

# Circular Public Procurement for Cities





# Circular Public Procurement

Public procurement is a powerful tool that city governments can use to enable the transition towards a circular economy. City governments have a large purchasing power which gives them the ability to create demand and shift the market to new ways of providing goods and services, from the individual product level to the system level. With public procurement accounting for 15-20% of global GDP<sup>1</sup> and with sub-national governments being responsible for almost 50% of procurement decisions,<sup>2</sup> city governments have an important role in developing markets and boosting local economies.

By embedding circular economy criteria into public procurement policies and tenders for goods and services, city governments can create demand for circularity. Circular public procurement can be a major driver for innovation as it challenges the market and industry to develop ingenious circular solutions. It incentivises circular economy markets, and encourages the increased use, reuse, and repair of products through service-based business models. By ensuring that procurement decisions consider the whole life-cycle of product, service or project, it may provide financial savings for public authorities. Circular public procurement focuses on long-term opportunities and developing a lasting relationship with the market.

Circular public procurement is the process in which the public sector purchases products, services or projects according to the principles of the circular economy. The procurement, tendering and bidding processes remain the same. It is *what* city governments seek to purchase that changes.

<sup>1</sup> European Commission, *International public procurement* (2020)

<sup>2</sup> OECD, *Subnational Government Finance And Investment* (2018)

# The benefits of circular public procurement



## Economic productivity

**By considering the whole life-cycle of a product, service, or project, circular public procurement can lead to cost and resource savings for both public authorities and society.**

**Example:** The [City of Venlo](#) has achieved an 18% cost saving on the procurement of cradle to cradle furniture for its new city hall through a buy and buy-back scheme.



## Jobs, skills & innovation

**By providing incentives to industry to develop circular technologies and products and put them on the market, circular public procurement can be a driver for innovation.**

**Example:** Philips' 'pay per lux' solution provides lighting as a service to Amsterdam's Schiphol Airport on a performance contract basis. This tender has encouraged Philips to develop specially designed light fixtures that are easier to service and maintain, making them last 75% longer than conventional alternatives.



## Health & environment

**Circular public procurement can help public authorities to achieve their environmental and climate targets. By procuring cleaner and more environmentally-friendly public services, such as public transport systems that improve air quality or healthy food for school canteens, circular public procurement can improve quality of life, public health, and the environment.**

**Example:** [Barcelona City Council](#) carried out a procurement with sustainable criteria for the renting of 145 hybrid vehicles for Barcelona's municipal police. It has been estimated that this tender led to an annual reduction of 51.9 tonnes CO<sub>2</sub> and 0.39 GWh.



## Community & social prosperity

**By procuring goods and food produced locally, circular public procurement can contribute to local job creation, support the local economy. And also promote social inclusion. Small and medium-sized companies can benefit as it offers an opportunity to find markets for their innovative solutions and products.**

**Example:** [São Paulo](#)'s addendum to the National School Feeding Policy includes specific targets for introducing food items from family farming, and local and agroecological production in public purchases for school meals. In 2015, 1,747 family farmers benefited from USD 2 million in food acquisition contracts with the city of São Paulo, and new bids have been secured for local and organic or agroecology farming.



## Resource use

**By introducing requirements to use secondary raw materials in tenders, city governments can promote resource efficiency, avoid waste, and foster circular flows.**

**Example:** In 2005, the [City of Zurich](#) made it mandatory to use concrete products that contain at least 25% recycled aggregates in public building projects. Recycled concrete is now used whenever technically feasible, and out of the 18,400 m<sup>3</sup> of concrete used annually in public building projects, 90% (or 17,000m<sup>3</sup>) are made from recycled aggregate.

# Circular public procurement opportunities



## Buildings

Infrastructure is one of the largest assets managed by city governments. Through public procurement, city governments can encourage smarter material choices in construction projects, the use of new construction techniques, and promote circular practices in the construction and renovation of city-owned assets.

Integrating circular economy principles into all the phases of a building's life cycle can work to meet urban needs for built space, while staying within planetary boundaries. Core urban benefits of a circular economy development path include the possibility to reduce the need for new construction, improve urban land use, reduce construction and operational costs, and increase resource-efficiency, while strengthening the local economy.

When it comes to large-scale construction projects, city governments can make use of public-private partnership performance frameworks or Design-Build-Finance-Operate (DBFO) procurement models to help mitigate and share risk. Including circular procurement criteria, or outcomes, as early as possible allows for a whole-lifecycle approach to infrastructure projects that would help to deliver cost efficiencies as well as keeping assets and materials at their highest value for longer. Asset managers can also inform public procurement to ensure maintenance work is conducted most cost effectively – for example by pooling tenders for lighting, fit-outs or refurbishment to achieve economies of scale and cost reductions.

