about saving values and “closing the loop” of product lifecycles.

The Ellen MacArthur Foundation defines the circular economy as “an economic and industrial system that is restorative and regenerative by design, and which aims to keep products, components and materials at their highest utility and value at all time”.

Procurement plays a key role in the development of a circular economy and provides a powerful mechanism for enabling economies to become more circular. In the EU, public procurement represents on average approximately 19 % of GDP. With this procurement volume procurers can encourage shifts in the supply of goods and services that provide momentum to developing more circular business models. This is also the reason why public procurement is mentioned as an important driver for circular economy in the EU Commissions [Circular Economy Package from December 2015](#).

The whole life approach is not new. It is about considering: What is required, how it will be consumed or used and what happens after end of life. But it is also about enabling hidden costs, risks and impacts to be identified. At this stage, the learning process is very important. Therefore this report focus on giving inspiration on how to make the procurement more circular, presenting cases to show what circular procurement can be, to show different ways of integrating circular thinking in the procurement and finally what you can gain from it.



## What is circular procurement?

There is no agreed definition of circular procurement. But a circular demand creates opportunities for a circular supply!

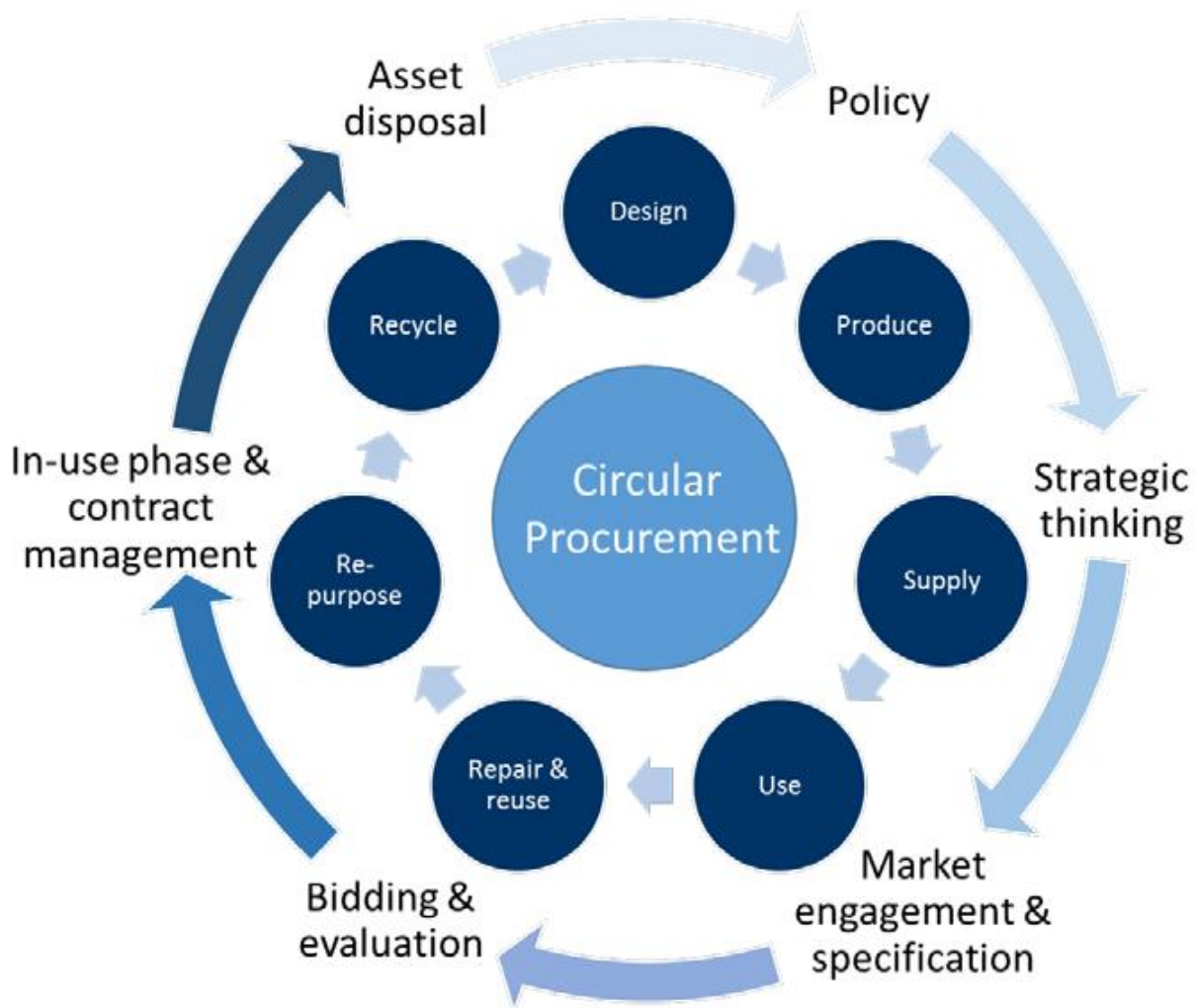
Circular procurement is about making agreements to ensure that the products that you procure for your organisation are produced in accordance with the principles of the circular economy and will be further processed after use. Such products are, for example, designed for durability, reparability and recycling and can at the end of their life cycle be broken down into components, materials or raw materials, which can then be used again in the production chain.<sup>1</sup>

