



**MAINLINE SUMMARY**

***CIRCULAR ECONOMY: FROM WISH TO PRACTICE***

**CIRCULAR ECONOMY WORKING GROUP**

**Brussels, 13 September 2016**

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## Introduction

The EEAC Network and the Dutch Council for the Environment and Infrastructure (*Raad voor de Leefomgeving en Infrastructuur*, Rli) have organized a workshop on the challenges of implementing the concept of a circular economy at the national and regional level. Through in-depth presentations and informed debate, the event facilitated mutual learning on the complex task of implementing the circular economy concept. Several national and regional experts shared their knowledge with the audience. This document provides a summary of the presentations given.

The first session of the Working Group focused on a systemic approach to developing a circular economy at the national and regional level. The session included contributions from Marjolein Demmers, Manon Sernee and Hermien Busschbach.

The second session of the Working Group focused on circular procurement. Fabrix Dehoux, Arthur ten Wolde and Erick Wuestman shared their views and experiences.

The third and final session was dedicated to examining the potential costs and benefits of the circular economy for employment, and the consequences of the circular economy for the skills and qualifications of the labour force. Jean Pierre Maugendre, Pascal Gabriel, Philippe Dreno and Henri de Groot addressed the audience.

Over 40 participants attended the Working Group session, which took place in Brussels on 13 September 2016 and was kindly hosted by the Belgian Federal Council for Sustainable Development.

## *Session I*

### *A systemic approach to developing a circular economy at the national and regional level*

#### 1.1 A systemic approach

The global scarcity of raw materials and rising resource prices are expected to make the European economy vulnerable. For 54 scarce and economically important raw materials, Europe in its entirety depends for 90 percent on raw materials imported from outside Europe. Along with shifting power balances and conflicts in resource-supplying regions, this dependence leads to fluctuations in resource prices and affects the security of supply. Furthermore, this impacts the earning capacity of the EU.

Resources are no longer seen as solely an environmental issue. Therefore, questions arise as to how we can reap the benefits of the circular economy and how we can deal with different levels of scale when implementing the circular economy concept.

Marjolein Demmers, representing the Dutch Council for the Environment and Infrastructure, presented a systemic approach to identifying the right actions at each level. Ms Demmers recommended developing a common vision on the circular economy at the different levels of scale. Such a vision should help to build a common language ('getting the discourse right'), identify typical

qualities (urban benefits, rural benefits), and sort out strengths and opportunities at the different scale levels in order to align the initiatives to these levels.

Ms Demmers continued by arguing that, in addition to a common vision, we also need to formulate overarching goals that are objective and measurable.

When a vision and goals have been determined, there is a need for a strategy. This strategy should include a clear-cut picture of the desired direction for the different scale levels. Setting a clear ambition and defining clear targets to work towards are important elements of this exercise. One could, for example, focus on the sharing of goods. A strong sense of coherence in society is needed for an effective sharing mechanism. You can then easily implement a circular economy, while the sharing mechanism in turn creates more closely connected societies. Other strategies could include focusing on industrial symbiosis (exchange of residual flows, one party's waste can be another party's resource), zero waste (as little waste as possible is disposed of or incinerated by focusing on the reduction and recycling of waste), and being a self-sufficient region (everything that is used is locally produced, reused and recycled).

The creation of a vision, goals, and a strategy at different scale levels supports the transition to a circular economy. Furthermore, this approach could support knowledge-sharing. This process is vital, since the task ahead is too complex and versatile to define a blueprint.

## **1.2 Implementation at the national level**

A transition to a circular economy will help the European Union to implement international commitments such as the 2030 Agenda and the Paris Agreement (COP21), and to fulfil its ambition of creating more sustainable supply chains and globalized markets for secondary raw materials, as decided within the framework of the G7 Alliance for Resource Efficiency.

