

# Hacia una economía circular como elemento clave para un desarrollo regional inteligente y sostenible

Jorge Molina Martínez  
Campus Iberus - Delegado en Bruselas

## WHY A CIRCULAR ECONOMY?

### The EU is heavily dependant on imported raw materials

#### European Union (EU-28)



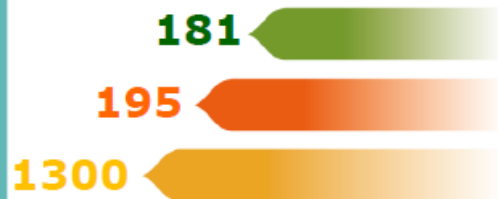
**Total trade  
EU-28 to ROW**  
In 2004: 455 million tonnes  
In 2014: 640 million tonnes

Source: <http://ec.europa.eu/eurostat/data/database>

#### EU-28 exports (2014)



#### EU-28 imports (2014)



- Biomass
- Manufactures (finished manufactured products)
- Fuels and mining products (fossil energy, metal ores and non-metallic minerals)

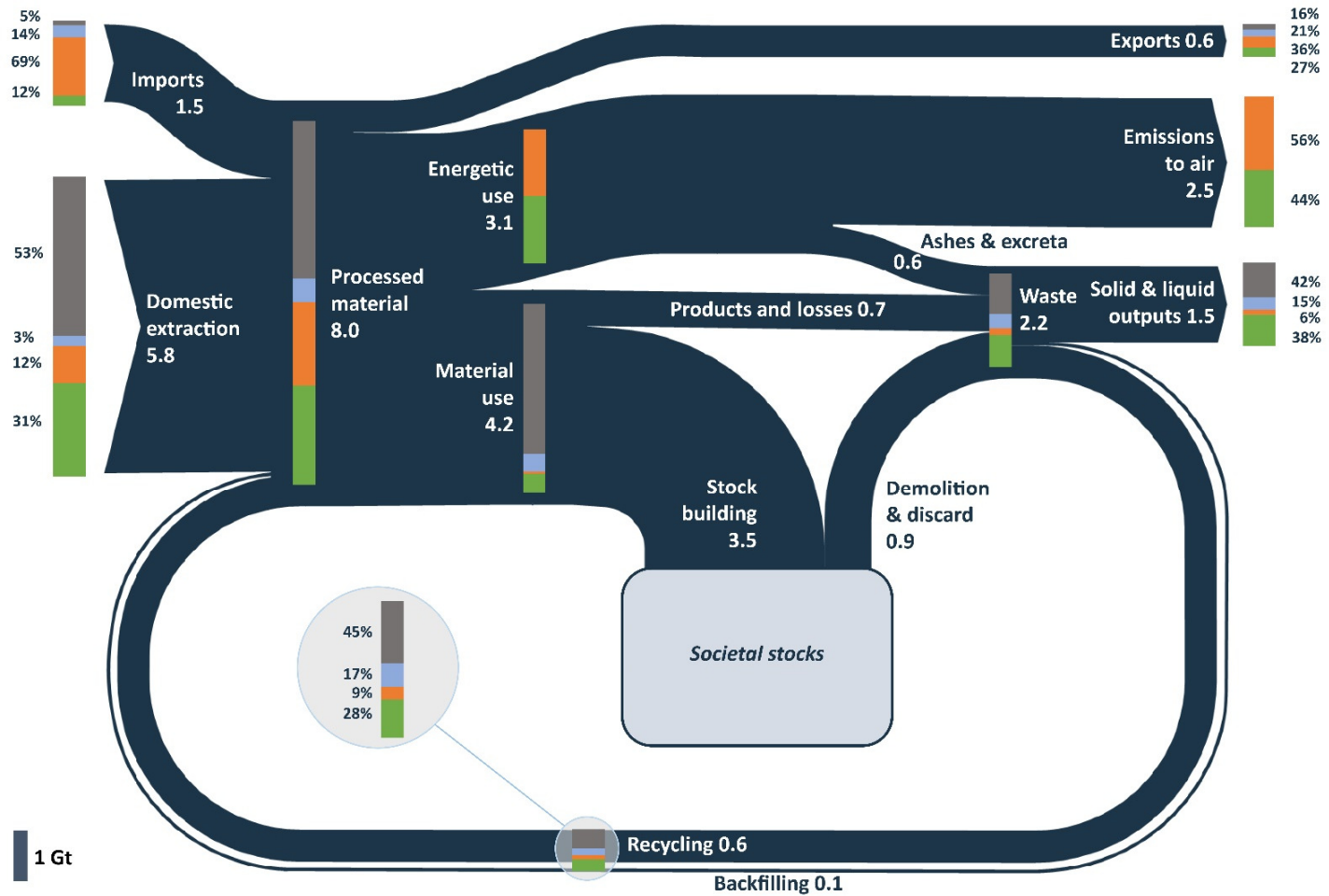
#### Rest of the world (ROW)



**Total trade  
ROW to EU-28**  
In 2004: 1664 million tonnes  
In 2014: 1534 million tonnes

# WHY A CIRCULAR ECONOMY?

## Material flow diagram (EU, 2014)



Material flows true to scale in Gt/year (billion tons/year) in 2014

Note: Numbers may not sum up to total due to rounding.

# WHAT IS CIRCULAR ECONOMY?

A production and consumption model which involves **reusing, repairing, refurbishing and recycling** in order to maintain the value of products, materials and resources for as long as possible in the market and economy cycle , while minimizing the generation of waste and turning it into valuable resources.

Circular Economy is generally opposed to a traditional, linear economic model, which is based on a 'take-make-consume-throw away' pattern.

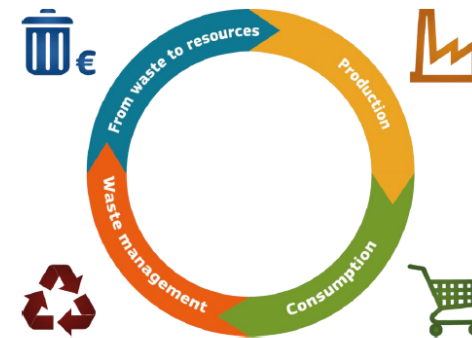
## What are the limitations of a Linear Economy?