Circular procurement emphasizes the principles of existing Sustainable Public Procurement (SPP) about considering use and disposal alongside sourcing in order to help close material and product loops.

<sup>1</sup> <http://mvonederland.nl/circular-procurement-guide>

There is not one silver bullet, but instead many approaches on both product level, supplier level and system level that can promote more circular solutions and resource efficient products. And there are many steps to take in the different phases of procurement on the way to closing the loops. Especially the initial phase of procurement is important when trying to procure more circular solutions. It is where the needs are defined and where the dialogue with the market starts. It is where the procurement strategy and the possibilities are examined.

In each steps of procurement there are elements to change in order to obtain a more circular solution. In the case studies mentioned later in this report you can see examples of different procurement approaches in different steps of the procurement phases.



## INTEGRATING CIRCULAR ECONOMY INTO PROCUREMENT POLICY IN NANTES, FRANCE

In 2017, Nantes adopted the Responsible Purchasing Promotion Scheme containing 11 areas of action, including one on circular economy. It shows a breakdown of the policy areas that the circular economy contributes to and includes achievements to date. It also provides the strategic direction and operational targets for incorporating circular economy into procurement, setting performance targets to be achieved by 2020. Nantes aims to contribute to environmental targets at the national and local government level, for example, by meeting operational targets supporting demonstration projects, optimising collection of small equipment and bio waste, and incorporating life-cycle assessments into procurement.

One illustration of this is how Nantes has developed and integrated procedures to ensure the purchase of recycled paper in public administrations. The city has also conducted different experiments to develop a methodology for practices, aiming to ensure the purchase of circular solutions. For instance they have tested the use of recycled railway ballast in road works, more precisely for under-road layer. These materials have been screened, selected and verified for pollution risks. The first assessment is that this experiment has been done without any financial impact.

Read the [full case study](#).

Especially three elements of procurement need to change or be in focus in order to promote more circular solutions:

- 1) Focus on service instead of products
- 2) Focus on the product's design, use phase and end of life
- 3) Focus on market dialogue

### **1) Focus on service instead of products**

Looking at how to focus on services instead of products it is a good idea to consider questions like: Do we need to buy a new product or can we rent or lease it through product service systems instead? Should we buy lamps or light? How can we make sure that the supplier has an incentive to supply us with the most resource efficient solutions and keep the materials used in the cycle?

These questions lead to more *performance based procurement* and *procurement of services* instead of products. Both measures which give the manufacturers the possibility to retain greater control over the items they produce and the embodied energy and materials, thus enabling maintenance, reconditioning and recovery.

The procurers benefit too, as they only pay for the service they require and use, and often receive a better service as the manufacturer has a greater interest in providing a product that lasts.



### PAY-PER-LUX LEADS TO CIRCULAR LIGHTING SOLUTIONS

Architect Thomas Rau worked with Philips to purchase light as a service. The end result was a bespoke 'pay-per-lux' intelligent lighting system to fit the requirements of the space at a manageable price. Philips retains control over the items they produce, enabling better maintenance, reconditioning and recovery.