### Examples

When the city of Brummen procured the extension of their city hall, the winning proposal offered a 20-year service contract for a modular extension that could also pilot “building as material banks” practices. The extension was designed for disassembly and reuse, and made use of high-quality, renewable, and re-fabricated materials. At the end of the contract, building components can be returned to their suppliers.

When procuring the demolition service of a police station and of another building at the end of their functional life, Hjørring Municipality aimed to recover and recycle the bricks. Following a feasibility study and thorough screening of the buildings for toxic substances, the requirements for dismantling bricks were developed in collaboration with the municipal waste disposal company who agreed to purchase the reclaimed bricks. Around 16,000 bricks, enough to build an average-sized single-family house, were reclaimed from the two buildings. The project has resulted in total savings of 10,950 kg of CO<sub>2</sub>. Based on the positive results of this pilot, Hjørring Municipality will continue to include requirements for the recycling of bricks from municipal buildings wherever possible, and will also explore how to incorporate recycling criteria for other building materials.



## Products

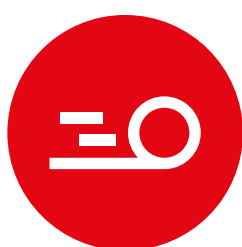
By setting circular criteria in their procurement tendering processes, city governments can challenge the market to develop innovative product solutions - from increasing the durability of a product to ensuring that the materials used are non-harmful, repairable, and reusable.

### Examples

The new offices of the London Waste and Recycling Board applied circular economy principles to the fit-out requirements ranging from office furniture to carpets and paint.

In Ghent, the local government procured cradle-to-cradle 'bronze' certified cleaning, hygiene, and polishing products for all of its buildings and facilities, and packaging was made to be recyclable and contained recycled materials.

The Municipality of Herning aimed to expand the lifespan of uniforms procured for their operations department. With the TEKÖ Design School, it explored opportunities to increase the reuse and recycling of working clothes. The Municipality developed detailed guidance on the criteria for the reuse, repair and disposal of working clothes. Circular principles were introduced to the contractor from whom the clothes were leased through a service-based model. It was estimated that savings of 6,700 and 1,011 tonnes of CO<sub>2</sub> were achieved over a four-year period in Herning's technical operations department.



## Mobility

City governments can reduce travel and freight distances through compact city development. By developing integrated roadmaps and strategies for all urban mobility, including freight, city governments can ensure effective logistics and resource flows.

Through public procurement, city governments can encourage zero-emission vehicles and publicly owned vehicle fleets to spur innovation and improve the local environment.

Public procurement can also incentivise the use of new construction techniques and alternative, renewable, and reusable materials for roads, better design of roads and bridges, publicly owned vehicles, and vehicle fleets. Furthermore, by including mobility assets in waste reduction, reuse, and recycling targets in roadmaps and strategies, a city government can create long-term signals for the market.

### Examples

In 2017, Shenzhen became the first city in the world to electrify all its public buses. With over 16,000 electric buses (e-buses) on its roads, the city aims to reduce noise pollution and improve air quality.

Barcelona City Council carried out a procurement with sustainable criteria for the rental of 145 hybrid vehicles for Barcelona's municipal police. The tender was divided in lots based on different vehicle characteristics and transformation needs as police service vehicles. It has been estimated that this tender led to an annual reduction of 51.9 tonnes CO<sub>2</sub> and 0.39 GWh.

When the City of Hamburg procured the refurbishment and resurfacing of one of its main roads, Mönckebergstrasse, it included a requirement to use recycled asphalt. The project led to a 30% saving compared to the costs for conventional road resurfacing.



## Food

City governments can shape public procurement policies to source food grown regeneratively and locally where appropriate. Circular public procurement can influence the way food is grown and encourage the adoption of regenerative farming practices. By reconnecting farmers to municipalities, it can encourage information flows on how food is grown. By designing healthy menus for school canteens and procuring nutritious foods, local authorities can influence the food culture of the future generations. By engaging the different food actors: - farmers, retailers, restaurants, schools - city governments can shape a healthy food system. From the farm, to the fork, to returning nutrients to the soil, city governments can develop a food system that supports climate mitigation targets.

### Examples

The Municipality of São Paulo connects a network of food system actors through its “Connect the Dots” programme. By procuring food grown on agroecological farms in the the São Paulo peri-urban zone and surrounding region, it supports local farmers, provides accessible nutrition to vulnerable people, and transforms urban organic waste streams into organic fertilisers.

