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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE
COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE
COMMITTEE OF THE REGIONS**

on the implementation of the Circular Economy Action Plan

1. Introduction

The circular economy package, adopted by the Commission on 2 December 2015, has created an important momentum to support the transition towards a more circular economy in the EU. This package included legislative proposals on waste, with long-term targets to reduce landfilling and increase recycling and reuse. In order to close the loop of product lifecycles, it also included an Action Plan to support the the circular economy in each step of the value chain – from production to consumption, repair and manufacturing, waste management and secondary raw materials that are fed back into the economy. The Commission committed to undertake the detailed list of actions within its current mandate.

The transition towards a more circular economy brings great opportunities for Europe and its citizens. It is an important part of our efforts to modernise and transform the European economy, shifting it towards a more sustainable direction. There is a strong business case behind it which enables companies to make substantial economic gains and become more competitive. It delivers important energy savings and environmental benefits. It creates local jobs and opportunities for social integration. It is closely interlinked with key EU priorities on jobs and growth, investments, the social agenda and industrial innovation.

The wider benefits of the circular economy also include lowering energy consumption and carbon dioxide emissions levels. Hence, the circular economy has strong synergies with the EU's objectives on climate and energy and with the Commission's recently adopted package on 'Clean Energy for all Europeans'.¹ It also is instrumental in supporting the EU's commitments on sustainability, as outlined in the Communication 'Next steps for a sustainable European future'² and in particular to reach Sustainable Development Goal 12 on sustainable consumption and production patterns. Delivering on the EU Action Plan for the circular economy is therefore a clear priority for the Commission.

The aim of this report is to present a complete overview of the actions already delivered in the implementation of the EU Action Plan since its adoption in December 2015, and to introduce key deliverables for 2017. Key actions have been undertaken in areas such as food waste, ecodesign, organic fertilisers, guarantees for consumer goods, and innovation and investments. Circular economy principles have also been gradually integrated in industrial best practices, green public procurement, the use of cohesion policy funds, and through new initiatives in the construction and water sectors.

The EU Action Plan has undoubtedly contributed to mainstreaming the concept of "circular economy" as a first step of a long-term endeavour. The Commission remains fully committed to implementing its Action Plan and to working across different policy areas to support the circular economy. This commitment is also reflected in an increasing number of financing opportunities for concrete projects.

Ensuring a successful transition to the circular economy, however, requires efforts on many different fronts and does not stop with delivering on actions put forward by the Commission. Many actors from the public and private sectors are moving forward, as seen for example with the development of circular economy strategies in an increasing number of EU countries and regions.

¹ <https://ec.europa.eu/energy/en/news/commission-proposes-new-rules-consumer-centred-clean-energy-transition>

² COM(2016)739 final.

The actions delivered by the Commission since the adoption of the Circular Economy Action Plan include several legislative proposals, in the first place on waste setting clear targets for waste recycling and establishing an ambitious long-term path leading towards waste prevention and recycling. Furthermore there are proposals on online sales of goods strengthening consumer guarantees, on fertilisers recovering nutrients, and a proposal on the restriction of the use of certain hazardous substances in electrical and electronic equipment (adopted together with this report). It is important that co-legislators work towards the adoption of these legislative proposals without delays, to allow a fast transition to the circular economy on the ground.

In particular, a swift adoption this year of the legislative package on waste is crucial to kick-start investments into more and better recycling across the EU. The Commission therefore calls on both institutions to reach an agreement by the end of 2017, in line with the Joint Declaration of the European Parliament, Council and Commission on the EU's legislative priorities in 2017³ in which a priority treatment of these proposals was agreed.

2. Key deliveries since the adoption of the Action Plan

Following commitments undertaken in the Circular Economy Action Plan, the Commission has put forward a number of key initiatives in 2016 to support the circular economy. These initiatives cover the full value chain, from production to consumption, waste management and use of secondary raw materials. They are presented below in chronological order of their completion.

