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# Synergic Circular Economy across European Regions

## SCREEN

### Deliverable D 3.4

### REGIONAL PORTFOLIO

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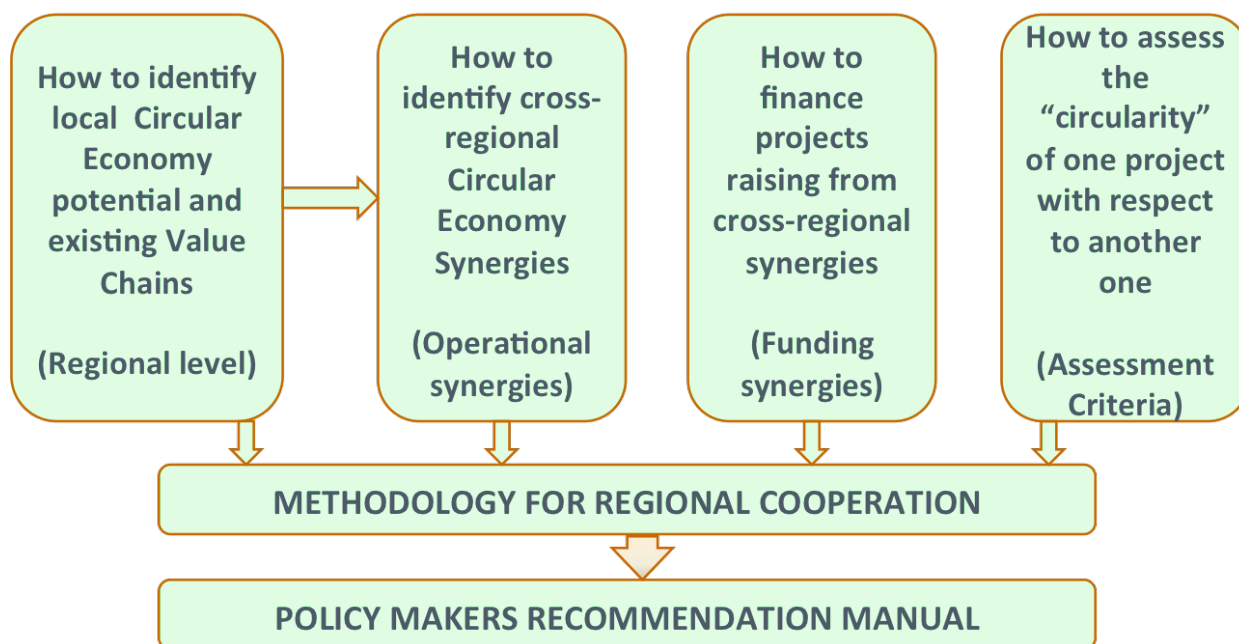
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## 1. Executive Summary

SCREEN H2020 aims at the definition of a replicable and scalable approach, to support European Regions in the transition to new Circular Economy cross-regional value-chains. This will be done through the identification and implementation of operative synergies between R&I investments of H2020 program and EU structural funds. The methodology developed within the project is replicable in all the European Union, thus creating an interregional framework for financing Circular Economy value chains. The overall SCREEN approach is represented in the figure below.



Within this deliverable the third pillar of the overall SCREEN approach is tackled focusing on existing funding instruments that could support the implementation of the cross-regional value-chain opportunities identified in previous steps of the SCREEN methodologies.

More in depth, the SCREEN methodology is a scientific approach based on four main phases namely *Data Collection*, *Analysis*, *Synthesis* and *Implementation*.

1. **Data Collection:** A tool has been designed to collect data about existing capabilities in the Screen Regions, also considering the Smart Specialization Strategies and the key industry sectors.
2. **Analysis:** A twofold data-driven and interaction-driven approach has been followed in order to analyse the existing capabilities and identify the existence of regional hotspots and cross-regional opportunities and emerging ideas.
3. **Synthesis:** The existing cross-regional value-chains have been formalized and specific opportunities that can potentially result in actions to be implemented through cross-regional cooperation have been formalized.
4. **Implementation:** The identified cross-regional cooperation initiatives are mapped against existing funding and support instruments at Regional and European level to analyze gaps and formalize requirements towards new support instruments.

In particular, the *Implementation* phase looks at the identification of the most suitable support and financing instrument to enable the activation of the synthesized innovation actions. The existing Regional instruments presenting suitable characteristics to support the identified cross-regional initiatives are classified, according to a framework common for all the regions.

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Specific best practices are highlighted to enabling a cross-regional learning process. Then, the existing gaps among the instruments and the features of the synthesized initiatives are highlighted, resulting in specific requirements and recommendations for the development of new support instruments in the future. Such recommendations are transferred to the Policy Lab, which is the SCREEN permanent committee of regional representatives, linking the SCREEN project to the European Commission and other European Institutions active in Circular Economy, for further discussions towards the implementation.

Focusing on the implementation step of the overall SCREEN methodology, Deliverable 3.4 revises existing measures and instruments to be applied in a synergic way to fill the gaps and the needs expressed within the cross-regional synergies identified in the previous project phases, covering a broad range of TRL levels. The ultimate goal is to understand if and how existing and new regional instruments can support the implementation of the identified Circular Economy initiatives.

Specific investment instruments that have been taken into consideration by the participating regions include:

- (i) Cross-regional vouchers for industrial partners to access inter-regional research and innovation services;
- (ii) Funding measures to encourage entrepreneurial initiatives based on H2020 projects' results;
- (iii) Funding of industrial take-ups of running H2020 project results, for industrial exploitation and replication;
- (iv) Infrastructural investments, in synergy with European Structural and Investment Funds (ESIF) and the European Investment Bank (EIB);
- (v) Other eventual instruments to be included based on Regions experience and interests.

In general, particular importance has been given to instruments addressing cross-regional cooperation and instruments exploiting funding synergies to support industrial uptake and replication of the funded initiative.

The involved regions will agree upon the identified measures and will set common rules for application and monitoring the effectiveness of these instruments. Moreover, they can find inspiration from best practices gathered by other regions in the consortium.

The construction of the portfolio was, therefore, carried out by the following steps:

1. Request to the partners of the funding instruments belonging to the 5 categories mentioned above and managed by their own Authority;
2. Selection, among the identified tools, of some "best practices" that have been considered most suitable to achieve the project's goals;
3. Collection of some "success stories" related to the effective application of the tools identified as "best practices";
4. Association of funding instruments to the "actions" necessary to fill the gaps and to satisfy the needs emerging in task 3.3 for the development of the circular economy in the identified value chains.
5. Identification of existing gaps among funding instruments and actions and definition of a set of recommendations towards new funding instruments fulfilling such gaps.

This deliverable describes in detail the phases of this approach and reports the collected information as well as the main outcomes of the analysis. The deliverable is structured as follows. In Section 2, the procedure to collect relevant information about the funding instruments is revised and the main figures about the collected data are discussed. In section 3, the best practices are reported and the most interesting features of the related instruments are commented. In Section 4, some success stories related to the past

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implementation of the selected funding instruments are reported, with specific focus on circular economy initiatives. In Section 5 the methodology to match the local emerging ideas and the cross-regional synergies is presented while in Section 6 the identified gaps and recommendations for future funding instruments are discussed. Conclusions are drawn in Section 7.

## 2. Funding instruments

Although a preliminary screening of the existing funding instruments was already carried out through the data collection of area 6 of the Screen Mapping Tool (D2.1) namely “*Existing funding instruments*”, since that area was labelled as “optional” a new data collection process has been carried out within T3.4, specifically targeted to the goal of the task. In particular, with the objective to collect the information related to the funding instruments, a pre-set excel sheet was provided to the partners in which the following information was included:

- *Investment instrument name*: the name of the regional investment instrument;
- *Scope of the instrument*: the target area of application of the investment instrument (selected among European; National; Regional; Municipal; Other);
- *Destination area(s) of funds (if any)*: the related area of specialization (if available) or the related sector of application of the investment instrument;
- *Type of financing*: the type of financing established by the investment instrument (selected among Loan; Subsidy requiring co-financing; Subsidy without co-financing; Other);
- *Rate of financing (%)*: the rate of financing of the investment instrument or, whether the financing percentage is not applicable, the specification of this case;
- *Eligible costs*: description of the eligible costs covered by the investment instrument (e.g. personnel, equipment, consumables, travel, overheads, external services, sub-contracting, other);
- *Source of funding*: the funding source of the investment instrument (e.g. regional funds, ERDF, other);
- *Supported TRL level*: the Technology Readiness Level (TRL) of the project needed to be financed with the considered investment instrument;
- *Mechanism for the funding mix building*: the mechanism and the internal procedures adopted during the financial engineering process and the development of the fund. This can be interesting for other regions willing to investigate the proposal of similar instruments. If possible, the indication of a website or similar sources where further information on the funding mechanisms could be gathered.

The funding instruments to be taken into consideration and for which to provide the information above are those with the following characteristics, in accordance with the objectives of the SCREEN project:

- Tools dedicated to the financing or supporting of Circular Economy initiatives;
- Tools dedicated to the financing or supporting of initiatives in areas that are within the smart specialization strategy of the region, not specifically targeted to circular economy, but that can be used to finance Circular Economy initiatives (e.g. manufacturing, environment, ICT areas);
- Tools financing or supporting initiatives in more traditional areas different from Circular Economy (e.g. smart cities, energy, etc.) that can be converted to propose new financing tools also for circular economy.

Moreover, particular importance has been given to instruments addressing cross-regional cooperation and instruments exploiting funding synergies to support industrial uptake and replication of the funded initiative.

Once the contributions were obtained from the partners, a first "screening" of the records was made by eliminating the instruments that didn't feature the aforementioned characteristics.