The City of Copenhagen is dedicated to ensuring its food and catering service is healthy, sustainable, and appetising. The City has a target to supply 90% organic food across its 900 municipal canteens. In 2014, the municipality ensured that bids for fruit and vegetable contracts would include a variety of different sorts, varieties, and types. This was the Procura+ Award winning tender in 2016 for Sustainable Procurement of the Year.

In Torres Vedras, a nutritionist designs healthy food menus for the school canteens. The municipality sends out a tender months before the school year starts to ensure that all the suppliers and services are in place by the time the school year starts. The municipality works directly with farmers and suppliers to ensure the freshness of the food served in school canteens.

## Procuring the use of a product through circular business models

Rather than procuring a product, city governments can also procure the ‘use’ of a product. This can incentivise the adoption of circular business models and extend the lifespan of products and materials through reuse, pay-per-use, take-back, and leasing schemes. These can result in operational cost savings for city governments, a reduction in waste, and can further develop the market for products that are designed for performance, repair, and material recapture.

### Examples

Philips’ ‘pay per lux’ solution provides lighting as a service to Amsterdam’s Schiphol Airport on a performance contract basis. The system is designed to be cost- and resource-efficient. For example, Philips has developed specially designed light fixtures that are easier to service and maintain, making them last 75% longer than conventional alternatives. In addition, by using LED electricity, use can be reduced by up to 50%. The service operates through a collaboration between the Schiphol Group, the energy service provider Cofely, and Philips. This multi-party arrangement also enables the real-time management of the service, helping to ensure it is as reliable and effective as possible.

The city of Zurich is among several to lease printing equipment rather than buying it outright, thus only paying per page printed and incentivising better printer performance and energy use.

# How to get started?

# 1

## **Set the direction of travel**

Cities face multiple and complex challenges. Circular economy city roadmaps help to set the direction of travel, raise the level of ambition, and engage stakeholders in addressing future opportunities for the city. Having a city-wide vision for circularity helps to embed circular initiatives across different policy areas, including public procurement. But city governments can go one step further by developing a circular public procurement plan. Such a plan sends a signal to the market, communicates to suppliers a clear approach to the city's public procurement strategy, and provides a mechanism to engage stakeholders in the transition. It also supports the mainstreaming of a circular approach across all of the city's procurement activities and departments.

# 2

## **Learn from others**

Several cities around the world have already adopted a more circular approach to the procurement of various goods and services. From cradle to cradle office furniture, to the leasing of printers, to modular buildings, there are many successful examples. Learning from these pioneers, and understanding how similar strategies could be replicated in the local context is one way of identifying potential opportunities for circular public procurement.

# 3

## **Identify opportunities for pilots**

By looking at the products, services, and projects that the city currently procures, and considering how circular initiatives can be embedded throughout the life cycle of these purchases, cities can discover new opportunities. When a contract comes to an end, the city government has an opportunity to rethink their needs and explore how the new contract can incorporate a circular dimension. Low value, low-risk contracts represent interesting opportunities for trial and for experimenting with new schemes and business models.

# 4

## **Collaborate and build knowledge across departments**

Collaboration across departments is key to developing a city-wide approach to circular public procurement. Building knowledge and an understanding of how circular principles can be applied to the different types of contract that the city is tendering will support the mainstreaming of circular public procurement across its departments. Working closely with the public procurement department to identify needs and opportunities for circularity will help to develop the right criteria for the tenders.

# 5

## **Engage suppliers**

Circular public procurement aims to develop a long-term relationship with the market and engage suppliers throughout the journey. Understanding market readiness to provide circular solutions will help to inform the development of criteria and requests for proposals that suppliers can realistically respond to. Communicating to suppliers the objectives of a circular public procurement strategy and engaging them in the process early on will help to build momentum. City governments can also encourage more businesses with circular economy ambitions to register on the vendor list to provide them with potential opportunities. Public authorities can also support business model changes among their existing suppliers.



# How did they do it?



## **The Milan Food Policy: Collaborating to change local food systems**

The Municipality of Milan has taken a bold strategic approach to support a new food system. The Milan Food Policy supports the procurement of locally sourced food, produced by a consortium of farms on the outskirts of the city. By serving locally sourced food in the Milan school canteens, the city has cut down on transportation and supported local production.