Legislative proposal on online sales of goods (December 2015)

The first action taken by the Commission following the adoption of the Action Plan concerned legal guarantees for consumer goods. On 9 December 2015, the Commission adopted a legislative proposal on online sales of goods⁴. The proposal aims to strengthen guarantees for consumers to better protect them against defective products and contributes to the durability and reparability of products. This prevents products from being thrown away, and contributes strongly to the circular economy.

Under the proposal, in case of a defective product sold online, during the first two years from the time of delivery, the seller must prove that no default existed at that time. Under current rules, the seller's obligation is for the first six months. This change will make it easier for consumers to exercise their rights and will be a clear incentive to produce higher quality and more durable products.

Furthermore, the proposal provides a two-year legal guarantee for second hand goods and fully harmonises a hierarchy of remedies where repair is more strongly promoted.

Legislative proposal on fertilisers (March 2016)

On 17 March 2016, the Commission proposed a Regulation⁵ that will create a genuine single market for fertilisers made from secondary raw materials (in particular recovered nutrients), thereby turning waste management problems into economic opportunities.

Proposed rules can make the fertilisers sector less dependent on imports of critical, primary raw materials such as phosphate, which can also be recovered from domestic

³ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016C1224%2801%29&rid=2>

⁴ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2015%3A635%3AFIN>

⁵ <https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-157-EN-F1-1.PDF>

organic waste. The draft Regulation provides rules for free movement of all CE-marked fertilising products across the EU, including for organic fertilising products.⁶

The draft Regulation harmonises EU rules for products derived from organic waste and by-products, and provides rules for the recovery of nutrients into secondary raw materials. When organic waste fulfils strict recovery rules, it can become an eligible component of CE-marked fertilising products with unrestricted access to the single market. Regarding non-CE marked fertilisers, EU Member States will be able to continue trading those products on their national market according to their national rules.

How will the proposal on fertilisers help create jobs and boost innovation?

As set out in the impact assessment accompanying the legislative proposal,⁷ about 120 000 jobs could be created thanks to recycling of bio-waste in organic-based fertilisers. By creating a level playing field for fertiliser sector, SMEs and farmers producing organic fertilising products will be able to access the single market and seize new opportunities.

They will be able to offer their products to a wider group of customers and benefit from economies of scale by offering a product that is endorsed by the widely recognised quality guarantee of the 'CE-marking'. This will further boost research, innovation and investment in the circular economy, create jobs and generate value from secondary domestically-sourced resources.

Launch of the Innovation Deals (May 2016)

The Commission issued a call for expression of interest for 'Innovation deals for a circular economy',⁸ which was open between 26 May and 15 September 2016. The call constitutes a pilot approach to help innovators facing regulatory obstacles.

Innovation Deals aim at bringing together innovators, national/regional/local authorities, and Commission services to clarify perceived regulatory barriers to innovation in EU regulation or Member State implementing measures.⁹ If the existence of an EU legislative barrier is confirmed, the Commission will consider launching a further evaluation, consultation and assessment of the impact of this regulatory obstacle.

32 expressions of interest from 14 different Member States were submitted.¹⁰ Topics that have been mentioned in the expressions of interest include e.g. perceived regulatory barriers to innovation in the water, waste and energy sectors. Two Innovation Deals will be signed in the first quarter of 2017: one will look at perceived legislative obstacles with regards to e-mobility and recycling of batteries; the other one will examine regulatory barriers with regards to sustainable wastewater treatment using innovative anaerobic membrane bioreactors technology.