Read the [full case study](#).

You can read more about Product Service Systems in UNEPs technical report: [Using Product Service Systems to Enhance Sustainable Public Procurement](#) and about Performance based procurement in the State of the Art report on Performance/Output based Specifications developed for the SPP Region project by the University of the West of England<sup>2</sup>.

### 2) Focus on the product's design, use phase and end of life

When moving towards more circular solutions, it becomes important to consider what happens to the products in the use phase and after end of life. Through Product Service Systems or integrated waste contracts it is possible for procurers to make sure that products that have ended their life in the organisation finds their way to either new users or become part of new products. It is about looking at recycling, reuse and resell opportunities.

The following three procurement models can help close the loops and make sure that procured products gets new life after end of use in one's organization: 1) *Buy-sell back*, 2) *buy-resell* and 3) *Products Service Systems*. Read more in detail under "Examples of Circular Procurement models".

For products to become part of such circular solutions, the products in question need to be designed for durability, reuse, recyclability etc. Therefore *circular procurement criteria* become important. Also looking at the performance of the product in the use phase becomes essential and the *total cost* of buying and using a product.

### 3) More focus on market dialogue

To make circular procurement possible market dialogue and cooperation between public and private partners throughout the product chain becomes essential. New terms and contracts are necessary in circular procurement just as it demands greater transparency between partners in order to learn and benefit from each other. As a procurer it is important to actively make use of the knowledge in the market and to also challenge the market to create more circular solutions. The dialogue could be extended to cover both suppliers, recycle operators, producers, designers etc. if relevant.

Share your ambition and vision with the market in advance, engage them in early dialogue and involve your potential suppliers, giving them time to develop solutions that meet your requirements – and in turn get an insight in the possibilities on the market.<sup>3</sup>

<sup>2</sup> [http://www.sppregions.eu/fileadmin/user\\_upload/Resources/POBS\\_Best\\_Practice\\_Report.pdf](http://www.sppregions.eu/fileadmin/user_upload/Resources/POBS_Best_Practice_Report.pdf)

<sup>3</sup> Using Product Service Systems in Circular Procurement (Training Module), UNEP 2015

For more insight on how to use market dialogue to green the procurement see State of the Art Report on Market dialogue developed by ICLEI in the SPP Region project.<sup>4</sup>

### UPCYCLE CITY INNOVATION COMPETITION IN THE CITY OF ALMERE

The Municipality of Almere in the Netherlands strives to be “waste-free” by 2020. That means no more than 50 kilos of waste per person per year. This does not only require recycling of household waste, but also to be aware of how to reduce and manage the amount of waste in the public space.

In the pursuit of the objective the city in 2017 launched the “Upcycle City Innovation competition” with the aim to challenge participants of the city’s market-contractors to come up with innovative proposals on how to cooperate and manage waste in the public space in a more circular way.

The competition was published as a tender with an independent jury to assess and rank the innovative solutions - allowed as a separate procedure within the Public Procurement Act. The prize of the competition was to let the winner have the right to be the first to be allowed to negotiate with the municipality - among other things - about mutual obligations in regards to the use of hours and network. A contract with the winner will last for 3 years.

With the tender competition, the City of Almere has taken a role that compared to earlier is more focused on facilitating and driving innovations and on entering into partnerships. The team involved learned that this form of tendering attracts innovative ideas and that the innovative way of working suits the innovative character of the city. However, it is also a new approach for everyone and so the outcome was unpredictable.

Source: [www.piano.nl](http://www.piano.nl)

## Examples of Circular Procurement Models

There are many ways of using procurement to acquire more circular solutions. The best model suited to create circular demand and circular solutions depends on the conditions and options available to the market players and supply chain partners. Different markets are at different stages in their development thus, making the switch towards an entire circular model is not always a viable option for all markets, products and materials. The task of the procurement function is therefore to identify in dialogue with the market the most appropriate cycle for different products and services.