Ms Busschbach, representing the Dutch Ministry for the Environment and Infrastructure, continued by highlighting what is needed at the national and EU level to develop a successful circular economy. The EU should present coherent product policies, including, for example, circular elements in the EU Ecodesign Directive. Furthermore, the EU was called upon to prevent planned obsolescence, while product requirements to improve reparability should be strengthened, according to Ms Busschbach. She also mentioned the importance of aligning legislation on recycling and hazardous substances (definition of 'waste' and REACH), as well as phasing out micro-plastics in cosmetics and improving and harmonizing product labelling.

At the national level, the Netherlands faces significant challenges in implementing a circular economy. Currently, 60.4 million tonnes of waste are produced every year, with household waste accounting for 9.2 million tonnes. Only 51 percent of municipal waste is separated, although the EU target is 65 percent by 2030 and the domestic Dutch target is 75 percent waste separation. Furthermore, much of the recycling of construction and demolition waste may be regarded as down-cycling, since the recycled products are only used as foundation materials. Additionally, 50 percent of plastic packaging is recycled; the other half is incinerated.

In the face of these challenges, the Dutch government wants to tackle obstacles by formulating a vision on how the relevant aims can be achieved. Moreover, additional efforts must be made to streamline existing policies more effectively in order to achieve more coherence and focus in current policies. These actions must be implemented to take the next step in the transition to a circular

economy. However, this process will not take care of itself. Regulatory barriers, structural issues in the waste sector, existing knowledge gaps and externalization of costs are making the transition more difficult. Furthermore, there is little familiarity with new circular economy business models, and the private sector and members of the public continue to engage in 'non-circular' behaviour. The public sector needs to act to remove these barriers, according to Ms Busschbach. Business innovation should be supported and sustainable consumption encouraged. Furthermore, materials should not be wasted, but re-used instead.

At the time of the EEAC Working Group session, the Dutch government was about to release its government-wide programme for a circular economy. This programme is aimed at developing a circular economy in the Netherlands by 2050. The programme aims to use raw materials more effectively, intelligently and profitably, and in this way to also reduce energy consumption. It emphasizes the optimization of resource usage, developing new ways of producing/consuming, and innovative business models, among other measures.

### **1.3 Implementation at the regional level: an example**

The third and final presentation of the Working Group's first session focused on experiences gained at the sub-national level. Ms Sernee, representing the Province of North Holland, shared her experiences with the Westas project. The Westas area includes flower cultivation and trade, Schiphol Airport, the so-called Dataport (AMS-IX) and the Amsterdam port area. The level of activity in this area is expected to increase. Consequently, the volumes of goods used and waste produced are expected to increase proportionally. All parties involved consider it necessary to implement a circular economy.

Ms Sernee argued that the circular economy cannot be implemented 'in splendid isolation'. Collaboration must be sought with the private sector, knowledge institutions and different governmental levels, creating a so-called 'triple helix'. It is important to have an interdisciplinary approach, arrange funding and formulate a common but clear-cut vision, Ms Sernee argued. To formulate such a vision, partners must be found at all scale levels and must be kept on board. Ms Sernee once again underlined the important role of business and called upon national governments to create – where possible – synergy between strategies at different scale levels. An overarching approach should ensure that the overall focus on sustainability is maintained.

The implementation project in the Westas area is currently in the research phase, Ms Sernee told her audience. To ensure the project's success, a study has been carried out to identify the chains of materials/material flows that are likely to be most successful in the Westas area. Furthermore, the parties involved are considering the best locations for the various activities, identifying environmental and infrastructural issues, and developing tools and benchmarks to ensure and monitor progress. By developing a set of circular economy indicators, the Westas team aims to ensure that the various objectives are mutually reinforcing so that positive spin-offs can be utilized.