⁶ <https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-157-EN-F1-1.PDF>

⁷ <http://ec.europa.eu/DocsRoom/documents/15949>

⁸ <https://ec.europa.eu/research/innovation-deals/index.cfm?pg=home>

⁹ <https://ec.europa.eu/research/innovation-deals/index.cfm>

¹⁰ <https://ec.europa.eu/research/innovation-deals/index.cfm?pg=home>

Ecodesign (November 2016)

The possibility to repair or recycle a product and reuse its components and materials depends largely on the initial design of the product. Following political discussions on ecodesign in April and October 2016, the Commission confirmed the importance of smart product design and decided to focus efforts on the product groups with the highest potential in terms of energy and resource savings and further reinforce the evidence base for regulatory action. This resulted in the adoption on 30 November 2016 of the Ecodesign Working Plan 2016-2019 as part of the Clean Energy for All Europeans package.¹¹ The new working plan will help us reach the EU's energy and climate objectives under the Paris agreement by delivering energy savings comparable to the annual primary energy consumption of Sweden by the year 2030, creating jobs and driving innovation.

Ecodesign can also have an important contribution in creating a more circular economy. While ecodesign measures have so far mainly focused on energy efficiency, in this working plan, the Commission undertook to also explore more systematically the possibility to establish product requirements relevant for the circular economy such as durability, reparability, upgradeability, design for disassembly, information, and ease of reuse and recycling. This will be undertaken both for new product groups and for reviews of existing product-specific measures, and will bring benefits throughout the value chain.

The Working Plan outlines the priorities for the coming years in terms of new product groups for investigation, and reviews of existing Ecodesign and Energy Labelling regulations. The Commission will also launch a specific study on ICT products, including smart phones, with a view to their possible inclusion in the ecodesign working plan.

In parallel, the Commission has developed mandatory product design and marking requirements to make it easier and safer to dismantle, reuse and recycle electronic displays (e.g. computer monitors, televisions and electronic display integrated in other products). The draft Regulation¹² includes requirements that facilitate recycling such as avoidance of welding or gluing of certain components (e.g. printed circuit boards, capacitors, batteries and internal power supplies), marking of plastic parts and the presence of cadmium and mercury.

Moreover, the draft regulation requires manufacturers to provide information for recyclers such as the location of plastic parts containing brominated flame retardants. These requirements would improve recycling of displays, which will contribute to the achievement of the recycling targets under the directive on waste electrical and electronic equipment¹³.

Immediately after it adopted the Circular Economy Action Plan, the Commission also asked the European standardisation organisations to develop generic standards on the durability, reusability and recyclability of certain products. Many consumer and industrial products could be made more durable, reusable and recyclable if appropriate metrics and standards were in place.

¹¹ COM(2016) 773 final.

¹² Draft Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for electronic displays.

¹³ Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE).

The three European standardisation organisations have accepted the Commission's request and have submitted a joint working plan. They have also set up a joint working group that will be developing around 20 generic standards. This will make it easier to decide which compulsory requirements should be developed to increasing the resource efficiency of products and to reduce waste.

Food waste (throughout 2016)

Food waste is a key area in the circular economy and should be addressed at many levels along the value chain. The Commission has delivered on a number of actions supporting the fight against food waste and the achievement of the related Sustainable Development Goal in this area. It launched a stakeholder's platform on food waste prevention, made progress in developing an EU methodology to measure food waste, and prepared EU guidelines to facilitate food donations and the use former foodstuff as feed.

On 1 August 2016, the Commission established the EU Platform on Food Losses and Food Waste.¹⁴ The platform will be the key forum at EU level to support all players in identifying and taking actions needed to achieve the Sustainable Development Goals commitment to halve food waste per capita by 2030.¹⁵ It gathers 70 members representing public authorities (Member States, EFTA countries, EU bodies and international organisations) and all actors along the food value chain, including food banks and other NGOs. The platform met for the first time on 29 November 2016, and discussed key deliverables of the circular economy Action Plan on food waste, including the main elements to be considered in developing a methodology to measure food waste consistently across the EU. The methodology will be utilised by Member States to fulfil reporting obligations related to food waste laid down in the Commission's legislative proposal to revise the Waste Framework Directive.

