

DRIVING CIRCULARITY AT A METROPOLITAN LEVEL: LONDON'S AMBITIONS OF BECOMING A CIRCULAR CITY

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Abstract

In the last years, new economies have emerged in Europe as an attempt to solve societal and environmental challenges that the Old Continent faces. One example is the circular economy whose large spectrum of solutions attracts both public and private sectors. This new economic model is followed in many European countries, their cities having already integrated circularity in their municipal agendas. Public institutions, SMEs, large businesses, organizations, academia and research centres are involved in the process of transition to a circular economy. The United Kingdom has shown its interest in these plans, supporting several projects in the field accross the country. This paper deals with London's strategies to attain the objective of becoming a circular city. The measures planned by the municipality and their impact on London's economy are explored.

Keywords: circular economy, circular city, transition, recycle, reuse

JEL Classification: Q20, Q28, Q55

Introduction

In December 2018, the United Kingdom's Government published a report on new strategies for resources and waste management. This plan mainly focuses on circular economy initiatives in England and sets ambitious goals in this respect. The government's agenda includes the following key objectives: find solutions for waste crime, raise awareness among citizens, promote sustainable consumption and production, reduce food waste, save resources, solve waste issues, invest in research, engage at an international level, finance innovation, tackle pollution and assess progress (2).

London ranks 6th in the world's top biggest urban economies and is the largest city in the United Kingdom and the European Union (3). Today, London's population counts about 9 million people (6) and is expected to reach 11 million by 2050 (3), while 21 million tourists per year will visit the capital by 2022 (3).

In 2015, the London Waste and Recycling Board (LWARB) established that circular economy would thrive in several fields. Thus, special attention would need to be given to the plastics, textiles, construction, electricals and food value chains, as they are economically profitable, offer a wide range of possibilities to reuse the materials and products involved in their processes and have a significant impact on the environment (3).

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Circular economy would be supported by the government, media, digital instruments, universities, finance and service (3).

For a proper implementation, circular economy needs planning, organization and support. As all new economic models, the circular one has to be tested, adjusted and scaled up. LWARB considers that London will make a successful transition to the circular economy through a couple of enablers that could facilitate the process. These enablers consist of changing policies, financing circular businesses, communicating efficiently across sectors, offering support to companies, fostering innovation, developing circular procurement, enhancing cooperation between economic actors and showcasing projects (3).

Strategies and measures

LWARB proposes a Route Map with a series of strategies and actions for the implementation of circular economy principles in the five value chains identified as key enablers in the transition process. These measures, as well as their impact on London's economy, are briefly described in Table 1. The complexity and diversity of actions proves that London's municipality makes efforts to accomplish its transition goals successfully.

Table 1: Key actions for a circular economy in London (4)

Field	Strategy	Actions	Expected results
Construction	Design	Stimulate the use of innovative technologies for circular construction Support circular construction projects Educate university students about circular design	More buildings designed according to circular economy concepts More circular business models implemented More professionals trained in the circular economy field
	Materials management	Foster the reuse of building materials	Less use of resources
	Buildings operation	Propose circular business models in the operation of buildings	Optimization of resource use
Food	Reduce food waste	Create a campaign called Love Food Hate Waste Research conducted related to food waste management and reduction in various sectors Promote policies regarding the demand for spaces to store food waste	More informed citizens Reduction in food waste resulted from companies Enhanced amenities in neighbourhoods

	Reuse food waste and surplus	<p>Raise awareness on social media in order to guide people through the process of food waste recycling</p> <p>Collect food waste from citizens</p> <p>Redistribute surplus food to people in need</p> <p>Support businesses in their efforts to create circularity in the food sector</p> <p>Foster innovative technologies related to circular economy</p>	<p>Boost recycling rates</p> <p>Reduce CO2 emissions and quantity of resources used</p> <p>Set up more social supermarkets</p> <p>Economic profits for companies</p>
	Facilitate urban production	<p>Enhance the municipal plans regarding local production sites and protection of land</p> <p>Involve citizens in the production of their personal food.</p>	<p>Additional sites for food growing, more food produced locally, less transport of imported food which implies less CO2 and greenhouse gas emissions, less pollution</p> <p>Strengthen the regional food growing system</p>
Textiles	Design	Organize circular economy courses and contests for design students and experts	Creation of an academic background for the circular textiles sector
	Adopt circular economy principles	<p>Propose the adoption of extended producer responsibility schemes</p> <p>Develop circular procurement and business models</p>	<p>Textiles waste reduction, more recycling and less use of resources</p> <p>Economic benefits for public and private sectors</p>
	Recycle and reuse	<p>Create a campaign called Love your clothes to reduce waste and promote reuse; scale up and support the campaign, make it visible</p> <p>Improve the infrastructure necessary for the implementation of the</p>	<p>Less resources used, less CO2 emissions, less waste resulted from the textiles industry, more recycled clothes</p> <p>Better management of resources and waste, increase in the</p>