#### ***General conclusions***

##### ***Session I***

- *The creation of a vision, goals and a strategy at different governmental scale levels*

*promotes the transition to a circular economy.*

- *Every governmental scale level should identify its own strengths within a circular economy.*
- *Different goals should be defined for energy and for resources.*
- *A transition to a circular economy will help the European Union to implement international commitments such as the 2030 Agenda and the Paris Agreement (COP21), and to fulfil its ambition of creating more sustainable supply chains and globalized markets for secondary raw materials.*
- *Additional efforts must be made to streamline existing policies more effectively in order to achieve more coherence and focus in current policies. Regulatory barriers, existing knowledge gaps and externalization of costs are making the transition more difficult.*
- *A circular economy cannot be implemented ‘in splendid isolation’. A broad spectrum of stakeholders, including the business community, should be involved.*
- *Product innovation and design as well as waste management are key elements of a circular economy.*
- *A cross-sectoral approach is more important than a cross-level approach in creating a circular economy.*

## **Session II**

### **How can we increase and accelerate circular public procurement?**

#### **2.1 Circular public procurement: challenges identified**

The concept of circular public procurement was introduced by describing the differences between this procurement concept and the more familiar concept of ‘green public procurement’.<sup>1</sup> In contrast to green public procurement, circular public procurement considers the entire process from production to usage and waste recycling. This broader scope ensures that aspects like re-use, upcycling and goods sharing are included in the concept. Products as such are no longer the main focus and the modus operandi shifts towards a focus on ‘what do we need’. In other words: from ownership to service. According to Mr Dehoux of the Belgian Federal Council for Sustainable Development, this approach represents an opportunity to reduce the number of products needed, while it may also lead to substantial cost reductions for governments. Furthermore, the social aspect of circular public procurement should not be underestimated. Local businesses can profit from shortened cycles.

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<sup>1</sup> “A process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured.”

Although increasing attention is devoted to green or even circular public procurement, the Belgian Federal Council for Sustainable Development identified several obstacles in a recent publication on the circular economy. Firstly, there is a legal obstacle in Belgium. Although Directive 2014/24/EU on public procurement has been transposed, the Belgian government has not yet implemented the decree. Serious challenges also exist at the institutional level. For example, each administration has at least one procurement department, and an overarching department is in charge of so-called 'big markets'. These activities are all being undertaken under different regulatory regimes and subject to different scope definitions. Furthermore, the regulatory authorities (i.e. the Department of Finance and the Court of Auditors) do not have the right focus to support circular public procurement. The concept of Total Cost of Ownership is rarely considered, and even when it is, no uniform underlying methodology is applied. This approach does not provide sufficient incentives to apply circular procurement policies. Besides legal and institutional obstacles, there is also the human factor. Ingrained habits, the requirements of time efficiency ('copy and paste') and the fact that taking risks and innovation are not always appreciated do not favour the development of a circular economy under the current status quo.

Mr Dehoux presented a couple of strategies to overcome these problems. As mentioned on other occasions during the event, training and raising awareness was suggested as an important tool for supporting circular public procurement. To create awareness, regulatory and procurement departments at governmental institutions and companies should establish a dialogue. A single (online) source should be created to provide access to guidelines, best practices, etc. This source should be comprehensive, yet easy to navigate and up-to-date. Furthermore, investments should be made in a Total Cost of Ownership. Procurement departments should engage with manufacturers to elaborate a common long-term vision. In Denmark such an approach has already been applied, resulting in the Sustainable Procurement Form (see [www.ansvarligeindkob.dk](http://www.ansvarligeindkob.dk)). To facilitate such engagement, governments should first identify high-priority sectors and allocate budget resources and time in order to enable civil servants to develop innovative specifications.

In his concluding remarks, Mr Dehoux presented circular public procurement as an opportunity to foster the development of a circular economy. Governments should assume the role of 'launching customer'. Strengthening the circular economy could bring opportunities in terms of new jobs, cost savings and resource savings. There are legislative opportunities, but not enough action has been taken.