In 2016, the Commission, in close cooperation with Member States and stakeholders, worked on the preparation of EU guidelines to facilitate food donation. The guidelines will provide a more consistent interpretation by Member States regulatory authorities of EU rules applying to food redistribution. It aims to address legal and operational barriers, for both donors and receivers, for the redistribution of safe, surplus food in the EU. The main elements of the guidelines were discussed by the platform on 29 November 2016; the guidelines will be published in 2017.

The Commission is also elaborating guidelines for use of former foodstuff as feed, with the aim to valorise the nutrients in former foodstuffs through their safe use in animal nutrition. This reduces food waste, avoids that the former foodstuffs are burned or landfilled and instead substitutes cereals and oil seed in the animals' diets, at the same time freeing land for the production of food and reducing the EU dependence on imported feed. The draft guidelines were also discussed at the meeting of the platform; they will be finalised and published in 2017.

Waste-To-Energy (January 2017)

Together with this report, the Commission is adopting a Communication on waste-to-energy processes and their role in the circular economy.¹⁶ The primary objective of the communication is to ensure that the recovery of energy from waste in the EU supports the objectives of the circular economy action plan and is firmly guided by the EU waste hierarchy. The communication also examines how the role of waste-to-energy processes

¹⁴ http://ec.europa.eu/food/safety/food_waste/eu_actions/eu-platform/index_en.htm.

¹⁵ http://ec.europa.eu/food/safety/food_waste/index_en.htm.

¹⁶ COM(2017)34

can be optimised to play a part in meeting the objectives set out in the Energy Union Strategy and in the Paris Agreement.

Proposal to amend the Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (January 2017)

Together with this report, the Commission is also adopting a proposal¹⁷ to make a targeted amendment to the Directive restricting the use of hazardous substances in electrical and electronic equipment ('RoHS Directive'). The draft directive, by triggering the substitution of certain hazardous substances in electrical and electronic equipment, enhances the possibility and economic profitability of recycling waste of that equipment. The draft directive also implements the waste hierarchy's highest priority, waste prevention.

Enabling operators to prolong the use of electrical and electronic equipment will postpone their end-of-life and disposal, thus avoiding additional generation of waste, including hazardous waste. It is estimated that the measure will prevent the creation of more than 3 000 tonnes of hazardous waste per year in the EU.¹⁸ The extended lifetime of electrical and electronic equipment would also lead to additional savings of energy and raw materials.

The proposal to amend the RoHS Directive will:

- enable secondary market operations (e.g. reselling, second hand market) for certain electrical and electronic equipment; and
- enable repair with spare parts of certain electrical and electronic equipment that were placed on the market before 22 July 2019.

How does this proposal benefit European citizens and businesses?

Fully enabling secondary market operations and increasing spare part availability for certain electrical and electronic equipment will have a positive economic impact by bringing market opportunities to the repair industries and secondary selling. It will reduce costs and administrative burden both for business, including SMEs, and for public authorities. For example, it will save European hospitals approx. EUR 170 million after 2019 due to maintaining the possibility to resell and buy used medical devices (which, without the proposal, would not be possible after the transitional period).

To facilitate preparation for reuse and the environmentally sound treatment of waste electronic and electrical equipment, the Commission also initiated the dialogue between manufacturers and recyclers of electronic products with the aim to improve the exchange of information about preparation for reuse and treatment of new equipment placed on the market.

The platform to support the financing of circular economy (January 2017)

Together with this report, a platform is launched, bringing together the Commission, the European Investment Bank (EIB), financial market participants and businesses to increase awareness of the circular economy business logic and improve the uptake of circular economy projects by investors. While the business case for the circular economy is clear, this message still has to reach a good part of businesses in the EU and of the financial and banking sector.

¹⁷ COM(2017)38

¹⁸ SWD(2017)22 and SWD(2017)23

The platform will have a three-pillar structure:

- The coordination and awareness raising pillar will share best practices amongst potential project promoters and other stakeholders. It will analyse the characteristics of circular economy projects and their particular financing needs, advice on improving their bankability, as well as coordinate activities regarding financing of the circular economy. A dedicated expert group will be created in this context.
- The advisory pillar will be used to develop circular economy projects and to improve their bankability prospects.
- The financing pillar will explore whether a dedicated financing instrument for circular economy projects is needed.