- lost value of materials and products
- scarcity of resources, volatile prices
- waste generated, environmental degradation & climate change



## What is a Circular Economy?

- the value of products, materials and resources is maintained in the economy for as long as possible
- waste generation is minimised



# WHAT IS CIRCULAR ECONOMY?

## Expected benefits

- growth & job creation/  
up to +7% GDP
  - up to 600 billion in savings/8% of annual turnover for business in the EU
  - estimated 170 000 direct jobs in waste management sectors created by 2035
- boosting competitiveness and ensuring security of supply
- building economic and environmental resilience
- encouraging innovation
- reducing total annual Greenhouse Gas Emissions by 2-4%

## ADOPTED ON 2 DECEMBER 2015

- 📄 Action Plan Communication
- 📄 List of follow-up initiatives
- 📄 4 Legislative proposals on waste (+targets towards 2030)
  - Directive on Waste (2008/98/EC)
  - Directive on Packaging Waste (94/62/EC)
  - Directive on Landfill (1999/31/EC)
  - Directive on electrical and electronic waste (2012/19/EC), on end-of-life vehicles (2000/53/EC), and waste batteries and accumulators (2006/66/EC)

## 2016

- 📄 Regulatory barriers for the Circular Economy (DG GROW)

## 2017

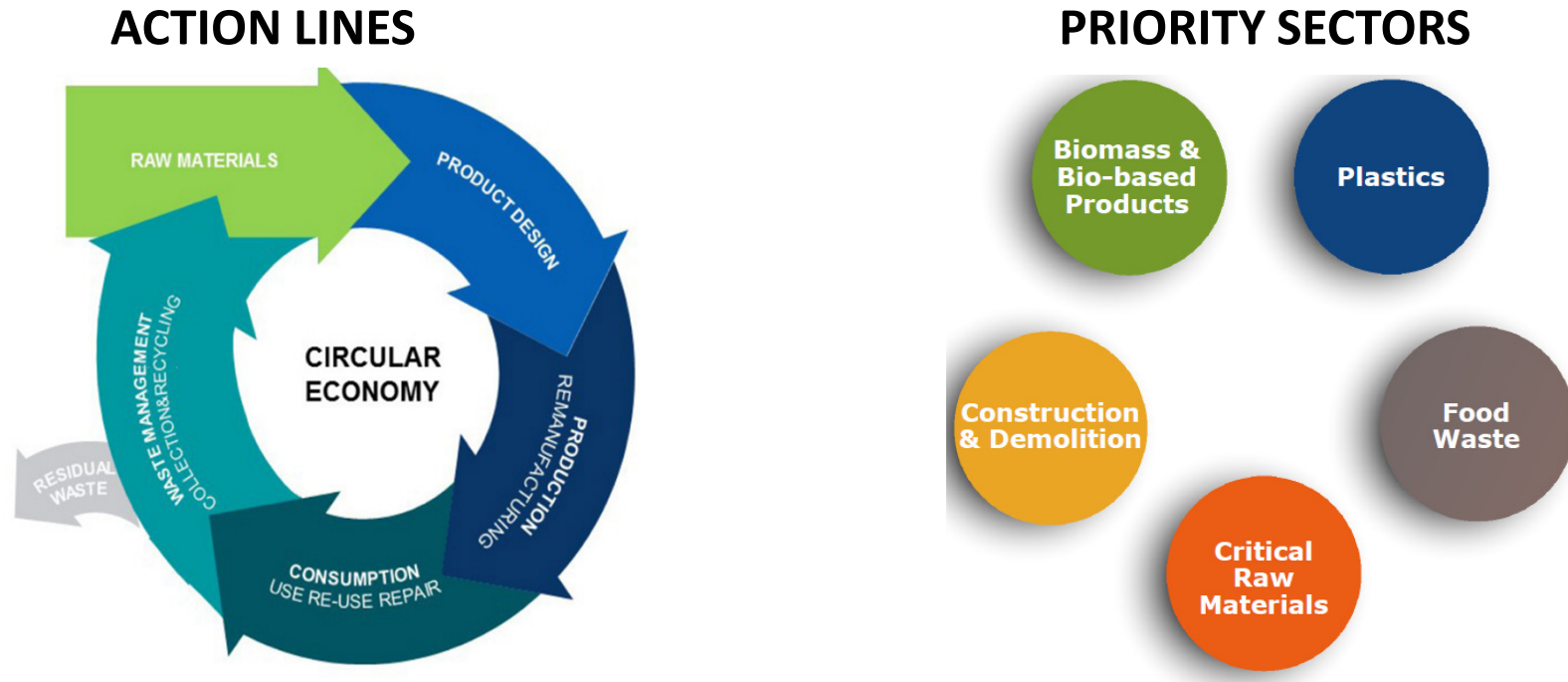
Circular Economy Stakeholder Platform

## 2018

- 📄 EU Strategy for Plastics in the Circular Economy
- 📄 Communication on Options to address the interface between chemical, product and waste
- 📄 Proposal on Port Reception Facilities
- 📄 Report on Critical Raw Materials and the circular economy
- 📄 Report on oxo-plastics
- 📄 Monitoring Framework on progress towards a circular economy
- 📄 Eurobarometer: SMEs and the circular economy

**More info:** [http://ec.europa.eu/environment/circular-economy/index\\_en.htm](http://ec.europa.eu/environment/circular-economy/index_en.htm)

## EU CE ACTION PLAN: PRINCIPLES AND SCOPE



### IMPLEMENTATION THROUGH KEY ACTIONS (2016-2018)

- **By Action Line (20 key actions)**
  - **By Priority Sector (16 key actions)**
  - **Cross-cutting issues (8 key actions)**
- } + **Monitoring/Assessment**

## KEY ACTIONS BY ACTION LINE - 1. DESIGN & PRODUCTION

Goals	9 Actions	When
✓ Provide incentives to boost circular product design	1. Emphasis on circular economy aspects in future <b>product requirements under the Ecodesign directive.</b>	2016 Onwards
	2. <b>Ecodesign work plan 2016-2019</b> and <b>request to European standardisation organisations</b> to develop standards on material efficiency for setting future Ecodesign requirements on durability, reparability and recyclability of products.	December 2015
✓ Innovative and efficient production processes	3. Proposal for an <b>implementing regulation</b> on televisions and displays	End 2015/Beginning 2016
	4. Examine options and actions for a more coherent policy framework of the different strands of work of EU product policy in their contribution to the circular economy	2018
	5. Include guidance on circular economy into <b>Best Available Techniques reference documents (BREFs)</b> for several industrial sectors	2016 Onwards
	6. <b>Guidance and promotion of best practices</b> in the mining waste management plans	2018
	7. Establishing an open, <b>pan-European network of technological infrastructures for SMEs</b> to integrate advanced manufacturing technologies into their production processes	2016
	8. Examine <b>how to improve the efficiency and uptake</b> of the EU Eco-Management and Audit Scheme (EMAS) and the pilot programm	2017
	9. Develop an improved <b>knowledge base and support to SMEs</b> for the substitution of hazardous substances of very high concern	2018