The remaining instruments of each region were then classified according to the following categories:

- Instruments potentially supporting cross-regional cooperation [art. 70 Regulation (EU) No 1303/2013];
- Instruments targeting also CE (can be used to finance Circular Economy initiatives or that can be converted to propose new financing tools also for circular economy);
- Instruments dedicated to CE (specifically dedicated to the financing or supporting of Circular Economy initiatives);
- Classes of TRL; in detail the following four classes were identified: TRL = 2-3; TRL = 4-5; TRL = 6-7; TRL = 8-9.

The table below summarizes the gathered data. As it can be noticed, more than 100 instruments have been analysed, of which 64 showed capability to support cross-regional cooperation. Moreover, 87 instruments showed capability to support circular economy initiatives, which provides a significant ground for association between the identified action and the funding instruments. Furthermore, all TRL areas are covered by the existing tools.

Region	Total n° of instruments	Processed Data	Instruments potentially supporting cross-regional cooperation [art. 70]	Instruments targeting also CE	Instruments dedicated to CE	TRL 2-3	TRL 4-5	TRL 6-7	TRL 8-9
CCDRC	33	32	25	31	13	0	7	16	9
Extremadura	3	3	3	3	0	0	1	1	0
Fryslan	5	5	2	5	1	1	1	2	1
KTN - Scotland	9	8	5	7	2	1	3	5	2
La Reunion	4	4	4	4	0	0	1	2	4
Lombardia	4	4	4	4	-	1	1	3	1
Lazio	4	3	3	1	2	-	-	2	3
PGKC	2	2	-	2	-	2	-	-	-
Limburg	11	10	3	9	1	3	1	6	-
Flanders	8	8	4	8	-	-	-	5	3
Tampere	1	1	1	1	-	-	-	1	-
Navarra	4	4	4	4	-	-	1	2	1
NE Romania	3	3	3	1	-	-	1	-	2
Lodzkie	10	7	3	7	-	3	3	6	3
<b>TOTAL</b>	<b>101</b>	<b>94</b>	<b>64</b>	<b>87</b>	<b>19</b>	<b>11</b>	<b>20</b>	<b>51</b>	<b>29</b>

(REGULATION (EU) No 1303/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 December 2013)

Art. 70:

*"Eligibility of operations depending on location*

1. Operations supported by the ESI Funds, subject to the derogations referred to in paragraphs 2 and 3, and the Fund-specific rules, shall be located in the programme area.

2. The managing authority may accept that an operation is implemented outside the programme area but within the Union, provided that all the following conditions are satisfied:

(a) the operation is for the benefit of the programme area;

(b) the total amount allocated under the programme to operations located outside the programme area does not exceed 15 % of the support from the ERDF, Cohesion Fund and EMFF at the level of the priority, or 5 % of the support from the EAFRD at the level of the programme;

(c) the monitoring committee has given its agreement to the operation or types of operations concerned;

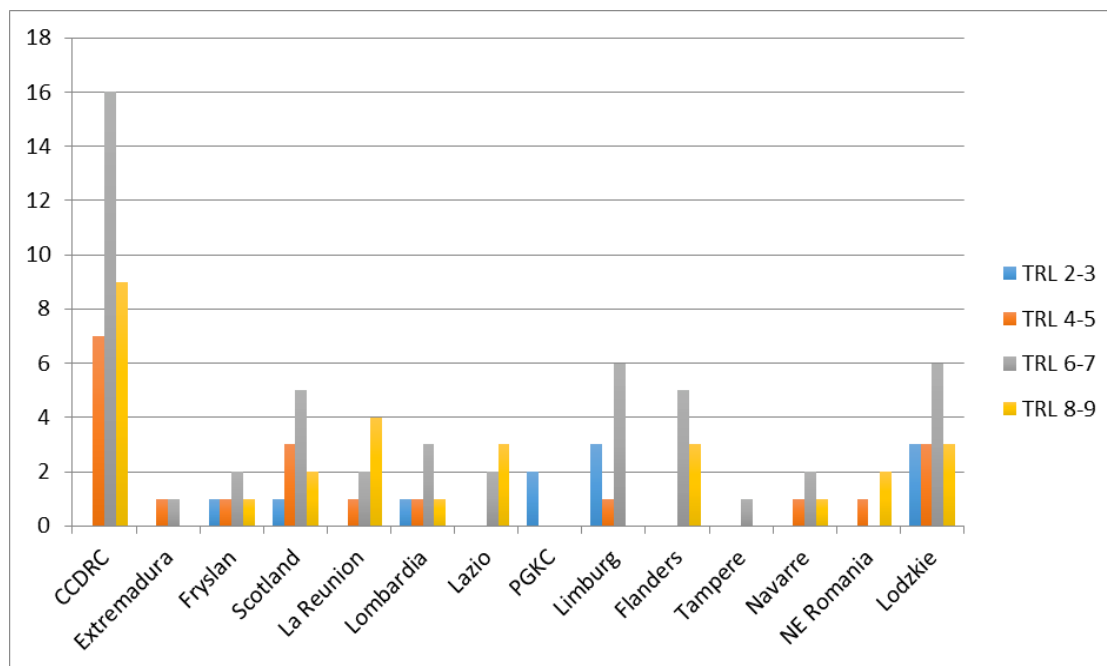
(d) the obligations of the authorities for the programme in relation to management, control and audit concerning the operation are fulfilled by the authorities responsible for the programme under which that operation is supported or they enter into agreements with authorities in the area in which the operation is implemented.

3. For operations concerning technical assistance or promotional activities, expenditure may be incurred outside the Union provided that the conditions set out in point (a) of paragraph 2 and the obligations in relation to management, control and audit concerning the operation are fulfilled.

4. Paragraphs 1 to 3 shall not apply to programmes under the European territorial cooperation goal and paragraphs 2 and 3 shall not apply to operations supported by the ESF".

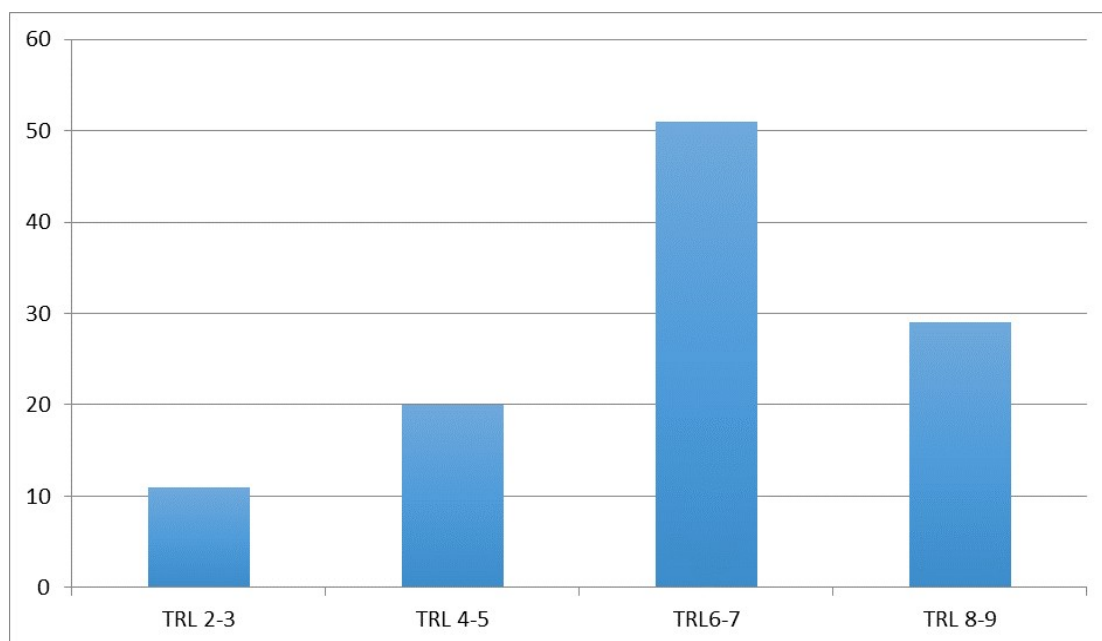
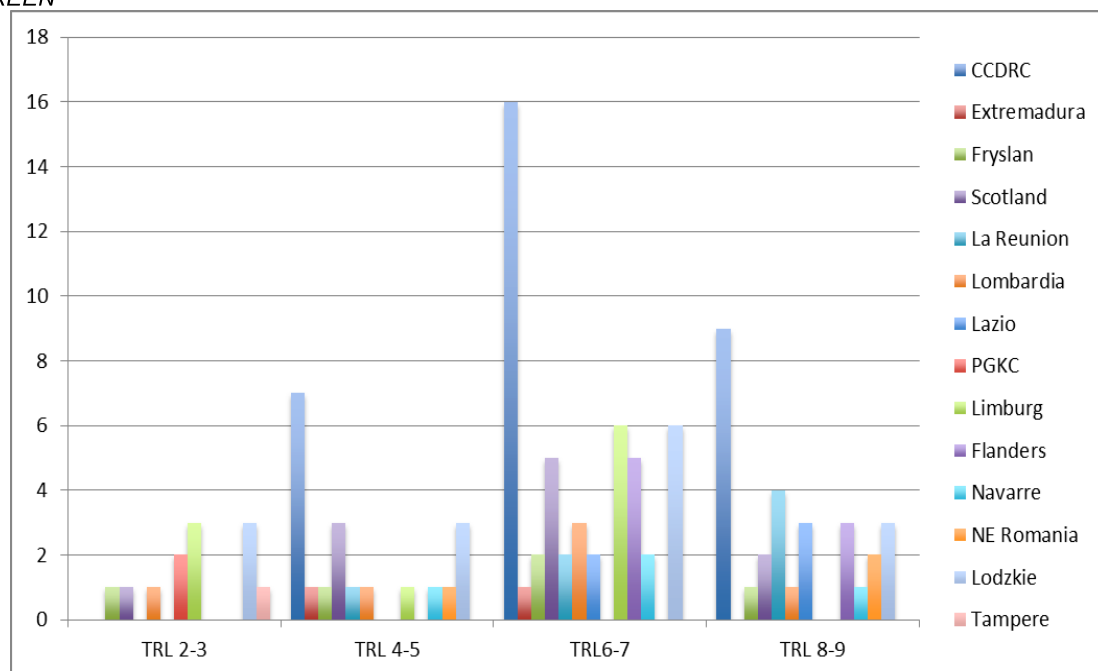
Article 70 of the ESIF regulation stipulates a possibility of up to 15% of the support from the ERDF, Cohesion Fund and EMFF at the level of the priority (up to 5% of the support from the EAFRD at the level of the programme), and up to 3% of the budget of a ESF operational programme (Article 13 ESF) to be allocated to operations located outside the programme area. There is no actual evidence of application of article 70 of the ESIF regulation.