## **Toronto Circular Economy Procurement Implementation Plan and Framework: Creating systemic change through public purchasing power**

The City of Toronto leverages its purchasing power to drive waste reduction, economic growth, and social prosperity through a circular economy approach. The city's Circular Economy Procurement Plan and Framework has identified existing circular procurement activities and integrated new requirements within call documents.



## **San Francisco 'green carpet' requirements: Cradle to cradle carpets for city buildings**

In an effort to reduce the amount of discarded carpets being sent to landfill, San Francisco's city government adopted a new regulation requiring that all future publicly procured carpet fits are cradle-to-cradle silver certified, with no polyurethane used, and with 45% recycled content. This new "green carpet" requirement applies to carpets installed in municipal buildings and construction projects. An online platform, available to city departments, shows a list of suppliers of compliant products.



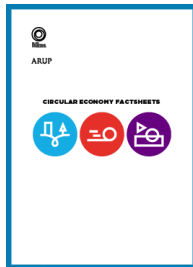
## **City Hall Venlo From Cradle To Cradle: Building future prosperity for citizens, the economy, and the environment**

From the outset, it was decided that the design of the new Venlo City Hall would be Cradle to Cradle (C2C) certified. The design tender included a brief to provide the most innovative vision for a C2C town hall that would benefit people, the environment, and the economy. The city government tender process included procuring high-quality furniture that would be easy to disassemble, repair, refurbish and reuse, and use non-harmful materials. The tender also specified that products had to be part of a take-back system to ensure their recovery after a ten-year period. The circular procurement of C2C furniture led to an 18% cost saving.



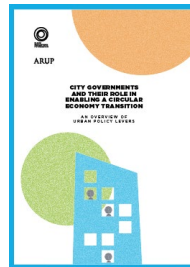
# Resources from the Ellen MacArthur Foundation

This resource on public procurement in circular cities builds upon the Ellen MacArthur Foundation's Circular Economy in Cities resource suite. Find out more:



## **Factsheets**

What benefits can a circular economy transition in key urban systems bring to cities?



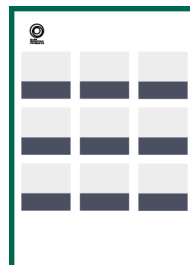
## **Policy levers**

What can urban policymakers do to accelerate this transition?



## **Case studies**

What examples are there of urban policymakers already putting this into action?

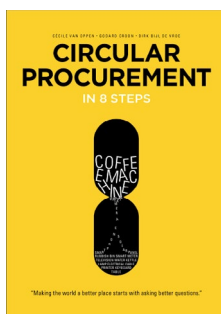


## **Circular Economy Procurement Framework:**

How can companies kickstart circular economy initiatives within their procurement process?

# Resources on Circular Public Procurement

Other organisations have published resources on circular and green public procurement. Find out more:



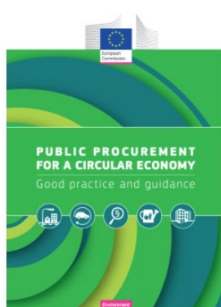
## **Circular Procurement in 8 steps**

This book provides a practical 8-step approach to integrate circular economy principles into a procurement process. Starting with the 'why' of circularity, the following steps include internal collaboration, procurement procedures, developing criteria, and contract management. The book includes a range of case examples from the Netherlands.



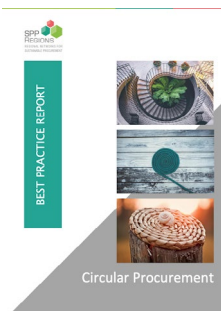
## **Module 5: GPP and the Circular Economy**

As part of its GPP Training Toolkit (2019), the European Commission has developed a module on the circular economy. It provides practical guidance to public purchasers for using GPP to support the transition towards a circular economy.



### **Public Procurement for a Circular Economy: Good practice and guidance**

This guidance on circular procurement provides an introduction to the European policy framework and practical guidance to those involved in public procurement decisions. It also includes good practice experiences from across Europe demonstrating how circular economy principles are being employed in public procurement.



### **Best Practice Report: Circular procurement**

This report gives an overview of the meaning of circular procurement and explores concepts and ideas related to the topic, including circular procurement examples from around Europe.



### **The Sustainable Procurement Platform's resource centre**

The Sustainable Procurement Platform's resource centre lists a number of case studies from around the world showing how public authorities have been experimenting with circular public procurement. The resource centre also includes several reports and practical tools.



### **Building Circularity Into Economies Through Sustainable Procurement**

This UNEP highlights and draws attention to the potential of procurement as a tool to scale circularity in products and services. This report provides examples from around the world.



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