## KEY ACTIONS BY ACTION LINE - 2. CONSUMPTION

Goals	7 Actions	When
✓ Repair and reuse of products	1. <b>Better enforcement</b> of existing guarantees on tangible products, accompanied by a <b>reflection on improvements</b> (upcoming Commission proposal for online sales of goods, and Fitness Check of consumer legislation)	2015-2017
✓ Reliable information to consumers	2. Action on false green claims, including <b>updated guidance</b> on unfair commercial practices	2016
	3. Analysis of the possibility to propose horizontal requirements on repair information provision in the context of Ecodesign	2018
	4. <b>REFIT</b> of Ecolabel (Regulatory Fitness of Performance Program), to be followed by actions to enhance its effectiveness	2016
	5. Assessment of the possibility of an <b>independent testing program</b> on planned obsolescence	2018
	6. Subject to evaluation of the current ongoing pilots, explore the possible uses of the Product Environmental Footprint to measure and communicate environmental information	2016 Onwards
	7. Action on <b>Green Public Procurement</b> : enhanced integration of circular economy requirements, support to higher uptake including through training schemes, reinforcing its use in Commission procurement and EU funds	2016 Onwards

## KEY ACTIONS BY ACTION LINE - 3. WASTE MANAGEMENT

Goals	6 Actions	When
✓ Improve waste management in line with the EU waste hierarchy	1. <b>Revised legislative proposal</b> on waste - EU targets for recycling 65% of municipal waste and 75% of packaging waste by 2030 - New binding target to reduce landfill to a maximum of 10% of total waste by 2030	Dec 2015
	2. <b>Improved cooperation with Member States</b> for better implementation of EU waste legislation, and combat illicit shipment of end of life vehicles	2015 Onward
✓ Address existing implementation gaps	3. Stepping up <b>enforcement</b> of revised Waste Shipment regulation	2016 Onward
	4. Promotion of industry-led <b>voluntary certification</b> of treatment facilities for key waste/recyclate streams	2018 Onward
✓ Provide long-term vision and targets to guide investments	5. <b>Initiative on waste to energy</b> in the framework of the Energy Union	2016
	6. Identification and dissemination of good practices in waste collection systems	2016 Onwards

## KEY ACTIONS BY ACTION LINE - 4. MARKET FOR SECONDARY RAW MATERIALS

Goals	7 Actions	When
✓ Increase the use of secondary raw materials	1. Development of <b>quality standards</b> for secondary raw materials (in particular for plastics )	2016 Onwards
	2. <b>Proposal for a revised fertilisers regulation</b>	Early 2016
✓ Increase the use of recycled nutrients and water	3. <b>Proposed legislation</b> setting minimum requirements for <b>reused water for irrigation and groundwater recharge</b>	2017
	4. Promotion of safe and cost-effective water reuse, including <b>guidance</b> on the integration of water reuse in water planning and management, <b>inclusion of best practices in relevant BREFs</b> , and support to innovation (through the European Innovation Partnership and Horizon 2020) and investments	2016-2017
✓ Safely managed chemicals	5. <b>Analysis and policy options</b> to address the interface between chemicals, products and waste legislation, including how to reduce the presence and improve the tracking of chemicals of concern in products	2017
✓ Improve knowledge of material flows	6. Measures to facilitate waste shipment across the EU, including <b>electronic data exchange</b> (and possibly other measures)	2016 Onwards
	7. Further development of the EU <b>raw materials information system</b>	2016 Onwards

## KEY ACTIONS BY PRIORITY SECTOR – 1. PLASTICS

2 Actions	When
1. <b>Strategy on plastics</b> in the circular economy	2017
2. Specific action to <b>reduce marine litter</b> implementing the 2030 Sustainable Development Goals	2015 Onwards

## KEY ACTIONS BY PRIORITY SECTOR – 2. FOOD WASTE

4 Actions	When
1. Development of a <b>common methodology</b> and indicators to measure food waste	2016
2. <b>Stakeholders platform</b> to examine how to achieve SDGs goals on food waste, share best practice and evaluate progress	2016
3. Clarify relevant <b>EU legislation related to waste, food and feed</b> in order to facilitate food donation and utilisation of former foodstuffs for animal feed	2016
4. Explore options for more effective use and understanding of <b>date marking on food</b>	2017

## KEY ACTIONS BY PRIORITY SECTOR – 3. CRITICAL RAW MATERIALS

4 Actions	When
1. <b>Report on critical raw materials</b> and the circular economy	2017
2. Improve <b>exchange of information</b> between manufacturers and recyclers on <b>electronic products</b>	2016 Onwards
3. <b>European standards</b> for material-efficient recycling of electronic waste, waste batteries and other relevant complex end-of-life products	2016 Onwards
4. <b>Sharing of best practice</b> for the recovery of critical raw materials from mining waste and landfills	2017

## KEY ACTIONS BY PRIORITY SECTOR – 4. CONSTRUCTION & DEMOLITION

3 Actions	When
1. Pre-demolition assessment <b>guidelines</b> for the construction sector	2017
2. Voluntary industry-wide <b>recycling protocol</b> for construction and demolition waste	2016
3. <b>Core indicators</b> for the assessment of the lifecycle environmental performance of a building, and incentives for their use	2017 Onwards

## KEY ACTIONS BY PRIORITY SECTOR – 5. BIOMASS & BIO-BASED MATERIALS

3 Actions	When
1. <b>Guidance and dissemination</b> of best practice on the cascading use of biomass and support to innovation in this domain through Horizon 2020	2018 - 2019
2. Ensuring <b>coherence and synergies</b> with the circular economy when examining the sustainability of bioenergy under the Energy Union	2016
3. Assessment of the <b>contribution of the 2012 Bioeconomy Strategy</b> to the circular economy and possible review	2016