In particular, the following graphs show the distribution of the various instruments according to different classes of TRL (in the case of multiple TRLs indicated for the same instrument, the instrument has been counted for each TRL).





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The table reporting the detailed information about the mapped funding instruments provided by the SCREEN project partners is available upon request to the project coordinator.

### 3. Best practices

From the analysis of the funding instruments communicated by the partners, some "best practices" have been selected, i.e. instruments that due to their intrinsic characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense.

The criteria that led to the selection of best practices are the following:

- The funding instrument (which may or may not be dedicated to CE) groups a mix of funds from different sources (European, national, regional);
- The instrument (which may or may not be dedicated to CE) is financed by one of the European Structural and Investment Funds (ESIF) and, therefore, makes it possible to activate the art. 70 of the EU Regulation 1303/2013;
- The instrument, while not presenting any of the two previous characteristics, is distinguished by being dedicated to the development of the circular economy or to support specific funding areas, e.g. investments in infrastructure.

The purpose of this selection is to provide an overview of the funding instruments impacting directly on the circular economy, but also those that, although not specifically dedicated to it, have particular characteristics and operating mechanisms such as the simultaneous activation of different sources of financing or the potential activation of art. 70 of the EU Reg. 1303/2013.

The instruments selected as best practices are summarized in the following table, divided by proposing partner and classified according to the categories introduced at Page 5. They are further detailed in the next sections.

Partner's region	Funding instrument
CCDR	Fundo Ambiental: Repensar os Plásticos na Economia: Desenhar, Usar, Regenerar (DURE) <sup>a</sup>
CCDR	Vale Economia Circular (Circular economy voucher) <sup>a,*</sup>
CCDR	SI Qualificação das PME - Projeto individual <sup>b,*</sup>
CCDR	SI Investigação e Desenvolvimento Tecnológico (SI I&DT) <sup>b</sup>
CCDR	Valorização de Resíduos <sup>a</sup>
Extremadura	Ayudas para financiación de contratos predoctorales para formación de Doctores en los centros públicos (D 45/2016) V Plan Regional de I+D+i (2014-2017). <sup>b,*</sup>
Fryslân	Open Innovation Call <sup>b,*</sup>
KTN - Scotland	Circular Economy Investment Fund <sup>a,*</sup>
KTN - Scotland	Food and Drink Collaborative Innovation Fund <sup>b,*</sup>
KTN - Scotland	Circular Economy Business Support Service <sup>a,*</sup>
La Reunion	Fund of Funds: Financiere Region Reunion <sup>b,*</sup>
Lazio	APEA <sup>b,*</sup>
Lazio	Circular Economy and Energy <sup>a,*</sup>
Limburg	Limburg Energy fund <sup>b</sup>
Lodzkie	Regional Operational Programme for Lodzkie Region 2014-2020 1.2 Investments of enterprises in research and innovation / 1.2.1. Enterprise R & D infrastructure <sup>b,*</sup>
Lombardia	ManuNet <sup>b,*</sup>
Lombardia	InnoDriver S3 <sup>b,*</sup>

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Lombardia	Fund of Funds – AlpGIP <sup>b,*</sup>
Lombardia	Linea R&S per aggregazioni <sup>b,*</sup>
NE Romania	SME Initiative Operation Programme <sup>b,*</sup>
Navarra	Orizont Accelerator – SODENA <sup>b,*</sup>
Tampere	The Sustainable Growth and Jobs 2014-2020 Structural Funds Programme of Finland <sup>b,*</sup>

(\*) Instruments potentially supporting cross-regional cooperation [art. 70].

(a) Instruments targeting also CE.

(b) Instruments dedicated to CE.

### 3.1 CCDRC

<b>FUNDO AMBIENTAL: REPENSAR OS PLÁSTICOS NA ECONOMIA: DESENHAR, USAR, REGENERAR (DURE) – (ENVIRONMENTAL FUND: RETHINKING PLASTICS IN THE ECONOMY: DESIGN, USE, REGENERATE)</b>
<b>Scope of the instrument:</b> National
<b>Destination area(s) of funds (if any):</b> Promotion of circular economy in the value chain of plastics
<b>Category of beneficiaries:</b> <ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Large enterprises,</li> <li>• Other</li> </ul>
<b>Type of financing:</b> <ul style="list-style-type: none"> <li>• Subsidy requiring co-financing,</li> </ul>
<b>Rate of financing (%):</b> 75% (max. 200.000 € per project)
<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Equipment (depreciation),</li> <li>• External services,</li> <li>• Consumables,</li> </ul>
<b>Source of funding:</b> National funds
<b>Supported TRL level:</b> <ul style="list-style-type: none"> <li>• TRL 4 - 5: technology validated</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> <i>“This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense”</i> For more info about this instrument: <a href="http://www.fundoambiental.pt/avisos-2018/economia-circular/repensar-os-plasticos-na-economia-desenhar-usar-regenerar-dure.aspx">http://www.fundoambiental.pt/avisos-2018/economia-circular/repensar-os-plasticos-na-economia-desenhar-usar-regenerar-dure.aspx</a>

<b>VALE ECONOMIA CIRCULAR - (CIRCULAR ECONOMY VOUCHER)</b>
<b>Scope of the instrument:</b> National
<b>Destination area(s) of funds (if any):</b> Consultancy services acquisition to promote Circular economy transition in Business structures
<b>Category of beneficiaries:</b> <ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Universities,</li> <li>• Research institutes,</li> <li>• Other.</li> </ul>
<b>Type of financing:</b> <ul style="list-style-type: none"> <li>• Subsidy requiring co-financing,</li> </ul>
<b>Rate of financing (%):</b> 75% (limit of 7.500€ per project) except for beneficiary from OP Lisbon Region (max. 40%)
<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• External services,</li> <li>• Subcontracting.</li> </ul>
<b>Source of funding:</b> ESIF.

<b>Supported TRL level:</b>
<ul style="list-style-type: none"> <li>• TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b>
<p><i>“This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense. Being based on ESIF funds, this instrument is subject to Art. 70, thus potentially being exploitable for supporting cross-regional cooperation”.</i></p> <p>For more info about this instrument:  <a href="http://www.pocicompete2020.pt/admin/images/20180109_AAC_06_SI_2018_Acreditacao_Entidades_Vale_Econ_Circular.pdf">http://www.pocicompete2020.pt/admin/images/20180109_AAC_06_SI_2018_Acreditacao_Entidades_Vale_Econ_Circular.pdf</a></p>

<b>SI QUALIFICAÇÃO DAS PME - PROJETO INDIVIDUAL – (I.S. SME QUALIFICATION - INDIVIDUAL PROJECT)</b>
<b>Scope of the instrument:</b> National.
<b>Destination area(s) of funds (if any):</b> Strengthening entrepreneurship capacitation.
<b>Category of beneficiaries:</b>
<ul style="list-style-type: none"> <li>• SMEs.</li> </ul>
<b>Type of financing:</b>
<ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b> 45% per project (except for beneficiary from OP Lisbon region: 40%), 50% - 70% for training (limit of 500.000€).
<b>Eligible costs:</b>
<ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Equipment (depreciation),</li> <li>• Travel.</li> </ul>
<b>Source of funding:</b> ESIF
<b>Supported TRL level:</b>
<ul style="list-style-type: none"> <li>• TRL 8 - 9: technology proven and commercialized.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b>
<p>As regards the qualification of SMEs, the co-financing of investments located in the Centro Region is ensured by:</p> <p>COMPETE 2020 - for individual medium-sized projects, joint projects and multiregional projects (involving at least two regions between the North, Center and Alentejo);</p> <p>CENTRO 2020 - for individual micro and small enterprise projects carried out in their NUTS II. Whenever there are investments made in Centro Region in a single project, CENTRO 2020 will finance the component of this region.</p> <p>For more info about this instrument:  <a href="http://www.poci-competite2020.pt/concursos/detalhe/AAC_18-SI-2016">http://www.poci-competite2020.pt/concursos/detalhe/AAC_18-SI-2016</a></p>

<b>SI INVESTIGAÇÃO E DESENVOLVIMENTO TECNOLÓGICO (SI I&amp;DT) – (I.S. RESEARCH AND TECHNOLOGICAL DEVELOPMENT)</b>
<b>Scope of the instrument:</b> National.
<b>Destination area(s) of funds (if any):</b> Industrial R&D Projects on an European Scale.
<b>Category of beneficiaries:</b>
<ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Large enterprises,</li> <li>• Other</li> </ul>
<b>Type of financing:</b>
<ul style="list-style-type: none"> <li>• Subsidy requiring co-financing,</li> </ul>