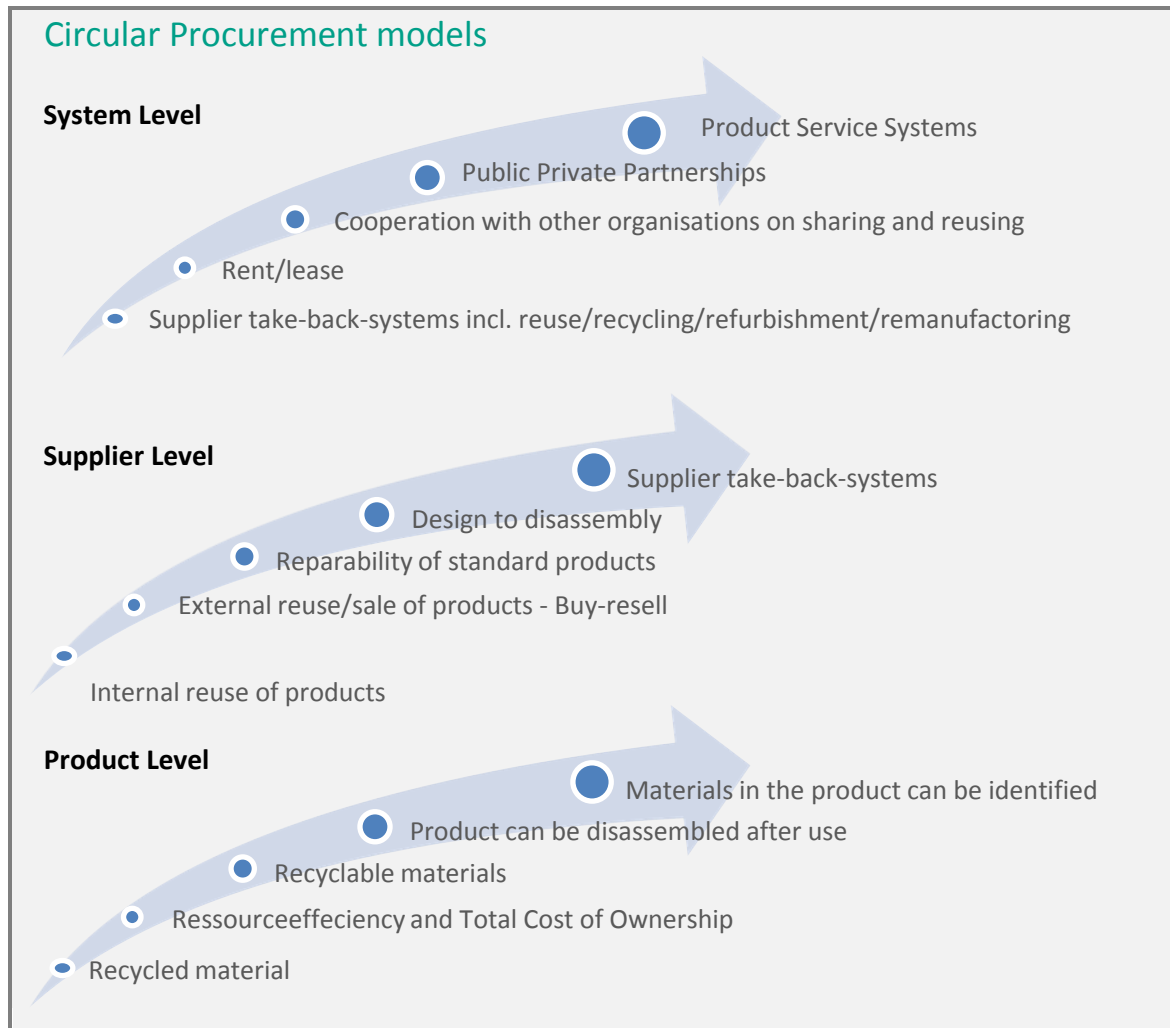
Circularity is not a homogeneous standard that can be required for each product. It is necessary to benchmark, pilot, create examples, challenge the market and evaluate what works best.<sup>5</sup>

In the figure below you can find different ways or models that can help making the procurement more circular – either by using one of the models or a combination of them – depending on the options available in the market and the product/service in question.