## TRANSVERSAL ACTIONS – INNOVATION & INVESTMENTS

8 Actions	When
1. Initiative "Industry 2020 and the circular economy" under <b>Horizon 2020</b>	October 2015
2. <b>Pilot project</b> for "innovation deals" to address possible regulatory obstacles for innovators .	2016
3. <b>Targeted outreach to encourage applications for funding</b> under EFSI, and support the development of projects and investment platforms relevant to the circular economy	2016 Onwards
4. <b>Targeted outreach and communication activities</b> to assist Member States and regions for the uptake of Cohesion Policy funds for the circular economy	2016 Onwards
5. <b>Support to Member States and regions</b> to strengthen innovation for the circular economy through smart specialisation	2016 Onwards
6. Assessment of the possibility of launching a <b>platform together with the EIB and national banks</b> to support the financing of the circular economy	2016
7. Engagement with stakeholders in the implementation of this action plan through existing fora in key sectors	2016 Onwards
8. <b>Support to a range of stakeholders</b> through actions on public-private partnerships, cooperation platforms, support to voluntary business approaches, and exchanges of best practices	2016 Onwards

## TRANSVERSAL ACTIONS – MONITORING

Actions	When
1. Development of a <b>monitoring framework</b> for the circular economy	2017

- 10 monitoring indicators:**
- Production & consumption (4)
  - Waste management (2)
  - Secondary raw materials (2)
  - Competitiveness & Innovation (2)

CIRCULAR ECONOMY INDICATORS

Production and consumption		
Indicator	Value	Trend
① EU self-sufficiency for raw materials (percentage)	36.4 (2014)	N/A
① Green public procurement	N/A	N/A
Waste generation		
① Generation of municipal waste (per capita)	476 (2014)	
① Generation of waste excluding major mineral wastes, per GDP unit	66 (2014)	
① Generation of waste excluding major mineral wastes, per domestic material consumption	12.9 (2014)	
① Food waste (million tonnes)	76 (2014)	
Waste Management		
Secondary raw materials		

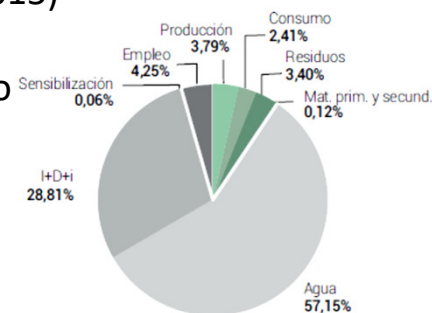
### Circular economy monitoring framework



More info: <http://ec.europa.eu/eurostat/web/circular-economy>



- ❑ **Creación:** 2017 (MAPAMA y MINECO)
- ❑ **Objetivo:** Fija el marco nacional para puesta en marcha de medidas para la transición hacia una economía circular (objetivos alineados con Estrategia Europea de Economía Circular, 2015)
- ❑ **Lanzamiento:** 12 Febrero 2018 (1er Borrador público)
- ❑ **Horizonte temporal/implementación:** 2030, Planes de Acción de Corto Plazo
- ❑ **1er Plan de Acción 2018-2020:**



<i>Líneas de Actuación</i>	<i>Sectores prioritarios</i>
<ul style="list-style-type: none"> <li>- Producción</li> <li>- Consumo</li> <li>- Gestión de residuos</li> <li>- Materias primas secundarias</li> <li>- Reutilización del agua</li> </ul>	<ul style="list-style-type: none"> <li>- Construcción</li> <li>- Agroalimentación</li> <li>- Industria</li> <li>- Bienes de consumo</li> <li>- Turismo</li> </ul>
<p><i>Sectores transversales:</i></p> <ul style="list-style-type: none"> <li>- Sensibilización y participación</li> <li>- Investigación, innovación y competitividad</li> <li>- Empleo y formación</li> </ul>	

EJE DE ACTUACIÓN	IMPORTE
Producción	31.740.000,00 €
Consumo	20.158.216,38 €
Gestión de residuos	28.479.648,69 €
Materias primas secundarias	997.362,90 €
Reutilización del agua	478.200.000,00 €
Investigación, innovación y competitividad	241.080.000,01 €
Sensibilización y participación	533.883,00 €
Empleo y formación	35.600.000,00 €
Seguimiento y formación	...
<b>TOTAL</b>	<b>836.789.110,98 €</b>

- ❑ **Plan de Acción 2018-2020:** 70 actuaciones en periodo 2018-2020, 836M€ presupuesto
- ❑ **Instrumentos financieros:** créditos, ayudas económicas reembolsables, subvenciones, etc. (detallados en Anexo II EEEC)
- ❑ **Seguimiento/Evaluación:** 15 indicadores; competencia de Red de Autoridades Ambientales (MAGRAMA)

**BORRADOR EEEC:** <http://www.mapama.gob.es/es/calidad-y-evaluacion-ambiental/participacion-publica/Residuos-2018-Nota-sobre-proceso-informacion-publica-estrategia-espanola-economia-circular.aspx>

## REGIONAL STRATEGIES FOR CE (EEEC, Dec. 2017)

C- Autónoma	Situación (Dic. 2017)	Denominación
Aragón	GIRA en fase de aprobación, EACCEL en fase de revisión y <b>estrategia de economía circular planificada</b> .	<a href="#">Plan de Gestión Integral de Residuos de Aragón</a> (GIRA), <a href="#">Estrategia Aragonesa de Cambio Climático y Energías Limpias</a> (EACCEL) y <b>próxima estrategia de economía circular</b> .
Castilla La Mancha	Elaborado un Anteproyecto de Ley de Economía Circular. Actualmente se encuentra en fase de consulta pública previa.	Ley de Economía Circular ( <a href="#">consulta pública</a> )
Castilla y León	En fase de elaboración	<a href="#">Estrategia Regional de Economía Circular de Castilla y León</a>
Cataluña	Elaboradas y publicadas dos estrategias complementarias	<a href="#">“Estrategia de Impulso a la Economía Verde y a la Economía Circular”</a> y <a href="#">“Estrategia Catalana de Ecodiseño, para una Economía Circular y Ecoinnovadora”</a>
Extremadura	En fase de elaboración. Publicada una hoja de ruta para facilitar la transición y la elaboración de la estrategia.	Extremadura 2030. Hacia un Modelo Extremeño de Economía Circular.
Galicia	En fase de elaboración	Extratexia Galega de Economía Circular
Madrid	En fase de elaboración	<a href="#">Madrid 7R. Economía Circular.</a>
Murcia	En fase de elaboración	<a href="#">Estrategia de Economía Circular de la Región de Murcia.</a>
Navarra	En fase de elaboración	<a href="#">Ley foral de residuos y su fiscalidad</a>