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<b>Rate of financing (%):</b> 40% - 75% per project (depending on beneficiary category and regional provenience)
<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Travel,</li> <li>• External services,</li> <li>• Subcontracting.</li> </ul>
<b>Source of funding:</b> ESIF.
<b>Supported TRL level:</b> <ul style="list-style-type: none"> <li>• TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> To support H2020- ESIF synergies there is a New Funding Instrument – Incentive Scheme for Research and Technological Development (IS R&TD) – Business R&D – Industrial R&D Projects on European Scale. The call aims at the national co-funding of Portuguese participants in R&D European projects, within the EUREKA Network, Eurostars, Horizon 2020 / ERA-NETS and Horizon 2020 / Joint Undertakings. Proposals sent should be formulated with reference to the international consortium, with evidence of approval through the European R&D Programmes (signed contract should be uploaded). Within this call it is the participation of the national partners that will be funded. For more info about this instrument: <a href="http://www.poci-compet2020.pt/Avisos/detalhe/AAC_25-SI-2017">http://www.poci-compet2020.pt/Avisos/detalhe/AAC_25-SI-2017</a>

<b>VALORIZAÇÃO DE RESÍDUOS - VALORIZATION OF RESIDUE</b>
<b>Scope of the instrument:</b> National.
<b>Destination area(s) of funds (if any):</b> Waste recovery.
<b>Category of beneficiaries:</b> <ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Large enterprises,</li> <li>• Other.</li> </ul>
<b>Type of financing:</b> <ul style="list-style-type: none"> <li>• Subsidy requiring co-financing,</li> </ul>
<b>Rate of financing (%):</b> 85% per project
<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• Other.</li> </ul>
<b>Source of funding:</b> ESIF.
<b>Supported TRL level:</b> <ul style="list-style-type: none"> <li>• TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> <i>“This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense. Being based on ESIF funds, this instrument is subject to Art. 70, thus potentially being exploitable for supporting cross-regional cooperation”.</i> For more info about this instrument: <a href="https://poseur.portugal2020.pt/en/investment-axes/presentation/">https://poseur.portugal2020.pt/en/investment-axes/presentation/</a> .

### 3.2 Extremadura

<b>AYUDAS PARA FINANCIACIÓN DE CONTRATOS PREDOCTORALES PARA FORMACIÓN DE DOCTORES EN LOS CENTROS PÚBLICOS – (AID FOR THE FINANCING OF PREDOCTORAL CONTRACTS FOR TRAINING DOCTORS IN PUBLIC CENTERS)</b>	
<b>Scope of the instrument:</b>	Regional.
<b>Destination area(s) of funds (if any):</b>	Extremadura's S3.
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>• Research institutes,</li> <li>• Universities.</li> </ul>
<b>Type of financing:</b>	<ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b>	75%.
<b>Eligible costs:</b>	<ul style="list-style-type: none"> <li>• Personnel.</li> </ul>
<b>Source of funding:</b> ESF. The Aid are regulated by Decree 116/2018, and they are financed using the authorized credits destined for this purpose, which are foreseen in the Annual Budget of Extremadura. The credit foreseen for the different Calls are described in the next table. The actions included in this Call will be co-financed by the European Social Fund (ESF) to 80 percent, in the Thematic Objective 10.” Investing in education, training and vocational training for skills and lifelong learning”. Investment Priority 10.2 “Improving the quality and efficiency of, and access to, tertiary and equivalent education with a view to increasing participation and attainment levels, especially for disadvantaged groups” and Specific Objective 10.2.1. “Increase the number of postgraduate students who obtain training in the field of R & D & I, encouraging the development of network activities with technology, research and business centers, with emphasis on the participation of women”. These grants will be financed from the credits authorized in the General Budget of Extremadura.	
<b>Supported TRL level:</b>	<ul style="list-style-type: none"> <li>• TRL 3 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> <i>“This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross- regional, which could support the development of the selected value chains in a circular sense. Being based on ESIF funds, this instrument is subject to Art. 70, thus potentially being exploitable for supporting cross-regional cooperation”.</i>	

### 3.3 Friesland

OPEN INNOVATION CALL	
<b>Scope of the instrument:</b>	Regional.
<b>Destination area(s) of funds (if any):</b>	Northern Netherlands S3 Area's and Social challenges.
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>• SME's</li> <li>• Large Enterprises</li> <li>• Research institutes,</li> <li>• Universities.</li> </ul>
<b>Type of financing:</b>	<ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b>	max 40%.
<b>Eligible costs:</b>	<ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Equipment (depreciation),</li> <li>• Consumables,</li> <li>• Overheads,</li> <li>• Travel,</li> <li>• External services,</li> <li>• Subcontracting.</li> </ul>
<b>Source of funding:</b>	ERDF.
<b>Supported TRL level:</b>	<ul style="list-style-type: none"> <li>• TRL: 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b>	<p>The goal of the instrument is to strengthen the innovation eco-system and facilities in the region at such a level that universities and companies are going to be capable to apply successfully in calls of other EU- instruments such as H2020.</p> <p><i>"This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense. Being based on ERDF funds, this instrument is subject to Art. 70, thus potentially being exploitable for supporting cross-regional cooperation".</i></p> <p>For more info: <a href="https://poseur.portugal2020.pt/en/investment-axes/presentation/">https://poseur.portugal2020.pt/en/investment-axes/presentation/</a>.</p>



### 3.4KTN - Scotland

CIRCULAR ECONOMY INVESTMENT FUND	
<b>Scope of the instrument:</b>	Regional.
<b>Destination area(s) of funds (if any):</b>	Circular economy.
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>• SME's</li> <li>• Other.</li> </ul>
<b>Type of financing:</b>	<ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b>	There are two funding strands – one for funding applications of £50.000 to £99.999; and another for higher value applications from £100.000 to £1.000.000. Recipients of funding will be subject to State Aid rules.
<b>Eligible costs:</b>	<ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Travel,</li> <li>• Subcontracting,</li> <li>• R&amp;I infrastructure (investment).</li> </ul>
<b>Source of funding:</b>	the Fund has been established by Zero Waste Scotland (ZWS), funded in part with ERDF funding to support the development and implementation of circular economy <sup>1</sup> ("CE") practices in Scotland. The £18 million Circular Economy Investment Fund, administered by Zero Waste Scotland, offers investment for SMEs based in Scotland and supports work that will deliver circular economy growth. It is supported by the European Regional Development Fund through the £73million Resource Efficiency Circular Economy Accelerator Programme.
<b>Supported TRL level:</b>	<ul style="list-style-type: none"> <li>• TRL: 6 - 7: technology demonstrated or prototyped</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b>	<p><i>"This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense. Being based on ERDF funds, this instrument is subject to Art. 70, thus potentially being exploitable for supporting cross-regional cooperation".</i></p> <p>For more info: <a href="http://www.zerowastescotland.org.uk/circular-economy/investment-fund">http://www.zerowastescotland.org.uk/circular-economy/investment-fund</a></p>

FOOD AND DRINK COLLABORATIVE INNOVATION FUND	
<b>Scope of the instrument:</b>	Regional.
<b>Destination area(s) of funds (if any):</b>	Food and drink.
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>• SME's</li> <li>• Large Enterprises.</li> </ul>
<b>Type of financing:</b>	<ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b>	max 50%.
<b>Eligible costs:</b>	<ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Travel,</li> <li>• Subcontracting.</li> </ul>

**Source of funding:** As part of that new Make Innovation Happen service, Highlands and Islands Enterprise and Scottish Enterprise are investing £650.000 into a new Food and Drink Collaborative Innovation Fund.

**Supported TRL level:**

- TRL 4 - 5: technology validated;
- TRL: 6 - 7: technology demonstrated or prototyped.

**Mechanism for the funding mix building / Additional information:**

*“This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense”*

For more info: <https://www.scottish-enterprise.com/services/develop-new-products-and-services/competitive-collaboration-innovation-fund/overview>

**CIRCULAR ECONOMY BUSINESS SUPPORT SERVICE**

**Scope of the instrument:** Regional.

**Destination area(s) of funds (if any):** Circular economy.

**Category of beneficiaries:**

- SME's.

**Type of financing:**

- Subsidy without co-financing.

**Rate of financing (%):** Bespoke one-to-one consultancy service can provide support with:

- Innovation/opportunities identification;
- Market assessment;
- Stakeholder engagement;
- Business plan support;
- Lifecycle analysis.
- Business case development
- Commercial case development
- Support in identifying funding opportunities
- Communications and marketing support
- Implementation support

On completion, businesses will have a clear picture of the benefits and costs of their proposed intervention and a well-defined pathway towards implementation.

Businesses may then be signposted to our Circular Economy Investment Fund for grant funding to enable implementation.

**Eligible costs:**

- Personnel,
- Travel,
- Subcontracting.

**Source of funding:** The Fund has been established by Zero Waste Scotland (ZWS), funded in part with ERDF funding to support the development and implementation of circular economy (“CE”) practices in Scotland. The Circular Economy Business Support Service, administered by Zero Waste Scotland, offers investment for SMEs based in Scotland and supports work that will deliver circular economy growth. It is supported by the European Regional Development Fund through the £73million Resource Efficiency Circular Economy Accelerator Programme.

**Supported TRL level:**

- TRL 1 - 3: from basic principles observed, to experimental proof of concept

**Mechanism for the funding mix building / Additional information:**

*“This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense. Being based on ERDF funds, this instrument is subject to Art. 70, thus potentially being exploitable for supporting cross-regional cooperation”.*

For more info: <http://www.zerowastescotland.org.uk/circular-economy/business-support-service>.