		circular economy in the textiles value chain	quantity of textiles collection and recycling
Electricals	Design	Implement circular economy principles in the product design and business models Cooperate with other cities Teach circular economy lessons to university students in the electronic engineering field	Resource use and CO2 emissions reduction Enhanced partnerships Trained professionals
	Extend products life	Create a campaign to raise awareness among citizens about sustainable use of electricals Develop a tracking system for electricals Support companies, innovative projects and instruments for a circular electricals market	Reuse, repair and recycling of electricals, less waste, less use of resources Better use and access to products in order to facilitate repair and reuse Additional circular businesses
	Collect and recycle	Build a resilient recycling system	Reduction of CO2 emissions
Plastics	Recycle and reduce	Categorize plastics to be recycled and educate citizens in this matter Reduce disposable packaging made of plastic Set up a start up incubator for the plastics businesses working in the circular economy field Explore the New Plastics Economy developed by the Ellen MacArthur foundation	Less contaminated plastics, less waste, increased recycling rates Less use of raw materials, reduced CO2 emissions New innovations and business opportunities

The savings estimated to result from the performance of all the actions proposed in the Route Map are worth around £2.8 billion (4). Other data based on a more prompt effect of the measures show that savings could reach about £1.2 billion, while bolder estimates anticipate more than £7 billion of monetary savings under a scenario of significant impact (4).

Employment in the circular economy

According an evaluation conducted in 2015, around 46,700 employees already worked in the circular economy field in the British capital in 2013 (5). Most of these jobs were related to rental, leasing, waste management, treatment and recovery activities (5). The average gross salaries for circular economy jobs in 2013 in London can be found in figure 1.

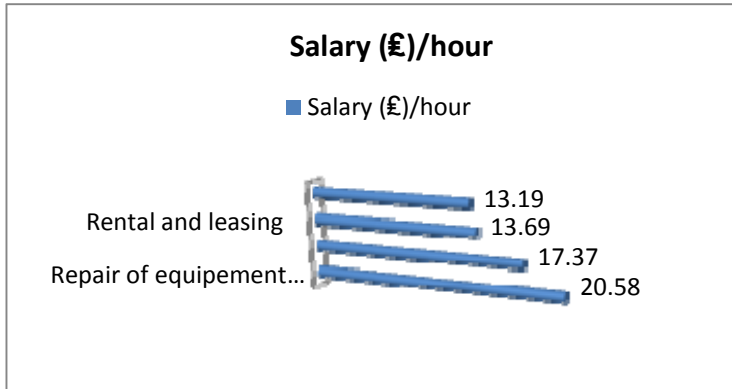


Figure 1: Average gross salary/hour for circular economy jobs in London (5)

A report assessing the potential benefits of the circular economy for the job market identifies three scenarios relation to the job creation in London. Under the first scenario which implies a steady state with no additional activities and projects, the market would benefit from the creation of 1,100 new jobs in the circular economy field by 2030 (5). If the present measures are continued in the same way until 2030 (2nd scenario), 5,500 new jobs would be created (5). The third scenario assumes that circular economy initiatives would be developed at a large scale until 2030, adding 12,000 new jobs to the market (5). Figure 2 summarizes the three scenarios for the creation of circular economy jobs in London.

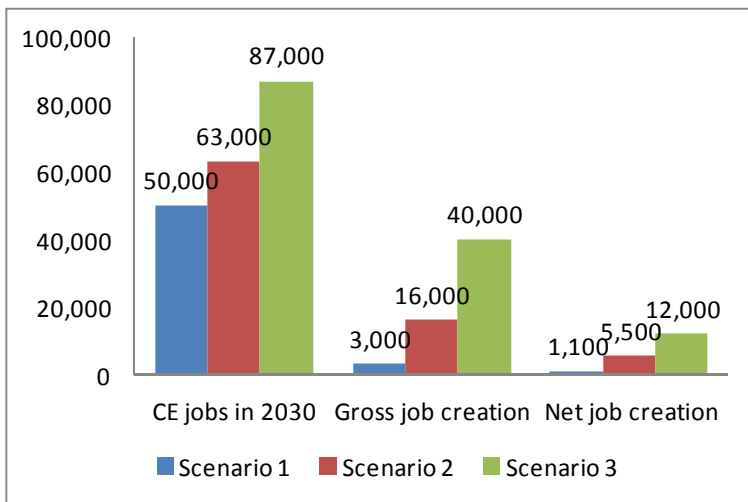


Figure 2: Possible circular economy contributions to the London job market by 2030 (5)

Conclusions

We explored the municipal measures planned to be taken in London and their impact on the economy and environment. Several value chains are considered to create the proper background and facilities for a circular economy: construction, food, textiles, electricals and plastics. The strategies that will be adopted are more or less the same for all value chains, ranging from circular design, reduce, reuse to the product life extension and waste recovery. The planned actions are expected to have positive economic, social and environmental impact in the London region. Moreover, if the most optimistic scenario becomes reality, around 87,000 circular economy jobs will have been created by 2030. It is a promising forecast for the future circular city.

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