Circular Flanders kick-off statement   
<http://www.vlaanderen-circular.be/nl>

## Circular Flanders kick-off statement



**Issuing Public Authority:** Vlaanderen Circular  
**Publication Date:** 01/2017  
**Country:** Belgium  
**Language for original content:** Dutch, English  
**Key Area:** Production, Consumption, Waste Management, Secondary raw materials, Innovation and investments  
**Sector:** Other (Regional Strategy)  
**Strategy level:** Regional  
**Contact:** Catharina Rams  
 Contact form

Circular Flanders is the hub and the inspiration for the Flemish circular economy. It is a partnership of governments, companies, civil society, and the knowledge community that will take action together. These organisations are the core of our partnership. Each one has committed to carrying out a specific action.

Be Circular - Regional Programme 2016 - 2020   
<http://www.circularprojects.brussels/a-propos/le-prec/?lang=en>

## Regional plan for the circular economy, Brussels Capital Region




**Issuing Public Authority:** Government of the Brussels-Capital Region  
**Publication Date:** 03/2016  
**Country:** Belgium  
**Language for original content:** Dutch, French  
**Key Area:** Production, Consumption, Waste Management, Secondary raw materials, Innovation and investments  
**Sector:** Other (Construction, Resources and waste, Logistic, Retail businesses)  
**Strategy level:** Regional  
**Contact:** Helpline (Belgium) 1819  
 Contact form


**Brussels Capital region Circular Economy strategy**, adopted in 2016, sets a 10 year framework to move Brussels' economy towards a circular model.

The strategy is focused on three objectives: transform environmental goals into economic opportunities, anchor the Brussels economy, where possible, to local produce and to minimise transportation whilst optimising the use of available territory in order to create additional value for the people of Brussels and to contribute to the creation of employment. It is structured in 4 different axes (combining 111 actions):

- Transversal ( regulatory framework);
- sectorial (specific industries);
- territorial and
- governance (to bring together 3 ministerial department)

London's Circular Economy Route Map   
<https://www.lwarb.gov.uk/what-we-do/circular-london/circular-economy-route-map/>

## London's Circular Economy Route Map



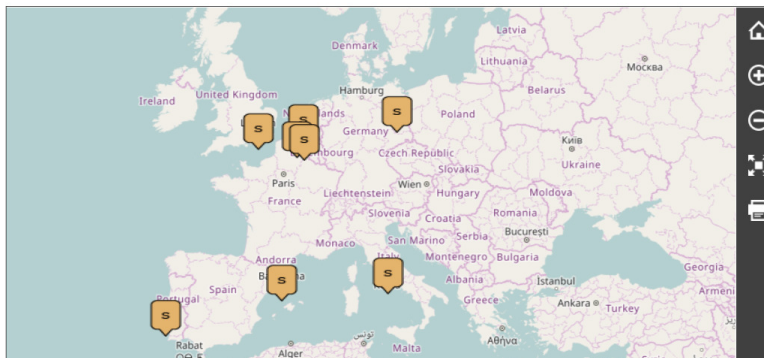
**Issuing Public Authority:** London Waste and Recycling Board  
**Publication Date:** 06/2017  
**Country:** United Kingdom  
**Language for original content:** English  
**Key Area:** Production, Consumption, Waste Management, Secondary raw materials, Innovation and investments  
**Sector:** Recycling  
**Strategy level:** Local  
**Contact:** Andrea Crump  
 Contact form

The London circular economy route map outlines a vision of a capital city thriving through the adoption of the principles of circular economy: an economy which keeps products, components and materials at their highest use and value at all times.

Home > Map search

## Map search

*What is happening where? On this map you can locate featured good practices, events, strategies and networks. Use the search box to select your items and areas of interest.*



**More info:** <https://circulareconomy.europa.eu/platform/en/strategies>

## EU FUNDING OPPORTUNITIES FOR CE



### **HORIZON 2020**

±2.700M€ (2014-2020) for support to R&I on Circular Economy



### **LIFE**

± 500M€ (2014-17) for support to R&I on Environment and Resource efficiency



### **COSME**

± 2.300M€ (2014-2020) for support of competitiveness and sustainability of EU enterprises, promote entrepreneurship and improve access to finance and to markets.



### **EUROPEAN STRUCTURAL AND INVESTMENT FUNDS**

+150.000M€ for CE-related measures as for development in EU Regions.



### **EUROPEAN INVESTMENT BANK**

+17.000M€ for CE-related projects from 2005-2016

## Horizon 2020: +2700M€ for R&I in circular economy

### ❑ 2014-2015: 131M€

- Societal Challenge 5 "Climate, Environment and Raw Materials" (call "Waste: A resource to recycle, reuse and recover raw materials")

### ❑ 2016-2017: 678M€

Call "Industry 2020 in the Circular Economy"

- Circular Economy
- Factories of the Future (FoF)
- Pilots
- Sustainable Process Industries (SPIRE)

### ❑ 2018-2020: 941M€

- Societal Challenge 2 "Food security and Bioeconomy": 253M€ (calls "Sustainable Food Security", "Blue Growth" and "Rural Renaissance", including access to risk finance)
- Societal Challenge 3 "Energy": 12M€ ("Carbon dioxide reuse")
- Societal Challenge 5 "Climate, Environment and Raw Materials": 306M€ (call "Greening the economy in line with the SDGs"): €306 M€
- Industrial technologies (LEIT-NMBP): 370M€ (calls "Industrial Sustainability" - notably Sustainable Process Industry and Catalysing the Circular Economy- and in industrial biotechnology)

### ❑ Bio-Based Industries Joint Undertaking: 975M€ (2014-2020)

## Access to funding: competitive open calls

## Horizon 2020 projects: Some examples



### CIRC-PACK

**Project ID:** 730423

**Funded under:**

[H2020-EU.3.5.4. - Enabling the transition towards a green economy and society through eco-innovation](#)