### 3.5 La Reunion

<b>FUND OF FUNDS: FINANCIERE REGION REUNION</b>	
<b>Scope of the instrument:</b>	Regional.
<b>Destination area(s) of funds (if any):</b>	Reunion S3 - Specialization Areas.
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>• SME's.</li> </ul>
<b>Type of financing:</b>	<ul style="list-style-type: none"> <li>• Subsidy requiring co-financing,</li> <li>• Other.</li> </ul>
<b>Rate of financing (%):</b>	Since these funds are based on public resources, their maximum intensity is determined by European State-Aid Legislation.
<b>Source of funding:</b>	ERDF (24 M€), Regional funds (6 M€), European Investment Fund (20 M€).
<b>Supported TRL level:</b>	<ul style="list-style-type: none"> <li>• TRL 4 - 5: technology validated;</li> <li>• TRL: 6 - 7: technology demonstrated or prototyped;</li> <li>• TRL 8 - 9: technology proven and commercialized.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> This fund of funds was launched on September 2017 by the Regional Council of La Reunion and the European Investment Bank, following an ex-ante analysis of the financial needs of local SMEs. The 50M€ capital constituted by ERDF, Regional and BEI resources, is divided into two kind of instruments managed by intermediaries : an equity co-investment instrument and a funding/loan instrument. For more info: <a href="http://www.eif.org/what_we_do/resources/la_financiere_region_reunion/index.htm">http://www.eif.org/what_we_do/resources/la_financiere_region_reunion/index.htm</a>	

### 3.6 Lazio

<b>APEA - ECOLOGICALLY EQUIPPED PRODUCTION AREA</b>
<b>Scope of the instrument:</b> Regional.
<b>Destination area(s) of funds (if any):</b> Environmental sustainability.
<b>Category of beneficiaries:</b> <ul style="list-style-type: none"> <li>• SMEs.</li> </ul>
<b>Type of financing:</b> <ul style="list-style-type: none"> <li>• Subsidy requiring co-financing</li> </ul>
<b>Rate of financing (%):</b> 50%.
<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• Personnel.</li> </ul>
<b>Source of funding:</b> ERDF.
<b>Supported TRL level:</b> <ul style="list-style-type: none"> <li>• TRL 8 - 9: technology proven and commercialized.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> <i>Based on what is foreseen by the “Italian Delibera CIPE 10/2015”, for regional operational programs co-financed by the ERDF, the national public co-financing is set at a maximum rate of 50 percent of total public expenditures. The related financial coverage is charged on the Fund of rotation equivalent to 70 per cent of the national public quota (35% of the total). The remaining 30 percent is charged on the budget of the regions and / or other public bodies participating in the programs (15% of the total).</i>

<b>CIRCULAR ECONOMY AND ENERGY</b>
<b>Scope of the instrument:</b> Regional.
<b>Destination area(s) of funds (if any):</b> Circular economy and energy.
<b>Category of beneficiaries:</b> <ul style="list-style-type: none"> <li>• SMEs.</li> </ul>
<b>Type of financing:</b> <ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b> 10 – 80%.
<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Equipment (depreciation),</li> <li>• External services,</li> <li>• Consumables,</li> <li>• Overheads,</li> <li>• R&amp;I infrastructure (investment),</li> <li>• Subcontracting.</li> </ul>
<b>Source of funding:</b> ERDF.
<b>Supported TRL level:</b> <ul style="list-style-type: none"> <li>• TRL 6 - 7: technology demonstrated or prototyped;</li> <li>• TRL 8 - 9: technology proven and commercialized.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> <i>Based on what is foreseen by the “Italian Delibera CIPE 10/2015”, for regional operational programs co-financed by the ERDF, the national public co-financing is set at a maximum rate of 50 percent of total public expenditures. The related financial coverage is charged on the Fund of rotation equivalent to 70 per cent of the national public quota (35% of the total). The remaining 30 percent is charged on the budget of the regions and / or other public bodies participating in the programs (15% of the total).</i>

The “*Circular Economy and Energy*” call was launched during the implementation of the SCREEN project, as a logical continuation of an innovative “call for proposal” launched on 2015 by Lazio Region to receive evidence based pre-proposals for the competitive repositioning of a given regional industrial sector, cluster, market and segment. Such a call for proposal and its relevant outcomes are described in section 1.3.1 “Background” in the technical part of the SCREEN Grant Agreement. During the SCREEN activities the approach to the circular economy policies and instruments was fine-tuned according to the first project results and the call “*Circular Economy and Energy*” launched on December 2017 (month 14 of the SCREEN project).

Technically speaking, it cannot be considered as a “*new funding instrument*”, because it falls into the classic ERDF scheme; however it is an innovative application being part of a wider approach that by one side “generated” the SCREEN proposal (starting from the above mentioned 2015 call for proposal), and on the other side used some first project outcomes and indications.

### 3.7 Limburg

<b>LIMBURG ENERGY FUND</b>	
<b>Scope of the instrument:</b>	Regional.
<b>Destination area(s) of funds (if any):</b>	energy saving, sustainable energy, circular economy, remediation of asbestos.
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Large enterprises,</li> <li>• Other.</li> </ul>
<b>Type of financing:</b>	<ul style="list-style-type: none"> <li>• Loan,</li> <li>• Other.</li> </ul>
<b>Rate of financing (%):</b>	€15000 - € 12 mln depends on the specific evaluation of the management team.
<b>Source of funding:</b>	Regional.
<b>Supported TRL level:</b>	<ul style="list-style-type: none"> <li>• TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> <i>“This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense”</i> For more info: <a href="https://www.limburgsenergiefonds.nl/">https://www.limburgsenergiefonds.nl/</a> .	

### 3.8Lodzkie

<b>REGIONAL OPERATIONAL PROGRAMME FOR LODZKIE REGION 2014-2020</b> <b>1.2 INVESTMENTS OF ENTERPRISES IN RESEARCH AND INNOVATION / 1.2.1.</b> <b>ENTERPRISE R &amp; D INFRASTRUCTURE</b>	
<b>Scope of the instrument:</b>	Regional.
<b>Destination area(s) of funds (if any):</b>	Investment in R&D infrastructure for enterprises and consortia.
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Large enterprises.</li> </ul>
<b>Type of financing:</b>	<ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b>	Between 35% - 55% of co-financing in accordance to the regulations on public aid.
<b>Eligible costs:</b>	<ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Equipment (depreciation),</li> <li>• R&amp;I infrastructure (investment).</li> </ul>
<b>Source of funding:</b>	ERDF.
<b>Supported TRL level:</b>	<ul style="list-style-type: none"> <li>• TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> <i>“This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense. Being based on ESIF funds, this instrument is subject to Art. 70, thus potentially being exploitable for supporting cross-regional cooperation”.</i>	



### 3.9 Lombardia

<b>LINEA R&amp;S PER AGGREGAZIONI – (R &amp; D LINE FOR AGGREGATIONS)</b>
<b>Scope of the instrument:</b> Regional.
<b>Destination area(s) of funds (if any):</b> Lombardy's S3 - Specialization Areas.
<b>Category of beneficiaries:</b> <ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Research institutes,</li> <li>• Universities,</li> <li>• Large enterprises.</li> </ul>
<b>Type of financing:</b> <ul style="list-style-type: none"> <li>• Subsidy requiring co-financing,</li> <li>• Loan.</li> </ul>
<b>Rate of financing (%):</b> 40 - 70%, depending on beneficiary category.
<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Equipment (depreciation),</li> <li>• External services,</li> <li>• Consumables,</li> <li>• Overheads.</li> </ul>
<b>Source of funding:</b> ERDF.
<b>Supported TRL level:</b> <ul style="list-style-type: none"> <li>• TRL 1 - 3: from basic principles observed, to experimental proof of concept;</li> <li>• TRL 4 - 5: technology validated;</li> <li>• TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> The SME Partner will benefit of a 5% subsidy increase, constituted by an additional non-refund contribution, if at the time of submission of the application for participation in the Announcement or no later than 12 months from the date of the grant approval, the SME Partner presented a project within the Horizon 2020 program related to the Project admitted to the Financial Intervention and this European project has been assessed by the European Commission services as admitted. For more info: <a href="http://www.fesr.regione.lombardia.it/wps/portal/PROUE/FESR/Bandi/DettaglioBando/Aggregazioni/linea-res-aggregazioni">http://www.fesr.regione.lombardia.it/wps/portal/PROUE/FESR/Bandi/DettaglioBando/Aggregazioni/linea-res-aggregazioni</a>

<b>MANUNET</b>
<b>Scope of the instrument:</b> European.
<b>Destination area(s) of funds (if any):</b> Innovation in Manufacturing.
<b>Category of beneficiaries:</b> <ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Research institutes,</li> <li>• Universities,</li> <li>• Large enterprises.</li> </ul>
<b>Type of financing:</b> <ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b> 50 - 70%, depending on beneficiary category.