## **2.2. Circular public procurement: an external view**

In his introduction, Mr Ten Wolde (representing EcoPreneur, the European Sustainable Business Federation and its Dutch member De Groene Zaak) touched upon private-sector experiences with circular public procurement. Mr Ten Wolde argued in favour of what he called a 'massive training programme'. This programme should promote the integration of a circular economy approach in public procurement. He also advocated the inclusion in this programme of a wide variety of participants – ranging from national governments to cities, regions, municipalities, and small and medium-sized enterprises. Furthermore, Mr Ten Wolde urged the EU to define ambitious targets for re-use, repair, sharing etc., and to enforce existing regulations as well as any SMART new regulations.

Mr Ten Wolde also argued that the current lack of green and/or circular procurement is a major bottleneck for the companies he represents. Nevertheless, he remained positive, arguing that circular and green public procurement could, as was argued by Mr Dehoux, serve as a 'push' factor in creating a circular economy. Fourteen percent of the EU's GDP is derived from government

investments. Shifting towards a circular public procurement system would entail a serious boost of the circular economy.

Although Mr Ten Wolde recognized the obstacles as described in Mr Dehoux' presentation, he shared an optimistic note, referring to the Dutch Green Deal for Circular Procurement. This Green Deal concluded that there are no insurmountable obstacles, although hurdles still exist. Mr Ten Wolde argued that effective solutions are available, and that the parties involved should just get started.

From his perspective, Mr Wuestman (representing the Circular Economy Foundation, an organization focused on knowledge creation and sharing to enable a circular economy to flourish) agreed with Mr Ten Wolde. The obstacles should indeed be considered challenges. There is a lot more possible than lawyers and procurement officers think, Mr Wuestman argued. He pointed out that governments are 'inventing a new future' when it comes to circular public procurement, and that matters are therefore uncertain. This fact of life requires an open attitude to innovation, rather than seeking to avoid aspects that are considered 'risks' from the perspective of the old system and the old ways of doing things.

The current narrative around public procurement is focused in particular on managing procurement risks. This focus should be phased out, according to Mr Wuestman. When you want to implement circular public procurement, you must accept uncertainties and use them to select the best professional partners and to devise solutions that turn uncertainties into successes, he argued.

Innovation in a circular economy thrives when innovative procurement policies are applied. In too many cases, insufficient consideration is given to the Total Cost of Ownership, let alone the Total Cost of Usership. This narrative should be adjusted by adding the social component of 'Total Value of Usership'. From this perspective, sharing is key. Furthermore, products can be obtained at a better price when they are procured as a service rather than purchased in the form of goods. Product service systems should therefore be supported by changes to procurement methods. In Mr Wuestman's experience, putting this into practice results in increased circular quality of products. To create a solid business case and make service contracts profitable, companies must invest in high-quality products that are designed to be re-used or recycled.

## **General conclusions**

### **Session II**

- *Products as such are no longer the main focus and the modus operandi shifts towards a focus on 'what do we need' (light, transportation, etc.). In other words: from ownership to service.*
- *There are still legal, institutional and human obstacles that hinder the implementation of circular procurement.*
- *Training and awareness-raising projects are needed to increase knowledge and awareness levels and to overcome legal, institutional and human obstacles. A platform providing access to best practices is expected to be useful.*
- *Governments are 'inventing a new future' when it comes to circular public procurement, and*

*matters are therefore uncertain. This fact of life requires an open attitude to innovation, rather than seeking to avoid aspects that are considered 'risks' from the perspective of the old system and the old ways of doing things.*

- *Innovation in a circular economy thrives when innovative procurement policies are applied.*
- *The concepts of Total Cost of Ownership and Total Cost of Usership should be strengthened as a starting point for procurement departments, auditors and controllers.*

## **Session III**

### ***What are the potential costs and benefits of the circular economy for employment, and what are the consequences of the circular economy for the skills and qualifications of the labour force?***

#### **3.1 A changing world**

According to Jean Pierre Maugendre (representing the French labour organization MEDEF), there are some additional key trends to be considered when analyzing the effects of a circular economy on employment and the labour force. These trends are expected to profoundly shape the future of businesses, as well as the skills requirements for employees.