### Towards circular economy in the plastic packaging value chain

From 2017-05-01 to 2020-04-30, ongoing project

#### Project details

<p><b>Total cost:</b> EUR 9 252 466,25</p> <p><b>EU contribution:</b> EUR 7 308 180,13</p> <p><b>Coordinated in:</b> Spain</p>	<p><b>Topic(s):</b> <a href="#">CIRC-01-2016-2017 - Systemic, eco-innovative approaches for the circular economy: large-scale demonstration projects</a></p> <p><b>Call for proposal:</b> H2020-CIRC-2016TwoStage <a href="#">See other projects for this call</a></p> <p><b>Funding scheme:</b> IA - Innovation action</p>
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#### Objective

CIRC-PACK project aims at more sustainable, efficient, competitive, less fossil fuel dependence, integrated and interconnected plastic packaging value chain. To this end, three case studies will work in developing, testing and validating better system-wide economic and environmental outcomes by i) decoupling the chain from fossil feedstocks, (ii) reducing the negative environmental impact of plastic packaging; and (iii) creating an effective after-use plastics economy. All in all, the work will be supported by non-technological analysis and advanced methodological analysis (including circular economy and industrial symbiosis principles) which will trigger a broadly deployment of the tested solutions. CIRC-PACK project will provide breakthrough biodegradable plastics using alternative biobased raw materials, which will have an instrumental role to play in the subsequent steps of the plastic value chain. In addition, eco-design packaging for improving and end-of-like multilayer and multicomponent packaging will be technologically advanced and adapted also to the new materials produced. Thus these developments will also contribute with a great impact in the packaging footprint, and increasing the biobased content and using compostable materials. Lastly, a multi-sectorial cascaded approach along plastic packaging value chain will be applied with critical impacts in other value chains beyond the targeted plastic packaging value chain. The overall outcome of the project will facilitate the transition from the current linear plastic packaging value chain to circular economy principles.

#### Coordinator

FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS  
CALLE MARIANO ESQUILLOR GOMEZ 15 EDIFICIO CIRCE CAMPUS RIO EBRO  
50018 ZARAGOZA  
Spain

**Activity type:** Research Organisations

[Contact the organisation](#)

#### Participants

FUNDACION AITIIP

NOVAMONT SPA

MATER-BIOTECH SPA

MATER-BIOPOLYMER SRL

BUMAGA BV

NUEVAS TECNOLOGIAS PARA EL DESARROLLO DE PACKAGING Y PRODUCTOS AGROALIMENTARIOS CON COMPONENTE PLASTICA SL

MI-PLAST DOO ZA PROIZVODNJU TRGOVINU I PRUZANJE USLUGA - MI-PLAST LLC MANUFACTURING, TRADING AND SERVICES MIPLAST

GRUPO SADA P.A SA

SAPONIA KEMIJSKA, PREHRAMBENA I FARMACEUTSKA INDUSTRIJA D.D.

Fater S.p.A.

CENTRO RICERCHE FIAT SCPA

ASOCIACION ESPANOLA DE NORMALIZACION

RINA CONSULTING SPA

EKODENGE MUHENDISLIK MIMARLIK DANISMANLIK TICARET ANONIM SIRKETI

ECOEMBALAJES ESPANA, S.A.

GRAD RIJEKA-GRADSKO VJEDCE

KARTAL BELEDIYE BASKANLIGI

CALAF TECHNIQUES INDUSTRIALS SL

OCU EDICIONES SA

ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)\*

PLASTIPOLIS

## Horizon 2020 projects: Some examples



### REFRESH

**Project ID:** 641933

**Funded under:**

[H2020-EU.3.2. - SOCIETAL CHALLENGES - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy](#)

[H2020-EU.3.5.4. - Enabling the transition towards a green economy and society through eco-innovation](#)

### Resource Efficient Food and dRink for the Entire Supply cHain

From 2015-07-01 to 2019-06-30, ongoing project | [REFRESH Website](#)

#### Project details

**Total cost:**

EUR 9 444 757,79

**EU contribution:**

EUR 8 999 757,79

**Coordinated in:**

Netherlands

**Topic(s):**

[WASTE-2-2014 - A systems approach for the reduction, recycling and reuse of food waste](#)

**Call for proposal:**

H2020-WASTE-2014-two-stage [See other projects for this call](#)

**Funding scheme:**

RIA - Research and Innovation action

#### Objective

The overall aim of the REFRESH project is to contribute significantly towards the objective of reducing food waste across the EU by 30% by 2025 (which amounts to between 25 to 40 million tonnes of food not being wasted in 2025[1], worth tens of billions of Euros a year) and maximizing the value from unavoidable food waste and packaging materials. To achieve this ambitious goal, we will adopt a systemic approach and use cutting edge science to enable action by businesses, consumers and public authorities. A central ambition of the REFRESH project is to develop a 'Framework for Action' model that is based on strategic agreements across all stages of the supply chain (backed by Governments), delivered through collaborative working and supported by evidence-based tools to allow targeted, cost effective interventions. Success will support transformation towards a more sustainable and secure EU food system, benefitting Europe's economy, environment and society.

#### Coordinator

STICHTING WAGENINGEN RESEARCH  
DROEVENDAALSESTEEG 4  
6708 PB WAGENINGEN  
Netherlands

EU cont

**Activity type:** Research Organisations  
[Contact the organisation](#)

#### Participants

THE WASTE AND RESOURCES ACTION PROGRAMME

INSTITUTE OF FOOD RESEARCH

WAGENINGEN UNIVERSITY

ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA

RISE RESEARCH INSTITUTES OF SWEDEN AB

BIO INTELLIGENCE SERVICE

PROVALOR BV

UNIVERSITAET FUER BODENKULTUR WIEN

GLOBAL FEEDBACK LIMITED

UNIVERSITY OF NEWCASTLE UPON TYNE

ECOLOGIC INSTITUT gemeinnützige GmbH

ANTHESIS (UK) LIMITED

COLLABORATING CENTRE ON SUSTAINABLE CONSUMPTION AND PRODUCTION GMBH

IVL SVENSKA MILJOEINSTITUTET AB

VACUVITA HOLDING B.V.