3. Other initiatives delivered in 2016

In addition to the key initiatives listed above, a number of other important actions by the Commission, listed below, have helped to mainstream the circular economy into the full lifecycle of products, with tools such as best practices, procurement, information to consumers, guidance, funding and support schemes. These tools are essential to ensure that the circular economy is taken up by all relevant actors in the economy and gradually becomes the standard practice.

Guidance on circular economy into BREFs for several industrial sectors

The Commission has integrated circular economy aspects into the Best Available Techniques Reference Documents¹⁹ (BREFs) which EU Member States have to reflect when issuing permits for industrial installations. This will help to reduce waste generation, boost recycling and reduce resource use thus bringing further sustainability and competitiveness in the industries covered by the Industrial Emissions Directive. In addition, novel techniques that integrate aspects relevant to circular economy are identified through BREFs, thus promoting innovation in industrial processes.

For example, Best Available Techniques for the non-ferrous metals industries include:

- techniques to improve use of secondary raw materials, increase energy efficiency and reduce waste water generation which contribute to saving natural resources.
- techniques to reduce waste generation through for example alternative uses for process residues

Green Public Procurement

In 2016, the Commission published new Green Public Procurement criteria for office buildings, for roads, and for computers and monitors.²⁰ These can be used by public authorities on a voluntary basis, and include requirements relevant to the circular economy. For example, computers and monitors have to be designed so that they can be repaired with commonly available tools and that batteries can be easily replaced, and the possibility to upgrade them is rewarded. The use of recycled materials for the construction of roads and buildings is encouraged. As public procurement accounts for a large proportion of European consumption, the inclusion of requirements related to circularity in public authorities' purchasing will play a key role in the transition towards a circular economy.

¹⁹ <http://eippcb.jrc.ec.europa.eu/reference/>

²⁰ http://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm

Updated Guidance on Unfair Commercial Practices Directive - Action on environmental claims

On 25 May 2016, the Commission adopted a revised version of its guidance on the Unfair Commercial Practices Directive²¹, which includes specific elements to make green claims more trustworthy and transparent. The guidance addresses false, unclear, unintelligible, or ambiguous information, including claims related to the circular economy. It will help consumers to be protected from misleading and unfounded commercial information.²² Misleading claims can result in consumers losing confidence in labels and in companies being discouraged from making truthful and relevant claims, altogether hampering the circular economy. The revised guidance integrates the input from a multi-stakeholder group on environmental claims consisting of representatives of national authorities, European business organisations, consumer associations and environmental NGOs²³.

Stepping up enforcement of the revised Waste Shipment Regulation

On 28 July 2016, the Commission adopted an implementing act setting out a preliminary correlation table between customs and waste codes.²⁴ This new tool will help customs officials identify waste crossing EU borders illegally, for instance labelled as second-hand goods. It will strengthen the enforcement of the Waste Shipment Regulation and will help to prevent the leakage of valuable raw materials out of the EU.

Good practices in waste collection systems

Throughout 2016, the Commission has been identifying and promoting good practices for separate waste collection across EU Member States. The Commission has reviewed the state of implementation of separate collection in the EU Member States, including an assessment of the legal framework and the practical implementation of separate collection systems. Based on this assessment, the review led to a set of recommendations addressing different levels of decision-making.²⁵ The recommendations have been discussed with stakeholders and EU Member States in a conference held on 29 January 2016.²⁶ In addition, Horizon 2020 is supporting this work stream by financing a number of concrete projects in this area.²⁷

Water reuse

In June 2016, guidelines were issued under the Common Implementation Strategy for the Water Framework Directive²⁸ with the aim to better integrate water reuse in water

²¹ http://ec.europa.eu/justice/consumer-marketing/files/ucp_guidance_en.pdf

²² http://ec.europa.eu/consumers/consumer_rights/unfair-trade/environmental-claims/index_en.htm.