SCREEN

<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Equipment (depreciation),</li> <li>• Travel,</li> <li>• Consumables,</li> <li>• Overheads.</li> </ul>
<b>Source of funding:</b> Regional funds
<b>Supported TRL level:</b> <ul style="list-style-type: none"> <li>• TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> The funding mix building for Manunet has foreseen for the first joint call the opportunity choose the type of resources to use (regional funds or ERDF). For those who have chosen not to use ERDF, it has been possible to benefit of the top up of the EC. Manunet consortium has chosen to use first all the funding of the financial bodies (partner of the project) and when finished the funding use the top up of the EC to finance the project in the list. For more info: <a href="http://www.regione.lombardia.it/wps/portal/istituzionale/HP/DettaglioBando/servizi-e-informazioni/imprese/ricerca-e-innovazione-per-le-imprese/bnd-manunet-svec">http://www.regione.lombardia.it/wps/portal/istituzionale/HP/DettaglioBando/servizi-e-informazioni/imprese/ricerca-e-innovazione-per-le-imprese/bnd-manunet-svec</a>

INNODRIVER S3
<b>Scope of the instrument:</b> Regional.
<b>Destination area(s) of funds (if any):</b> Lombardy's S3 - Specialization Areas.
<b>Category of beneficiaries:</b> <ul style="list-style-type: none"> <li>• SMEs.</li> </ul>
<b>Type of financing:</b> <ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b> one of the submesaures foresee subsidy requiring cofinancing - the beneficiary has to contribute with 50%.
<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• External services,</li> <li>• Subcontracting.</li> </ul>
<b>Source of funding:</b> ERDF.
<b>Supported TRL level:</b> <ul style="list-style-type: none"> <li>• TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> Sinergy with H2020/SME Instrument phase 1: sub measure B - euro 600.000,00 - supporting the proposal that have received the "Seal of Excellence". The SME can apply asking for innodrive - mesaure B - euro 30.000,00 for single proposal. For more info: <a href="http://www.fesr.regione.lombardia.it/wps/portal/PROUE/FESR/Bandi/DettaglioBando/Agelazioni/bando-innodriver-2017">http://www.fesr.regione.lombardia.it/wps/portal/PROUE/FESR/Bandi/DettaglioBando/Agelazioni/bando-innodriver-2017</a>

FUND OF FUNDS – ALPGIP
<b>Scope of the instrument:</b> European.
<b>Destination area(s) of funds (if any):</b> Lombardy's S3 - Specialization Areas.
<b>Category of beneficiaries:</b> <ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Large enterprises.</li> </ul>
<b>Type of financing:</b> <ul style="list-style-type: none"> <li>• Loan</li> </ul>

SCREEN

<b>Rate of financing (%):</b> It depends on the specific evaluation of the fund managing team.
<b>Eligible costs:</b> <ul style="list-style-type: none"> <li>• Other.</li> </ul>
<b>Source of funding:</b> regional funds (re-entries from ERDF 2007-13, financial instruments).
<b>Supported TRL level:</b> <ul style="list-style-type: none"> <li>• TRL 8 - 9: technology proven and commercialized.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b> The initiative details (rules, supported level, rate of financing and eligible costs, ...) are not yet defined. The fund of funds is composed by a multi-regional contribution, a EIF top-up, and contribution by private investors. At the moment the following Italian Region, of the Alpin macro-area, have joined the initiative: Lombardy, Piemonte, Valle d'Aosta and Province of Bolzano. For more info: <a href="http://www.openinnovation.regione.lombardia.it/it/regione/news/operativa-la-piattaforma-macroregionale-alpgip">http://www.openinnovation.regione.lombardia.it/it/regione/news/operativa-la-piattaforma-macroregionale-alpgip</a> .

### 3.10 Navarra

<b>ORIZONT ACCELERATOR - SODENA</b>	
<b>Scope of the instrument:</b>	Regional.
<b>Destination area(s) of funds (if any):</b>	Agrifood industry and circular economy.
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>SMEs.</li> </ul>
<b>Type of financing:</b>	<ul style="list-style-type: none"> <li>Subsidy without co-financing.</li> </ul>
<b>Rate of financing (%):</b>	<p>Each project will be allocated €110,000: orizont positivo 01</p> <ul style="list-style-type: none"> <li>- €80,000 in the form of a participative loan for all the projects, on an equal basis, that can be capitalized at the end of the acceleration period;</li> <li>- €20,000 in capital in exchange for a participation by Sodena of 9% of the shareholding;</li> <li>- €10,000 in consultancy services, at the choice of the entrepreneur.</li> </ul>
<b>Eligible costs:</b>	<ul style="list-style-type: none"> <li>Other.</li> </ul>
<b>Source of funding:</b>	Regional funds.
<b>Supported TRL level:</b>	<ul style="list-style-type: none"> <li>TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building / Additional information:</b>	<p><i>“This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense”.</i></p>

### 3.11 North-East Romania

<b>SME INITIATIVE OPERATION PROGRAMME</b>	
<b>Scope of the instrument:</b>	National.
<b>Destination area(s) of funds (if any):</b>	<ul style="list-style-type: none"> <li>National Strategy for Research areas;</li> <li>RIS3 areas.</li> </ul>
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>Other.</li> </ul>
<b>Type of financing:</b>	100% (Guaranty Financial instrument).
<b>Rate of financing (%):</b>	100% (Guaranty Financial instrument).
<b>Eligible costs:</b>	<ul style="list-style-type: none"> <li>Equipment (depreciation),</li> <li>Other.</li> </ul>
<b>Source of funding:</b>	ERDF.
<b>Supported TRL level:</b>	<ul style="list-style-type: none"> <li>TRL 8 - 9: technology proven and commercialized.</li> </ul>
<p><b>Mechanism for the funding mix building / Additional information:</b> Support scheme for SMEs, not directly linked to Circular Economy.</p> <p>The SME Initiative - launched in Romania in October 2016 - is co-financed by Romania through the Operational Programme “SME Initiative”, the European Commission and the EIB Group - the European Investment Bank (EIB) and the European Investment Fund (EIF) - with EIF managing the scheme on behalf of the different contributors. The SME Initiative is a public-private partnership acting as catalyst for private investments and supporting economic growth and job creation.</p> <p>To this end, it entails an innovative change in the use of European Structural and Investment Funds (ESIF), combining the latter with EU central budget (resources from the Horizon 2020 programme) and EIB Group funds. Through a risk-sharing mechanism, the EUR 100 million of ESIF resources made available by Romania, leveraged with commercial lending, are expected to generate more than EUR 540 million of new SME loans at favourable terms.</p> <p>To this end, it entails an innovative change in the use of European Structural and Investment Funds (ESIF), combining the latter with EU central budget (resources from the Horizon 2020 programme) and EIB Group funds. Through a risk-sharing mechanism, the EUR 100 million of ESIF resources made available by Romania, leveraged with commercial lending, are expected to generate more than EUR 540 million of new SME loans at favourable terms.</p>	

### 3.12 Tampere

THE SUSTAINABLE GROWTH AND JOBS 2014-2020 STRUCTURAL FUNDS PROGRAMME OF FINLAND	
<b>Scope of the instrument:</b>	National
<b>Destination area(s) of funds (if any):</b>	Promoting energy efficiency in SMEs; Developing solutions based on renewable energy and energy-efficient solutions.
<b>Category of beneficiaries:</b>	<ul style="list-style-type: none"> <li>• SMEs,</li> <li>• Research institutes,</li> <li>• Universities,</li> <li>• Other.</li> </ul>
<b>Type of financing:</b>	<ul style="list-style-type: none"> <li>• Subsidy requiring co-financing.</li> </ul>
<b>Rate of financing (%):</b>	max 70% (investments), max 80% (other).
<b>Eligible costs:</b>	<ul style="list-style-type: none"> <li>• Personnel,</li> <li>• Travel.</li> </ul>
<b>Source of funding:</b>	ERDF.
<b>Supported TRL level:</b>	<ul style="list-style-type: none"> <li>• TRL 6 - 7: technology demonstrated or prototyped.</li> </ul>
<b>Mechanism for the funding mix building:</b>	<p><i>"This instrument does not expressly provide for the integration of funds of different origins. It is maintained in the best practice list for its recognizable value as its characteristics are suitable (or could be suitable if adequately re-routed) to support actions, also cross-regional, which could support the development of the selected value chains in a circular sense. Being based on ERDF funds, this instrument is subject to Art. 70, thus potentially being exploitable for supporting cross-regional cooperation".</i></p>

## 4. Success stories

For each of the tools selected as "best practice", the SCREEN project partners were then asked to provide a summary factsheet describing successful cases of application of the instrument. The scope was to highlight, through concrete examples, the features of the funding instrument and the supported types of activity. A sub-set of collected success stories is reported in the next sub- sections.

### 4.1CCDRC

<b>Success Story Title: “Book in Loop”</b>
<i>Funding instrument:</i> Fundo Ambiental: Apoiar a Transição para uma Economia Circular - Fase I (Alternative to Fundo Ambiental: Repensar os Plásticos na Economia).
<i>Region:</i> Centro Region.
<i>Starting Date – End Date:</i> December 2017 – December 2018.
<i>Involved Stakeholders:</i> Book in Loop.
<p><i>Description of the action:</i></p> <p>Book in Loop is mainly focusing on the circular economy subject. Based on the high expenditures that educators have in the beginning of every year, this start-up provides an online platform that allows the exchange of used scholar books.</p> <p>Educators can buy books for the next year with 60% of discount and sell the last year ones and receive 20% of the retail selling price. The developed solution has been on the market for three years and every year improvements having been done.</p> <p>This circular approach works and can be applied to many other products of ephemeral usage. Textbooks were the first product and the beginning of a set of new other products.</p> <p>Book in Loop is a company focused on developing new solutions, focused on circular economy for different markets and addressing new problems. The aim is to create a community of “Loopers” and be the standard company working on circular economy.</p>
<p><i>Achieved results:</i></p> <p>After three years of operations Book in Loop has already helped 60.000 families and allowed them to save more than one million euros. This year, the company is expecting to gather more than 80.000 families and extend their savings to two million.</p> <p>The results from Book in Loop are excellent, and the prevision for the next years is to keep growing and developing new products, keeping the same focus on circular economy.</p> <p>Similar to school books, University books could also enter into this circular framework, and so, this year Book in Loop will launch UniLoop. This is a new platform for the university segment. The objective is for UniLoop to become a known brand which relates to students, not only a place to exchange books. This new product will also give the company the opportunity to enter in the international market.</p>
<p><i>Support material:</i> <a href="http://www.bookinloop.com">www.bookinloop.com</a></p> <p><a href="https://www.youtube.com/watch?v=aJOxq2_E7ig">https://www.youtube.com/watch?v=aJOxq2_E7ig</a></p> <p><a href="https://www.facebook.com/bookinloop">https://www.facebook.com/bookinloop</a>.</p>

<b>Success Story Title: “Cantanhede recicla – ações imateriais”</b>
<i>Funding instrument:</i> Valorização de Resíduos.
<i>Region:</i> Centro Region.
<i>Starting Date – End Date:</i> 28.06.2016 – 30.06.2018.
<i>Involved Stakeholders:</i> INOVA – EM.