UNITED NATIONS ENVIRONMENT PROGRAMME

CENTRE DE RECERCA EN ECONOMIA I DESENVOLUPAMENT AGROALIMENTARI-UPC-IRTA

INSTITUTE OF GEOGRAPHICAL SCIENCES AND NATURAL RESOURCES RESEARCH, CHINESE ACADEMY OF SCIENCES

ALL-CHINA ENVIRONMENT FEDERATION

EUROPEAN FOOD INFORMATION RESSOURCE AISBL

INSTITUT JOZEF STEFAN

SYDDANSK UNIVERSITET

MAGYAR ELELMISZERBANK EGYESULET

GS1 AISBL

BACTEVO LIMITED

## Horizon 2020 projects: Some examples



### PPI4Waste

Project ID: 642451

Financiado con arreglo a:

[H2020-EU.3.5.4. - Enabling the transition towards a green economy and society through eco-innovation](#)

### Promotion of Public Procurement of Innovation for Resource Efficiency and Waste Treatment

Desde 2015-01-01 hasta 2017-09-30, proyecto cerrado

#### Detalles del proyecto

**Coste total:**

EUR 1 003 687,50

**Aportación de la UE:**

EUR 998 812,50

**Coordinado en:**

Belgium

**Tema(s):**

[WASTE-5-2014 - Preparing and promoting innovation procurement for resource efficiency](#)

**Convocatoria de propuestas:**

H2020-WASTE-2014-one-stage [See other projects for this call](#)

**Régimen de financiación:**

CSA - Coordination and support action

#### Coordinador

ASSOCIATION DES VILLES ET REGIONS POUR LA GESTION DURABLE DES RESSOURCES

AVENUE D'AUDERGHEM 63  
1040 BRUXELLES  
Belgium

Apor

Activity type: Other

[Contact the organisation](#)

#### Participantes

ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)\*

ZAGREBACKI HOLDING DOO

UNIVERSIDAD DE ZARAGOZA

[INSTITUTO ANDALUZ DE TECNOLOGIA.](#)

MANCOMUNIDAD DEL SUR

RISE RESEARCH INSTITUTES OF SWEDEN AB

MINISTERIE VAN INFRASTRUCTUUR EN WATERSTAAT

#### Objetivo

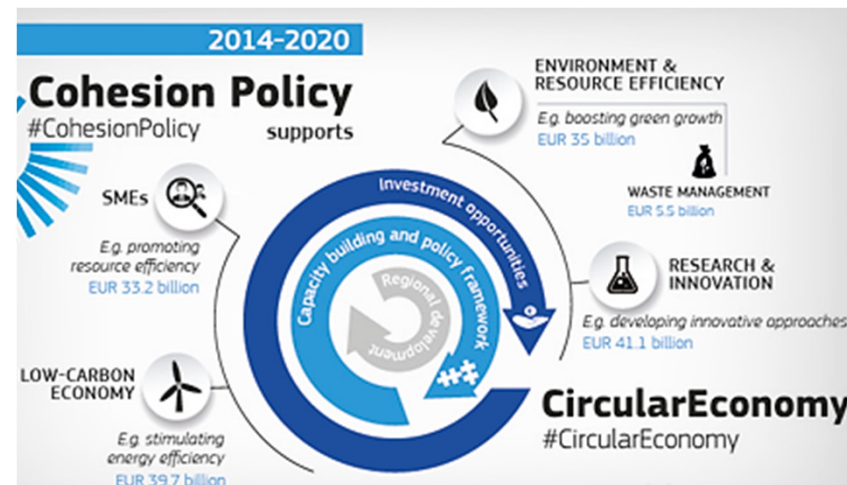
PPI4Waste is based on an integrated approach which will permit to define needs, targets, improvement of functional performances, and monitor the complete cycle of preparation activities for PPI process to be implemented in the waste sector, while making know-how on procedures for innovation procurement widely available through the establishment of buyer's group, making state-of-the-art solutions accessible to other procurers, capacity building and assessment of feasibility plan of uptaking PPI in the waste sector. This 30-month project, whose workplan has a concise structure that supports the workflow to achieve its main aim: The overall objective of the project is to achieve resource efficiency, sustainable waste management and sustainable consumption throughout Europe by increasing the use of innovative public procurement through coordinated a structured and coordination action of networking, capacity building, and dissemination. The cornerstone of the project is how to boost resource efficiency through PPI, on the basis of the waste hierarchy and the establishment of the buyer's group of public procurers in the first phase of the project will permit to achieve all objectives towards the reinforcement of early deployment of eco-innovative solutions for resource efficiency and waste management through joint or coordinated PPI processes.



### European Structural and Investment Funds (ESIF): +150.000 M€ for circular economy-related measures

Cohesion policy (ERDF, CF and ESF) supports Europe's objectives through investments in 11 priority areas (some of them linked to circular economy):

- ✓ More recycling
- ✓ Improved waste management
- ✓ Resource and energy efficiency
- ✓ Strengthening the bio-economy
- ✓ Novel solutions in product design
- ✓ New business models
- ✓ Creation of green jobs



- 35.000M€ allocated to "Environment and resource-efficiency", including €5.500M€ for waste management (Prevention and recycling; Incineration and thermal treatment; Hazardous waste management)
- €15 billion investment in the water sector (some for water reuse)

Access to CP funding data: <https://cohesiondata.ec.europa.eu/>

**Access to funding: Mainly through regional programs (prioridades de inversion contempladas en los Programas Operativos)**

## European Structural and Investment Funds (ESIF) initiatives: Some examples

### Closing the waste cycle in the Slovenian capital

With the help of EU funds, Slovenia is reaching its recycling targets and the citizens 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.



Supporting business

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Business Support Service

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Investment Fund

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Business Network

## Circular Economy Investment Fund

We are investing £18 million as grant funding to small and medium sized enterprises who are helping to create a more circular economy.