²³ http://ec.europa.eu/consumers/consumer_rights/unfair-trade/unfair-practices/files/mdec_compliance_criteria_en.pdf

²⁴ [Commission Implementing Regulation \(EU\) 2016/1245](#) of 28 July 2016 setting out a preliminary correlation table between codes of the Combined Nomenclature provided for in Council Regulation (EEC) No 2658/87 and entries of waste listed in Annexes III, IV and V to Regulation (EC) No 1013/2006 of the European Parliament and of the Council on shipments of waste.

²⁵ http://ec.europa.eu/environment/waste/studies/pdf/Separate%20collection_Final%20Report.pdf

²⁶ http://ec.europa.eu/environment/waste/eventspast/separate_waste.htm

²⁷ Under 2015-Societal Challenge 5 Horizon 2020 call on ‘Raw materials partnerships’, the Commission is financing a project ‘IMPACTPapeRec: Boosting the implementation of participatory strategies on separate paper collection for efficient recycling’ on best practices on separate paper collection for efficient recycling. Another project (with a budget up to EUR 1.5 million) will be funded in 2017 under the topic ‘Good practice in waste collection systems’.

²⁸ http://ec.europa.eu/environment/water/water-framework/objectives/implementation_en.htm

planning and management.²⁹ As water scarcity has worsened in some parts of the EU, the reuse of treated wastewater in safe and cost-effective conditions is a valuable but under-used means of increasing water supply and alleviating pressure on resources.³⁰ Facilitating water reuse in agriculture will also contribute to recycling of nutrients by substitution of solid fertilisers.

On 7 April 2016, the Commission published an Inception Impact Assessment for the upcoming initiative on minimum quality requirements for water reuse in irrigation and aquifer recharge. An open public consultation on policy options was launched by the Commission on 28 October 2016.³¹

In 2016, water reuse was made a top priority in the European Innovation Partnership (EIP) on water and was showcased in the EIP conference in Leeuwarden on 10 February 2016.

Construction and demolition

On 9 November 2016, the Commission proposed an industry-wide voluntary protocol on the management of construction and demolition waste. The aim of the protocol is to improve the identification, source separation and collection of waste, as well as logistics, processing, and quality management. The protocol will thus increase trust in the quality of recycled materials and encourage their use in the construction sector.

Based on volume, construction and demolition waste is the largest waste stream in the EU. The Waste Framework Directive 2008/98/EC establishes a target of 70 % of construction and demolition waste to be recovered by 2020. However the potential for reuse and recycling of this waste stream is not being fully exploited. One obstacle is the lack of confidence in the quality of construction and demolition recycled materials.

Horizon 2020 is also supporting several innovation projects in this area.

Biomass and bio-based products

On 30 November 2016, in its recast of the Renewable Energy Directive³² as part of the package on Clean Energy for all Europeans,³³ the Commission adopted sustainability criteria for all bioenergy uses. In order to limit pressure on limited biomass resources, the Commission proposed that only efficient conversion of biomass to electricity should receive public support.³⁴ This will facilitate synergies with the circular economy in the uses of biomass and particularly wood, which can be used for a range of products as well as for energy.

Support for circular economy through cohesion policy funds and smart specialisation strategies

Throughout 2016, the Commission undertook targeted outreach activities³⁵ to assist EU Member States and regions in the uptake of cohesion policy funds for the circular

²⁹ http://ec.europa.eu/environment/water/pdf/Guidelines_on_water_reuse.pdf

³⁰ <http://ec.europa.eu/environment/water/reuse.htm>

³¹ http://ec.europa.eu/environment/consultations/reused_water_en.htm.

³² http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v7_1.pdf

³³ <https://ec.europa.eu/energy/en/news/commission-proposes-new-rules-consumer-centred-clean-energy-transition>

³⁴ Except under duly justified reasons of security of electricity supply.