<sup>4</sup>[http://www.sppregions.eu/fileadmin/user\\_upload/Resources/Market\\_Engagement\\_Best\\_Practice\\_Report.pdf](http://www.sppregions.eu/fileadmin/user_upload/Resources/Market_Engagement_Best_Practice_Report.pdf)

<sup>5</sup>[Using Product Service Systems in Circular Procurement \(Training Module\), UNEP 2015](#)





As shown there are several ways to make the procurement circular or take steps towards circularity. The above mentioned procurement models encompass in different ways the circular procurement principals – more focus on service instead of products, more focus on the product’s design, use phase and end of life and more focus on market dialogue.

#### CIRCULAR PROCUREMENT CRITERIA

In the Danish municipality Lolland, recycling and recyclability criteria for packaging have been included in their tender for cleaning services: 75% of material used for bags must be recycled or biodegradable; non-reusable packaging must be easy to separate into single material types; monomaterials are to be used if possible; only recyclable materials must be used; and use of dark colours must be avoided. Green criteria in public tenders can be used to increase demand and improve market conditions for recycled and recyclable plastics.

(Ellen MacArthur Foundation: The new plastics economy, 2016)

The most common circular routes are as earlier mentioned: buy-sell back, buy-resell and Product Service Systems.

In case of *buy-sell back*, the supplier buys back the product after the use phase for a specific price – this could be a chair or a computer that is returned to the supplier after use. This encourages refurbishment and remanufacturing. In case of *buy-resell*, a third party purchases the product from the user and gives the products a second life. This encourages lifetime optimisation and recycling. In case of *Product Service Systems*, the product remains the property of the supplier. It is then only the service the product provides that is sold or leased, not the product itself. Examples could be leased photocopiers or “pay-per-lux”.<sup>6</sup> These models demand a certain market dialogue and that the market actors are ready to engage in more circular business models.

### PROCUREMENT OF REFURBISHED SCHOOL FURNITURE IN AALBORG, DENMARK

School furniture needs to be replaced periodically, though it often is an expensive affair for schools to invest in new furniture and learning environments. In 2017 Aalborg Municipality launched an ambitious project aimed at refurbishing and recycling of the old school furniture for the benefit of both the schools’ budget and the environment. As part of the market dialogue the city had 7 meetings with suppliers to determine and prepare them for circular procurement criteria. As minimum criteria to ensure circularity the municipality used the following:

- 5 years warranty on lifetime of new furniture
- 2 years warranty on lifetime of refurbished furniture
- 5 year warranty on spare parts
- Packaging has to be recyclable (paper, wood etc.)
- Plastic parts above 50 grams have to be labeled for recycling
- 70 % of used wood has to be sustainable eg. FSC, PFFC or reused wood
- New and refurbished furniture have to be labeled with supplier logo

As part of the award criteria circularity accounted for 40 % and was based on lifetime (30 %), service and maintenance (25 %), reuse (20 %), refurbishment (15 %) and material recycling (10 %).

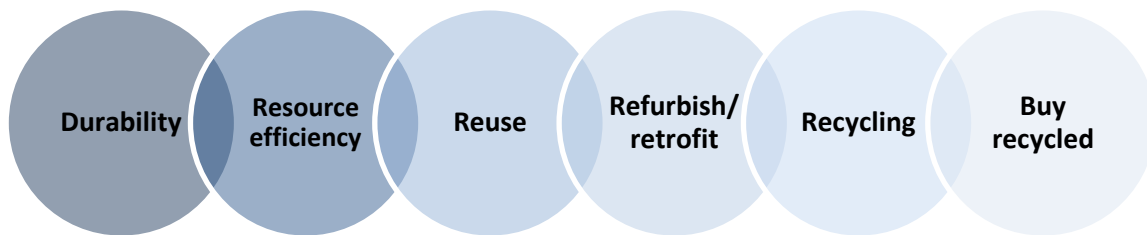
Several suppliers responded to the assignment with creative offers that impressed the municipality, as circular economy is a fairly new way of thinking. The contract has been awarded to Højer Furniture.

Source: Presentation of the City of Aalborg at the Circular Procurement Congress in Tallinn, October 2017.

Other ways to take steps towards circular solutions would require the need to consider how to influence the product chain via use of *circular procurement criteria* and eco-design requirements.