Related Links

Circular Economy Business Support Service

## European Structural and Investment Funds (ESIF) initiatives: Some examples

### ☐ 16 interesting case studies:

[https://www.irekia.euskadi.eus/uploads/attachments/8492/ENCORE\\_Regions\\_and\\_Circular\\_Economy\\_WEB.pdf?1474877920](https://www.irekia.euskadi.eus/uploads/attachments/8492/ENCORE_Regions_and_Circular_Economy_WEB.pdf?1474877920)

#### Basque Country

1. Kooperera Reusing Center
2. Basque Ecodesign hub
3. Circular economy demonstration projects programme
4. Metabolization of material resources contained in construction and demolition waste

#### Bavaria

1. Enhancing the acceptance in the use of mineral recycled building materials in civil engineering
2. To strengthen education and awareness for resource conservation
3. Novel biogenous hybrid polymers of cellulose and chitin
4. Working forum "Sustainable resource use and Integrated Product Policy (IPP)" of the 5th Environmental Pact Bavaria (Umweltpakt Bayern)

#### Catalonia

1. Catalan Eco-Vouchers Programme
2. Catalan Ecodesign Award

#### Drenthe

1. Life cycle approach by dairy farmers
2. Biodrawbridge Wildlands Emmen

#### Friesland

1. Optimal valorization of local green waste

#### Noord Brabant

1. From waste to resource collection in municipalities
2. Biogas from sewage sludge for garbage collection and industry
3. Greentech Brabant: a biobases future for picking

#### North Karelia

1. North Karelia towards oil free and low carbon area

#### Västra Götaland

1. Business model innovation for furniture circular economy
2. Design for circularity - Re:Textile

#### Denmark Central

1. Design for Disassembly and optimizing value chain cooperation
2. Biodrawbridge Wildlands Emmen Green business model programme
3. Rethink business
4. Value chain collaboration model — hospitals and plastic packaging
5. Green Industrial Symbiosis
6. Big data in material flows

## European Investment Bank and Circular Economy

EIB provides funding and advisory for CE projects (+17.000M€ for CE projects from 2005 to 2016)

### Types of CE projects eligible:

- *Climate action & Environment*: reduction of resource consumption, waste generation and GHG emissions.
- *Innovation & Skills*: innovative products, production processes or business models.
- *SMEs*: innovations on circular economy

### Projects focused on:

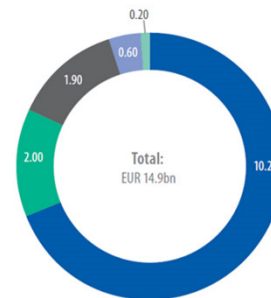
- Substitution of virgin with secondary materials
- Reduction of waste generation in production and consumption
- Extending the use and life of assets and products
- Recovering value from waste, by-products and wastewater

### Access to funding:

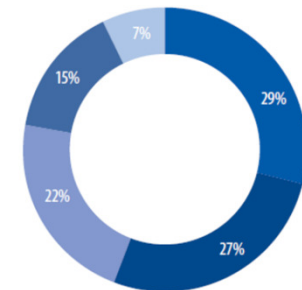
- Project loans, risk-bearing financial instruments, financial and technical advisory services: direct loans for projects (min 15M€), indirect credit lines to local banks and other intermediaries.
- CE projects with medium to high risk profiles may be accommodated under the **European Fund for Strategic Investments (EFSI)**, **InnovFin** and other special financial instruments with higher risk-taking potential.

<http://www.eib.org/projects/initiatives/circular-economy/index>

Investment cost of EIB co-financed circular economy projects (2005-2014)  
(in EUR bn)

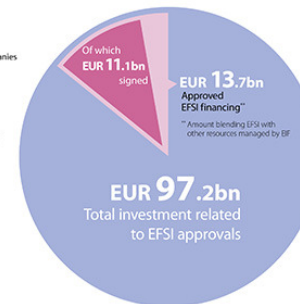


Circular economy lending 2012-2016: EUR 2.38bn



EIF figures As of 15/03/2018

EFSI investment by sector\*



About **599 400** SMEs will benefit from EIF financing – support that will strengthen Europe's economy and create jobs

EFSI investment relative to GDP\*

Darkier colours signify higher investment



## EU FUNDING OPPORTUNITIES FOR CE

### European Investment Bank projects: Some examples



# EU FUNDING OPPORTUNITIES FOR CE

## European Investment Bank projects: Some examples



### A2A Ambiente invests in increased recycling

In a project for A2A Ambiente in Milan, the EIB financed a new glass recycling facility. Since 2014, the plant has produced oven-ready cullets from source-separated glass.

The project also provided new waste collection trucks that made it possible to expand the separate bio-waste collection system so that it now covers the whole city of Milan.

These project components help to close material loops and create a more circular economy in Milan, with reduced climate impact as an added benefit.

More projects:

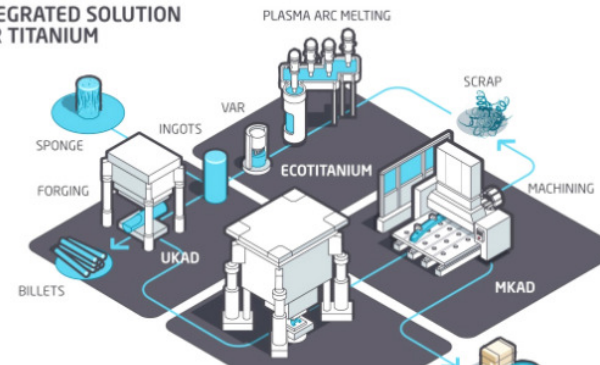
<http://www.eib.org/efsi/efsi-projects/index.htm>

INNOVATING & RESEARCHING
STUDYING & IMPLEMENTING
EXTRACTING & GENERATING VALUE
DEVELOPING, DESIGNING & TRANSFORMING
<b>RECYCLING &amp; RE-USING</b>
<ul style="list-style-type: none"> <li>· Valdi - Recycling catalysts, batteries and metal oxides</li> <li>· EcoTitanium – Aviation-grade titanium recycling</li> </ul>

### EcoTitanium®, first aviation-grade titanium recycling plant

EcoTitanium® is the first plant in Europe to produce aviation-grade titanium alloys by recycling. It will make titanium ingots from titanium alloys scrap (turnings and massive scrap) collected from major aircraft manufacturers and their subcontractors.

#### INTEGRATED SOLUTION FOR TITANIUM



Contact  
EcoTitanium®



RD 62 - La Croix de Biolet  
63780 Saint-Georges-de-Mons  
FRANCE

+ 33 (0)4 73 67 20 00

→ [ecotitanium@eramet-aubertduval.com](mailto:ecotitanium@eramet-aubertduval.com)

#### Press release

→ Read the press release related to EcoTitanium's inauguration on September 15th, 2017

# HACIA UNA ECONOMÍA CIRCULAR ¿OPORTUNIDADES PARA LAS REGIONES?....



## MUCHAS GRACIAS POR SU ATENCIÓN