Mr Maugendre identified four global trends. The process of urbanization comes with great demands on water, sanitation, urban waste, and transportation. Consequently, there is a growing demand for controlled management of renewable and non-renewable resources at the global level, Mr Maugendre argued. Furthermore, tackling climate change through mitigation and adaptation will shift the way in which we earn money. 'Climate-responsible' business models are emerging. Consumers will move from volume to value. This process reflects the environmental value created by our activities.

The third impact identified was the increasing role of technological innovations. Reduced distances enable greater flexibility, more effective resource allocation and improved coordination, and present enormous challenges in terms of governance, data protection and protection of personal privacy. The fourth challenge concerns new societal aspirations. Public and private actors are called upon by customers and employees to act more responsibly. According to Mr Maugendre, we may expect the development of a sharing economy and the growth of socially inclusive business models.

#### **3.2 Jobs and skills**

In this changing world, the circular economy has now been fully identified as a driver of growth and competitiveness in France. There is a trend which disassociates economic growth from consumption



of natural resources and greenhouse gas emissions. This trend towards a circular economy is expected to affect the labour force and the skills that tomorrow's workers need to have.

Mr Gabriel, representing Syndex, argued that this transition is supported by the French Energy Transition and Green Growth Act (adopted in August 2015). The Act includes chapters on the transition toward a circular economy, with objectives on reducing waste volumes and reducing disposals and the volume of waste admitted in landfills. The Act also contains provisions on developing industrial ecology, re-use, product sharing, ecodesign, and durable products.

The goals as formulated in the various policy initiatives are expected to have an influence on the French labour market. In April 2016, the National Institute of Statistics and Economic Studies in France conducted an initial assessment of employment in various sectors related to the circular economy. Currently there are about 800,000 jobs (3 percent of the French labour force) related to the circular economy. These jobs are mainly found in medium and small-sized enterprises or socially inclusive organizations, Mr Gabriel explained.

The highest rates are found in the repairs industry, which accounts for 25% of all jobs related to the circular economy. Quite a high percentage of these jobs (50%) concerns car repairs. In addition to the car repair industry, the waste management and soil remediation sectors are also experiencing growth. Hence, we can also see growth in the recycling and recovery sector as well as in ecodesign, maintenance, repair and re-use, Mr Garbiel argued.

### 3.3 What does this mean for business? An example

New technologies are creating more opportunities for the private sector to establish a sound business case based on the circular economy concept. Mr Dreno shared his experiences as an entrepreneur supplying active bio-facades for buildings. These systems combine micro-algae farming with optimizing the energy efficiency of buildings.

Mr Dreno explained to the audience that the bio-facades market is expected to grow to EUR 3.4 billion, while the algaculture market is estimated to grow to EUR 1.2 billion. This growth requires new skills and competencies in the entire value chain. At the company level, this means that various skills are needed, including process intensification, corporate intellectual property management, integration, high-value differentiation, integration diversification, and increased market pull development. Individual employees must develop competencies in fields like construction regulations, upstream communications, marketing of biological processes, corporate project management, microalgae processes, and value marketing.

To promote good business practices and boost market growth in a circular economy, we need to tackle two cultural/managerial challenges, Mr Dreno argued: the 'marketing of ruptures' approach and the 'extended enterprise' approach. The 'marketing of ruptures' approach shifts away from a 'formulated need' to an ability to reveal the needs of customers as such. This process requires an alert and more responsive attitude, rather than a leader attitude. The 'extended enterprise' approach requires the ability to cooperate in order to manage trust and reputation among partners.

Mr Dreno explained to his audience that he sees enormous opportunities for early adapters in business. Furthermore, he also foresees that the further development of a circular economy will result in growth in jobs and skilled labour.