## SCREEN

### *Description of the action:*

The action comprises a set of immaterial initiatives that will be complemented by another action approved in the same Funding instrument – “Cantanhede recicla – ações materiais”(description of the action is included in this page).

Both actions are interlinked and both are promoted by INOVA – EM, the managing body of the urban waste management services of the municipality of Cantanhede.

The aim of the set of immaterial actions is to increase in a significant way the quantity and the quality of recycled materials through awareness campaigns and environmental education concerning the production and disposal of waste.

### *Achieved results:*

An assessment of the quantity and typology of waste produced by each home was made, as well as an analysis of the way the waste is disposed in the available devices.

After this assessment, several teams of the company promoted actions of awareness with families regarding good practices on waste separation and recyclable materials.

This lead to an increase of practices related to composting, reuse of products and recycling, and to an overall mobilization of the citizens of Cantanhede to intervene more actively in their own community and making them more environmentally engaged.

### *Support material:*

<http://cantanhederecicla.pt/>

## **Success Story Title: “Trust”**

*Funding instrument:* SI Investigação e Desenvolvimento Tecnológico (SI & DT).

*Region:* Centro Region.

*Starting Date – End Date:* 01.07.2018 – 30.06.2021.

*Involved Stakeholders:* MICROIO - SERVIÇOS DE ELECTRÓNICA LDA (promotor, from Centro Region)+2 Portuguese partners (another company and a R&D unit).

### *Description of the action:*

The TRUST project aims to develop a meteorological and environmental monitoring system capable of identifying and alert risk conditions in roads equipped with ITS technologies infrastructures, and, through communication between vehicles and Infrastructure, alert drivers in circulation of any existent danger due to accidents in specific locations, enabling the reduction of incidents and associated fatalities.

The continuous increase of vehicles circulating around the world has raised a number of issues, making it a prominent theme of national and international political agendas due to its direct impact toward energy consumption, air pollution, accidents and traffic congestion that largely affects urban areas. To avoid these problems, various strategies have been adopted in order to mitigate the harmful and dangerous effects of road traffic growth. Bad weather conditions are also another major cause of road accidents, especially in rainy and wet conditions, therefore a constant monitoring through vehicular communications, the Internet of Things, Sensing, Cloud Computing and Big Data Will certainly contribute to a drastic reduction of this typology of incidents.

### *Results to achieve:*

The TRUST project intends to invest in an innovative system, that with a strong consortium, composed by two companies and a reputed Research and Scientific Entity, will exploit the emerging market for software solutions.

Additionally, the TRUST project is part of the SARWS project that is an European EUREKA program initiative labelled by the CelticPlus Office. The TRUST Project PT2020, proposed here, will serve to finance the Portuguese participation in the SARWS international project.



## 4.2 Lombardia

<b>Success Story Title: “SuperEcoPlast”</b>
<i>Funding instrument:</i> Research&Development line for aggregations.
<i>Region:</i> Lombardy.
<i>Starting Date – End Date:</i> 6 December 2016 – 6 December 2018.
<i>Involved Stakeholders:</i> enterprises and university.
<p><i>Description of the action:</i> Several areas of the manufacturing sector are involved due to the transversality of surface finishing technologies: automotive, white goods, mobile / furniture, construction, advanced mechanics.</p> <p>The technological innovations of Superecoplast are easily applicable to the metallization (chrome plating) sector of plastic materials, and then to the final applications related to the components for cars, furniture and devices, consumer goods. Surface metallization gives the molded piece high aesthetic and functional properties, such as scratch resistance and cleanability. The project’s finality is to:</p> <ul style="list-style-type: none"> <li>• Integrate technologies with low environmental impact such as solventless UV coating and physical vapor coating deposition (PVD) of metal chromium (therefore free of Cr6 + ions);</li> <li>• Develop cycles of metallic finishing of highly innovative, high performance and low environmental impact plastics materials, as they are free from Cr6 + and from the release of organic solvents.</li> </ul>
<p><i>Achieved results:</i></p> <ul style="list-style-type: none"> <li>• Setting of the metallization of the plastic substrates (UV curing cycle of the varnish, cycle of deposition of metal chromium by PVD);</li> <li>• Diversification and expansion of classes of treatable plastic materials (extending to materials not commonly treated such as polypropylene);</li> <li>• Performance improvement of metallized products, with particular reference to their mechanical surface behavior (hardness, scratch resistance, wear resistance, adhesion).</li> </ul>
<p><i>Support material:</i></p> <p><a href="http://www.greencoat.it/?page_id=237">http://www.greencoat.it/?page_id=237</a></p> <p><a href="http://fibereuse.eu/">http://fibereuse.eu/</a></p>

The SME obtained the additional 5% funding thanks to the participation to the project "FiberEUse" funded by the Horizon 2020 CIRC-01-2016 call "Systemic, eco-innovative approaches for the circular economy: large-scale demonstration projects". FiberEUse concerns the large-scale demonstration of new circular economy value-chains based on the reuse of end-of-life fiber reinforced composites. The project involves the participation of stakeholders (companies, universities, research centers) from 7 European countries. This is a good example of synergic use of European and local funding instruments to support industry uptake of innovation results.

### 4.3 Extremadura

<b>Success Story Title: Grant for the financing of predoctoral contracts for the training of doctors in public centers</b>
<i>Funding Instrument:</i> ESF.
<i>Region:</i> Extremadura.
<p><i>Starting Date – End Date:</i></p> <p>The start date is the signing of the contract between the beneficiary body and the pre-doctoral candidate, which must be produced within a maximum period of one month from the publication of the Resolution of the aid in the Official Diary of the State (DOE).</p> <p>The call for the Grant has been made by Order of May 11, 2016 (Decree 45/2016, of April 12), whose Resolution of May 10, 2017 is published in the DOE No.95 of May 19, 2017.</p> <p>The Centre awarded with the present grant, had a period of one month to sign the contract with the candidate, once the publication of resolution has been done.</p> <p>The final date is fixed four years from the beginning of the predoctoral contract, so the thesis projects will conclude after 2021.</p>
<p><i>Involved Stakeholders:</i></p> <p>The beneficiaries of these grants are the agents of the Extremadura System of Science and Technology (SECTI): University of Extremadura and Public R &amp; D Centers of Extremadura. And the predoctoral candidates are university graduates of Spanish nationality who meet the requirements set forth in the call for grant.</p> <p>In the present call, the beneficiary centres are:</p> <ul style="list-style-type: none"> <li>• the University of Extremadura with 22 predoctoral contracts;</li> <li>• the Jesús Usón Minimally Invasive Surgery Center with 3 predoctoral contracts;</li> <li>• the Scientific and Technological Research Center of Extremadura (CICYTEX), with 1 predoctoral contract.</li> </ul>
<p><i>Description of the action:</i></p> <p>The Regional Smart Specialization of Extremadura during its designing phase identified a lack of competencies in the Regional Scientific System, and a strong need of training and promoting qualified researchers among the strategic sectors of the Region. One of those sectors was agriculture and agrotechnology. Therefore, this Grant was designed to start the qualification of new researchers, making the point around the importance of Human Resources in the regional development.</p> <p>With ESF the organization of these training phase became a reality. And the strategy is with these grants, strength the Research and Innovation Sector in the region, by training researchers that will later organise Specific Researching Groups around strategic sector that will be also able to attract funds and promote an innovative development in the region.</p> <p>For an offer of 30 predoctoral contracts, the General Secretary for Science has received a total of 104 applications. The beneficiary applicants must associate their research activity with the strategic areas of the current Regional R + D + I Plan. Regarding the applications submitted, 48% (50 applicants) of the thesis projects were linked to the green economy, circular economy and bioeconomy. Finally, 11 applicants will develop their doctoral thesis in the strategic agri-food sectors, the management of natural resources, tourism linked all of them to the green economy, circular economy and bioeconomy.</p> <p>The expected success rate of these grants is of 70% at the end of the grants, based on the results obtained in previous calls of similar characteristics.</p> <p>Amount of Grant: The amount of the grant to be granted for the formalization of predoctoral contracts is 20,501.15 euros, corresponding to 75% of the costs of the predoctoral research staff hired under their collective agreement and with a 30% reduction in the costs of Social Assurance costs.</p>

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### *Achieved results:*

The results are not linked to any commercialization or exploitation results as the Grant is at a TRL 1 – 3.

The promotion of commercialization is linked to the General Director for Enterprises and the Public Company of Internationalization – AVANTE.

However the results achieved in the grant presented in the present form, are collected when the interested parties complete the various standardized annual and final reports and a table with their scientific production data, which can be accessed through the platform for processing and managing the grants: <http://ayudaspri.gobex.es/portal/>

Likewise, those interested must have their data updated on the basis of the Curriculum Vitae Normalized (CVN).

### *Support material:*

These grants are at a very early stage and there are still no results that can be published. Is not posible to report nowadays, on the monitoring results collected in the annual reports and neither reveal data on aspects related to the Doctoral Thesis Projects.

However in the next few months, there's several on-site visits planned, with a technical follow-up activity that will gather the advertising measures carried out by the beneficiary of the grant.