³⁵ Including a number of events, and a publication outlining funding opportunities and good examples: http://ec.europa.eu/regional_policy/en/information/publications/factsheets/2016/cohesion-policy-support-for-the-circular-economy

economy. The circular economy was one of the topics of the ‘Urban innovative actions’ call³⁶ launched in December 2016. It was also one of the main topics of the European week of regions and cities and one of the categories for the RegioStars awards in 2016, which identifies outstanding EU funded regional development projects.³⁷

Many regions have identified priorities related to the circular economy in their Smart Specialisation Strategies, which guide their investments in research and innovation through cohesion policy. In 2016, new thematic smart specialisation platforms have been launched helping these regions to cooperate with others along value chains on topics such as industrial modernisation, agri-food and energy³⁸.

How does EU funding concretely support the circular economy?

Cohesion policy funds

For two decades, EU cohesion policy has provided policy implementation support relevant to the circular economy (e.g. EUR 6bn for waste management in 2007-13). In the current funding period (2014-2020), ex-ante conditions for funding are in place to ensure that new investments in the waste sector are consistent with the waste management plans designed by Member States to meet their recycling targets. The EU support for the 2014-2020 period for innovation, SMEs, low carbon economy and environmental protection amounts to EUR 150 billion and many of these areas are contributing to the achievement of a circular economy.

For example, with the help of EU funds, Slovenia is reaching its recycling targets and the people of Ljubljana have better, more sustainable waste management. Since joining the EU, the Slovenian capital has boosted separate collection and recycling, and reduced the amount of waste sent to landfill by 59 %. It also invested in prevention and reuse. Ljubljana now generates 41 % less waste per capita than the European average and decided not to build two new incinerators as originally planned.

One of the key elements of the integrated waste system is the Ljubljana Regional Waste Management Centre. This EU-funded project started as a facility for 17 municipalities. Later, 20 more municipalities joined, renouncing the need for an additional treatment plant.

The Circular Ocean INTERREG project³⁹ deals with the problem of marine litter in the Northern Periphery and Arctic region. It promotes the green economy by finding solutions to re-use plastic waste, such old fishing nets and ropes, and to drive eco-innovation. The project is a 2016 RegioStars Award winner and is pilot-testing several new uses for plastic waste such as reinforcing concrete or other building materials. It is also experimenting with using fishing nets as a material to remove pollutants from water.

HORIZON 2020

The EU's research and innovation Framework Programme Horizon 2020 is funding innovative projects to support the transition to a circular economy. For example, Horizon 2020 is contributing € 8.8 million to the RESYNTEx⁴⁰ project that will develop innovative circular economy business models for the chemical and textile industry. It brings together

³⁶ <http://www.uia-initiative.eu/>

³⁷ http://ec.europa.eu/regional_policy/en/regio-stars-awards/

³⁸ <http://s3platform.jrc.ec.europa.eu/>

³⁹ <http://www.circularocean.eu/>

⁴⁰ <http://www.resyntex.eu/>

20 partners from across 10 different EU member states, including industrial associations, businesses, SMEs and research institutes. The project will demonstrate how to avoid the incineration and landfilling of textile waste through chemical recycling of unwearable blends in a pilot textile recycling plant of 500 ton/year. The new reprocessing technology will increase resource efficiency by valorising textile waste into usable industrial feedstock while ensuring its market acceptance.

LIFE

The LIFE programme has been supporting projects relevant to the circular economy since 1992 with over 670 waste reduction, recycling, reuse projects totalling to over EUR 1 billion of EU funding. This continues under the new LIFE programme 2014-2020 with over EUR 100 million invested into over 80 circular economy projects during its first two years.