It is about defining procurement criteria geared at increasing: durability, resource efficiency, reuse, recyclability, refurbishment/retrofitting and to buy recycled. It is important to consult with the market in order to find the right ambition level for the criteria.

<sup>6</sup> Using Product Service Systems in Circular Procurement (Training Module), UNEP 2015




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### EXAMPLES OF CRITERIA

<b>Durability</b>	<ul style="list-style-type: none"> <li>• Requiring quality and durability standards</li> <li>• Demanding a minimum guarantee and availability of spare parts</li> </ul>
<b>Resource efficiency</b>	<ul style="list-style-type: none"> <li>• Setting criteria for use of electricity in the use phase</li> <li>• Setting criteria for fuel consumption</li> </ul>
<b>Reuse</b>	<ul style="list-style-type: none"> <li>• Demanding delivery of products in reusable transport packaging</li> </ul>
<b>Refurbish/retrofitting</b>	<ul style="list-style-type: none"> <li>• Retrofitting of building appliances through energy service contracts</li> <li>• Refurbishment of furniture</li> </ul>
<b>Recycling</b>	<ul style="list-style-type: none"> <li>• Demanding the use of low or no harmful materials and products to improve the recyclability of the products themselves and their packaging</li> <li>• Demanding that products can be dismantled for recycling</li> </ul>
<b>Buy recycled</b>	<ul style="list-style-type: none"> <li>• Purchase of textiles with recycled fibres, recycled paper etc.</li> <li>• Require a minimum of recycled material in packaging.<sup>7</sup></li> </ul>

Both the EU GPP criteria and the criteria behind eco-labels such as the Nordic Swan, the EU Ecolabel and the Blauer Angels are based on life cycle analysis and therefore take into consideration the most important environmental impacts of the products throughout its lifetime and several of the above mentioned criteria.

When focusing on resource efficiency, products tools like *Total Cost of Ownership (TCO)* or *Life Cycle Costing* becomes relevant. This requires the need to look at the cost of the procuring, using and discarding of products instead of simply focusing on the purchasing price.

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<sup>7</sup> From presentation made by the Catalan Government in the third meeting of the Circular Europe Network "[Circular economy and GPP in the Catalan Government](#)" from 30th of October 2015

### TCO GIVES LARGE SAVINGS ON LIGHTING

Syddjurs Municipality used The Danish EPA's TCO tool to calculate prices when the municipality did a tender for lighting. Looking at the total costs over a lifetime of 15 years meant that the lifetime of the lamps and bulbs and the working hours spent on replacing defective bulbs had major impact on the total cost. The calculation showed that LED bulbs are six times less expensive than halogen bulbs looking at the total cost of buying and using the bulbs.

The tools are designed to make it easier for public procurers to calculate and estimate the total cost of a product. Buying resource efficient products and products with longer lifespan is a way of promoting more circular solutions.

(Danish EPA, 2015)

If you want to know more about how to use Total Cost of Ownership to ensure resource efficient procurement see [State of the Art Report on Life Cycle Costing](#) developed by Ecoinstitut SCCL in the SPP Region project.<sup>8</sup>



<sup>8</sup> [http://www.sppregions.eu/fileadmin/user\\_upload/Life\\_Cycle\\_Costing\\_SoA\\_Report.pdf](http://www.sppregions.eu/fileadmin/user_upload/Life_Cycle_Costing_SoA_Report.pdf)

## Why circular procurement?

Besides being an instrument for public organisations to drive the market in a more circular direction, circular procurement has financial, societal and strategic benefits that need to be taken into consideration.

### BENEFITS OF CIRCULAR PROCUREMENT

#### Financial reasons

- It reduces costs (in the short and long term), in terms of Total Cost of Use or Total Cost of Ownership
- It can lift some of the burden from your organisation.
- The frequency of procurements will be lowered thanks to the extended life of products
- Less waste management is required (if any), so those costs will decrease
- It will counter price fluctuations

#### Societal reasons

- It prevents waste and minimizes the use of dangerous substances
- It helps to counter the depletion of scarce raw materials and the associated geopolitical and environmental problems
- It leads to greater transparency in the chain
- It assists a number of businesses in the chain to maintain or increase their revenues by modernizing their business models

#### Strategic reasons

- Your organisation becomes future-proof. This is due in part to lower costs and greater security of supply
- Cohesive cooperation in the chain and so a more robust supply chain
- It reduces risk: the (economic) risk should ideally be placed with the party best able to bear it.
- It provides greater insight into your future costs
- It enhances your reputation and gives your brand greater distinction

Source: Circular procurement guide, MVO Nederland

## Best practice examples

Circular Procurement is still in its infancy. Not many experiences have been done so far. Below you can find a collection of best practices. The idea is to inspire procurement staff to look at products differently, ask different questions, analyze the needs in the organisations and challenge the market to a more circular supply of products and services.