### 3.4 What can we expect and what can we not expect of a circular economy when it comes to jobs and job creation?

Both Mr Gabriel and Mr Maugendre agreed that more accurate and stable metrics are not yet available on employment within the resource efficiency models. Nevertheless, the transition to a circular economy in France is expected to result in job creation. The impact on jobs will increase if material efficiency is combined with energy efficiency and promotion of the use of renewable energy sources. Some of these jobs may also be 'new', although most of the job creation is based on developing existing jobs, possibly with some minor development of skills.

The further development of a circular economy will most likely have a positive impact on supply chains, research and development (ecodesign, shifting needs), the development of information systems (which is already occurring for other reasons), and on recycling and the use of secondary materials, Mr Gabriel added. The impact on matching new needs and current skills depends to some extent on the speed of the transition toward a circular economy.

Mr De Groot (representing the Social and Economic Council of the Netherlands) urged the audience to adopt a broad perspective on the possible effects of a circular economy on jobs, skills, and job creation. According to Mr De Groot, there is reason to be cautious when analyzing the effects of a circular economy on the labour market.

When Europe wishes to move towards a circular economy and – as argued by some speakers at the Working Group session – also wishes to support the broader sustainable development agenda and job creation, it should be understood that this involves different societal objectives. These different aims may require different instruments. Presenting a 'one size fits all' solution is therefore not an option, Mr De Groot argued.

Furthermore, Mr De Groot underlined that labour markets are expected to adapt when the transition from a linear to a circular economy affects the everyday economic system. Nevertheless, this transition will produce both winners and losers. Mr De Groot argued that substantial investments are needed in order to identify challenges related to this transition. As an example, Mr De Groot pointed to in-depth research that should be conducted into the underlying mechanisms and the labour market preconditions that must be met to effectively contribute to an acceleration of the circular economy.

According to Mr De Groot, one of the important questions that should be raised is what the social agenda ahead of us might bring. Mr De Groot said that life-long learning is of major importance. Nevertheless, the process of life-long learning has not yet been effectively integrated. Furthermore, there is a tendency to shift the burden of life-long learning from employers to third parties, such as employees themselves or governments. In his concluding remarks on this topic, Mr De Groot argued that if we want to completely change the approach to life-long learning, all parties involved should make sure that schooling is included in the transition agenda.

In addition to life-long learning and schooling, Mr De Groot also referred to the 'double dividend hypothesis' as a solution for the transitional process. This hypothesis suggests that raising taxes on polluting activities may yield two kinds of benefits. The first benefit is an improvement in the environment. The second benefit is an improvement in economic efficiency as environmental tax revenues can be used to reduce other taxes (such as income taxes) that distort the labour supply and saving decisions. Mr De Groot added that in the event of a more radical tax shift from labour to raw materials, the effectiveness and side-effects of such a tax realignment should not be ignored. Further

research into the overall effects of tax changes in favour of the circular economy is therefore necessary, Mr De Groot concluded.

### **General conclusions**

#### **Session II**

- *The circular economy has been identified as a driver of growth and competitiveness in France. This trend is expected to affect the labour force and the skills that tomorrow's workers need to have.*
- *The impact on jobs will increase if material efficiency is combined with energy efficiency.*
- *Statistics in France show that a circular economy will create some new jobs, although most of the job creation is based on developing existing jobs, possibly with some minor development of skills.*
- *It is advisable to invest in the new labour skills required for the transition to a circular economy.*
- *Life-long learning and integrating the circular economy in schooling is of major importance, starting in primary school.*
- *An agenda must be drawn up for education and new labour skills.*
- *It is uncertain how the development of a circular economy will affect employment. Further research into the overall effects is therefore necessary.*

### **Disclaimer :**

*This summary is an interpretation made by the EEAC secretariat. It does not necessarily reflect the exact opinion of the speakers. Any shortcomings or errors remain entirely the responsibility of the EEAC secretariat.*