Research and Innovation: Industry 2020 in the circular economy

The Horizon 2020 Work Programme 2016-17 invests € 650 million in a Focus Area on "Industry 2020 in the circular economy" which grants funds to demonstrate the economic and environmental feasibility of the circular economy approach, and at the same time give a strong impetus to the re-industrialisation of the EU. In 2016, multiple calls were opened under the focus area, including one dedicated to large-scale projects for systemic, eco-innovative approaches for the circular economy and to water in the circular economy. Evaluation of proposals submitted to these topics took place recently and grant-agreement preparation for the projects selected is ongoing. Additional calls have also been launched in 2016, within the framework of the Public Private Partnerships on "Factories of the Future", "Sustainable Process Industries" and "Bio-based Industries" to help develop and deploy the necessary key enabling technologies to support EU manufacturing across a broad range of sectors.

Technology services to accelerate the uptake of advanced manufacturing for clean production by manufacturing SMEs

On 8 November 2016, under Horizon 2020, the Commission published a call to establish a one-stop shop access for SMEs to access technology services and/or facilities in the field of advanced manufacturing for clean production.⁴¹ Despite Europe's good patenting and trade performance, the uptake of advanced manufacturing solutions by European companies remains a challenge. Many SMEs lack the resources or competence to integrate innovative advanced manufacturing technologies related to clean production.

The aim of the call is to provide access to this one-stop shop to a critical mass of manufacturing SMEs, over a period of three years, to enable them to integrate innovative advanced manufacturing technologies into their production process and make informed decision for further investment. The call will be open until 28 March 2017.

How does the Commission support SMEs in their transition towards a circular economy?

⁴¹ <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/innosup-03-2017.html>.

The Commission has supported SMEs in their transition to the circular economy through the continued implementation of the Green Action Plan for SMEs.⁴² EU funds have also supported thousands of SMEs in the past decades, boosting resource efficiency, energy efficiency and innovation in manufacturing and production. This support to SMEs continues from the cohesion policy funds in the 2014-2020 period. A European Resource Efficiency Excellence Centre for SMEs started operating in January 2017. The Centre will include a self-assessment tool and provide networking opportunities and support activities to SMEs and their support organisations. A pilot project financed by the European Parliament and executed by the Commission will provide practical capacity building to SMEs in the area of circular economy and eco-innovation starting from February 2017.

4. Key initiatives for 2017

The 2017 Commission Work Programme confirms the full commitment to ensure the timely implementation of the Circular Economy Action Plan. In 2017, the Commission will propose a Plastic Strategy to improve the economics, quality and uptake of plastic recycling and reuse, to reduce plastic leakage in the environment and to decouple plastics production from fossil fuels.

The Commission will also put forward a detailed analysis of the legal, technical or practical problems at the interface of chemical, product and waste legislation that may hinder the transition of recycled materials into the productive economy. In particular the Commission will consider options to improve information about substances of concern in products and waste, and options to facilitate the management of substances of concern found in recycled materials. The objective is not only to promote non-toxic material cycles, but also to enhance the uptake of secondary raw materials.

The Commission will also come forward with a legislative proposal on minimum quality requirements to promote the safe reuse of treated waste water, while ensuring the health and environmental safety of water reuse practices and free trade of food products in the EU.

The monitoring framework assessing the progress of the circular economy in the EU and its Member States will also be presented in 2017.

In 2017, the implementation of the Ecodesign working plan will have an increased focus on circular economy and resource efficiency beyond energy efficiency.

The Commission will also publish the Fitness Check on EU Ecolabel and EMAS in the first quarter of 2017.

2017 will be a crucial year to develop a policy dialogue with stakeholders. To this aim, the Commission and the European Economic and Social Committee will launch a circular economy stakeholders' platform, at the occasion of an inter-institutional stakeholders' conference on the circular economy on 9-10 March 2017 in Brussels.

5. Conclusions

In the coming years, it will be essential to keep the momentum created by the adoption of the circular economy package and by actions at all levels, to make the circular economy a reality with benefits for all Europeans. The consistent delivery of the Action Plan and a swift adoption of the legislative proposals on waste and fertilisers will help to bring clear directions to investors and support the transition.

⁴² http://ec.europa.eu/growth/smes/business-friendly-environment/green-action-plan_en.