Hopefully this collection of best practices can help make it clearer what Circular Procurement can be and what the potentials are. You can read the full collection using [this link](#).

The first six cases were developed especially for the SPP Regions project. The rest of the cases were developed earlier in other projects or are part of reports within sustainable procurement. The original sources of the cases are stated at the end of each case story.

<b>CASE 1</b> <b>CONSTRUCTION</b>	Building of the € 27 million Land Rover BAR team headquarters and visitors' center using BREEAM and circular principles (UK)
<b>CASE 2</b> <b>ROAD CONSTRUCTION</b>	Circular reconstruction of 19 km of the A12 motorway between Ede and Grisjoord junction (the Netherlands)
<b>CASE 3</b> <b>CIRCULAR ASSET MANAGEMENT</b>	Use of circular asset management plan at Sweett Group to make the ongoing maintenance more circular, closing the material loops of categories like furniture and other office equipment (Wales)
<b>CASE 4</b> <b>OFFICE FURNITURE</b>	Development of a framework for procurement for furniture, fixtures, fittings and flooring by the National Procurement Service (UK)
<b>CASE 5</b> <b>HOSPITAL MATTRESSES</b>	Focus on circular options re-tendering for the provision of 329 mattresses at Cambridge University Hospital Foundation Trust (UK)
<b>CASE 6</b> <b>TEXTILES</b>	Experience with circular procurement of textiles in public sector contracting authorities/central Purchasing Bodies
<b>CASE 7</b> <b>CAR SHARING</b>	Use of car sharing services to improve the public fleet management in the city of Bremen (Germany)
<b>CASE 8</b> <b>CARPENTRY AND FURNISHING</b>	Procurement of carpentry and furnishing of the office building of Prorail (The Netherlands)
<b>CASE 9</b> <b>CONSTRUCTION</b>	Building of a temporary office, Brummen Town Hall, for a period of 20 years (the Netherlands)
<b>CASE 10</b> <b>MEDICAL TECHNOLOGIES</b>	Co-operation between Phillips Healthcare and Georgia Regents Medical Center to deploy innovative patient care strategie, inclusive circular initiatives (USA)
<b>CASE 11</b> <b>WORK WEAR</b>	Procurement of work clothes in the municipality of Herning (Denmark)
<b>CASE 12</b> <b>CIRCULAR PROCUREMENT POLICY</b>	Adoption of a Circular Procurement Policy in the municipality of Samsø to motivate both the procurer and the bidder in a more circular direction (Denmark)
<b>CASE 13</b> <b>OFFICE FURNITURE</b>	Procurement of furniture for the City Hall of Venlo looking at toxic free substances to make it easier to disassemble, refurbish and retain residual value (The Netherlands)

## List of References

- State of the Art Report on Life Cycle Cost, Eco Institute, SPP Region Project
- State of the Art Report on Performance/Output based Specification, University of West England, SPP Region Project
- State of the Art Report on Market Dialogue, ICLEI, SPP Region Project
- Circular Procurement Guide, MVO Nederland
- Product Service Systems in UNEPs technical report: Using Product Service Systems to Enhance Sustainable Public Procurement
- Using Product Service Systems in Circular Procurement (Training Module), UNEP 2015

For more introduction to circular procurement see the Circular procurement Guide:

Guidance on how to integrate circular thinking through each stage of procurement is developed by MVO

Nederland and is available at: <http://mvonederland.nl/circular-procurement-guide>.

Here you can find answers to: **what** is circular procurement, **how** to do it, **why** do it, and **what** procurement methods to use including pros and cons, plus more case studies.



## About SPP Regions

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