Several Official Links:

<https://ciudadano.gobex.es/buscador-de-tramites/-/tramite/ficha/5186>

[http://noticias.juridicas.com/base\\_datos/CCAA/600247-d-91-2017-de-20-jun-ca-extremadura-vi-plan-regional-de-investigacion-desarrollo.html](http://noticias.juridicas.com/base_datos/CCAA/600247-d-91-2017-de-20-jun-ca-extremadura-vi-plan-regional-de-investigacion-desarrollo.html)

#### 4.4KTN – Scotland

<b>Success Story Title:</b>
<i>Funding instrument:</i> Circular Economy Investment Fund.
<i>Region:</i> Scotland.
<i>Involved Stakeholders:</i> Ingenza, University of Dundee and Drochaid Research Services.
<p><i>Description of the action:</i></p> <p>Ingenza a world leading biotech business in Midlothian is being funded £191,393 to implement a highly innovative and carbon neutral approach to convert a gaseous waste stream (biobased substrates), into a useful chemical known as succinate. Succinate is a water-soluble, colourless crystal that is used in medicine, the manufacture of lacquers and perfume esters. It also has applications in foods as a sequestrant, buffer, and a neutralising agent.</p> <p>Ingenza is pleased to announce a collaboration with the University of Dundee and Drochaid Research Services on a highly innovative project that aims to reduce the waste carbon dioxide generated by industrial biotech manufacturing applications. Funded by Zero Waste Scotland, the proposal involves capturing and recycling the emerging CO2 waste streams that evolve during fermentative bioprocessing, and using them as a supplementary carbon feedstock for bio-based chemical manufacturing. This strategy is essential for the sustainable feedstock and energy inputs required for bio-based manufacturing approaches to be truly ‘circularised’ in the future. The project will be funded by Zero Waste Scotland’s £18 million Circular Economy Investment Fund, which supports work that will deliver circular economy growth in line with Scottish Government objectives and targets. The Circular Economy Investment Fund is supported by the Scottish Government and the European Regional Development Fund through the £73 million Resource Efficiency Circular Economy Accelerator Programme.</p>
<p><i>Achieved results:</i></p> <p>Capabilities: <a href="https://www.ingenza.com/capabilities/">https://www.ingenza.com/capabilities/</a></p>
<p><i>Support material:</i> <a href="https://www.ingenza.com/ingenza-embarks-on-collaborative-project-to-recycle-co2/">https://www.ingenza.com/ingenza-embarks-on-collaborative-project-to-recycle-co2/</a></p>

<b>Success Story Title: Ferguson’s PI-Polymer Recycling</b>
<i>Funding instrument:</i> Circular Economy Investment Fund.
<i>Region:</i> Scotland.
<i>Involved Stakeholders:</i> Ferguson’s PI-Polymer Recycling, Recycling Technologies Ltd and Impact Recycling Ltd.
<p><i>Description of the action:</i></p> <p>Project Beacon, a big solution to a big problem which combines existing and innovative mechanical and chemical recycling to create a world-first Advanced Plastics Reprocessing facility at Binn Eco Park, Perthshire. Beacon has been supported by Zero Waste Scotland, the Circular Economy Investment Fund (backed by Scottish Government and European Regional Development Funding) has just awarded funding of £1.7million in Perthshire. By locating state-of-the-art recycling technologies together, significantly more plastic is kept in the economy and diverted from landfill and incineration, contributing towards Scotland’s ambitious recycling targets.</p> <p>The system being developed at Project Beacon combines the latest material separation combined with a chemical feedstock recycling process.</p> <p>The key element is said to be a patented process based on thermal cracking which has been developed to cope with difficult to recycle end-of-life plastic waste such as mixed, laminated, black, film, hard and contaminated streams.</p> <p>The process produces a range of chemical constituents that can be used to create new virgin plastics, or other chemical products.</p>

## SCREEN

<i>Achieved results:</i> The facility will process between 15,000 and 25,000 tonnes of plastics per annum and create over 70 new jobs.
<i>Support material:</i> <a href="https://www.zerowastescotland.org.uk/case-study/project-beacon">https://www.zerowastescotland.org.uk/case-study/project-beacon</a>

<b>Success Story Title: Recycling Technologies</b>
<i>Funding instrument:</i> Circular Economy Investment Fund.
<i>Region:</i> Scotland.
<i>Involved Stakeholders:</i> Recycling Technologies.
<i>Description of the action:</i> Recycling Technologies in Perth and Kinross is being funded £1 million to develop Plaxx, a low sulphur HFO replacement from residual waste plastic, which can be developed into a commercially viable hydrocarbon product used as a heavy fuel oil alternative or used to make virgin plastic.
<i>Achieved results:</i> Plaxx is a ultra low sulphur oil, cut into four fractions. These have applications in multiple industrial sectors and can be sold individually or combined dependent on the drives of the local market place. Plaxx comprises several hydrocarbon fractions which can be sold separately or as a whole: <ul style="list-style-type: none"><li>• Target applications are as recycled feedstock for production of plastics and as a wax.</li><li>• Alternative uses are as recovered low-sulphur fuel for shipping and power and/or heat generation.</li></ul> Target end markets for Plaxx fractions: <ul style="list-style-type: none"><li>• The blend of Plaxx-8, Plaxx-16 and Plaxx-30 as feedstock for steam cracking in the plastics production chain.</li><li>• Plaxx-50 as a petroleum wax in packaging, cosmetics and other applications.</li></ul> Both of these applications allow Plaxx to be used as a highly-desirable recycled petroleum feedstock. Alternative end markets for Plaxx fractions: <ul style="list-style-type: none"><li>• Plaxx-16 as Low Sulphur Marine Gas Oil (LS MGO) for the shipping industry, MARPOL-compliant.</li><li>• Plaxx-30 as Low Sulphur Heavy Fuel Oil (LS HFO) for use in engines/burners.</li><li>• The blend of Plaxx-8, Plaxx-16, Plaxx-30 and Plaxx-50 as LS HFO for use in engines/burners with modified fuel delivery systems.</li></ul> Fuel applications represent Plaxx being used as a recovered material and are relevant where the RT7000 is located too far from a petrochemical refinery for transport to be economic and/or environmentally desirable.
<i>Support material:</i> <a href="https://recyclingtechnologies.co.uk">https://recyclingtechnologies.co.uk</a> <a href="https://recyclingtechnologies.co.uk/technology/plaxx/">https://recyclingtechnologies.co.uk/technology/plaxx/</a>

<b>Success Story Title: Xanthella</b>
<i>Funding instrument:</i> Circular Economy Investment Fund.
<i>Region:</i> Scotland.
<i>Involved Stakeholders:</i> Xanthella, Allenergy and Woodland Renewables (Ardnamurchan Estate).
<i>Description of the action:</i> Xanthella in Oban with a £581,507 investment is looking at algal production from whisky by-products. This project will enable new industry in rural areas that simultaneously increases the strength of the rural circular economy by enabling better use of stranded timber and distillery co-products.

## SCREEN

### *Achieved results:*

The ENBIO project, funded by Zero Waste Scotland, is highly innovative and (to our knowledge) currently unique in the world. It uses algal bioproduction to enable new industry in rural areas and at the same time increasing the strength of the rural circular economy by enabling better use of stranded timber and distillery coproducts.

The project builds on the existing LECF-funded ASLEE project which developed a novel, class-leading internally lit photobioreactor (Pandora PBR™) whose lighting can be externally controlled to meet grid demands, allowing the PBRs to be used as a rapidly-acting balancer of local renewable energy production. The ASLEE project also demonstrated that the algae are very tolerant to light intermittency, making their production an ideal transactive load.

The ENBIO project will see sixteen 1000 litre Pandora PBR™ deployed on the Ardnamurchan Estate using surplus energy from the CHP plant to produce high value algae and automatically matching local electricity demand with production. The Ardnamurchan PBR array will give Scotland a lead in industrial scale algal biotechnology in the UK.

In addition, the ENBIO project will contribute to the low carbon economy through helping reduce transport costs, displace algal imports that are currently air shipped to Scotland, achieve better use of distillery co-products and directly incorporate CO2 into the algae.

### *Support material:*

<http://aslee.scot/energy-and-the-bioeconomy-enbio/>

## 4.5 Navarra

<b>Success Story Title: Brioagro technologies</b>
<i>Funding instrument:</i> ORIZONT ( <a href="http://www.orizont.es/en/">http://www.orizont.es/en/</a> )
<i>Region:</i> NAVARRA
<i>Starting Date:</i> 2016 <i>End Date:</i>
<i>Involved Stakeholders:</i> Brioagro Technologies, Sodena and Florette
<i>Description of the action:</i> Brioagro it is a monitoring system of the main variables in which farmers can intervene to improve their crops, thus from your computer or mobile device you can supervise real-time evolution. It is a technology system of agriculture control. It is possible to achieve an increase of the quality and productivity of crops as well as a reduction of the environmental impact with a limited investment.
<i>Achieved results:</i> Brioagro systems achieves reductions from 20 to 40% in irrigation systems depending on the type of crop.
<i>Support material:</i> <a href="http://brioagro.es/">http://brioagro.es/</a>

#### 4.6 Tampere

<b>Success Story Title: Development of BioMediTech's international operations in Euregio</b>
<i>Funding instrument:</i> The Sustainable Growth and Jobs 2014-2020 Structural Funds Programme of Finland (article 70).
<i>Region:</i> Tampere Region.
<i>Starting Date – End Date:</i> 1.1.2016-31.12.2018.
<i>Involved Stakeholders:</i> BioMediTech, the joint research institute of Tampere University of Technology and University of Tampere.
<p><i>Description of the action:</i></p> <p>At the moment Finland lacks viable ecosystem in life science industry as well as the amount of risk capital is relatively low. One of the world's leading innovation ecosystems in this field is located in central Europe. This so called Euregio in Belgium, Netherlands and Germany contains hundreds of different size companies from leading pharmaceuticals to small start ups. The ecosystem and innovation platforms produce continuously new commercial products and clinical treatments. The area also contains high number of skilled personnel for international commercialization as well as large amount of risk capital. In this project BioMediTech establishes contact point to Belgium in order to become more active member in this productive ecosystem.</p>
<p><i>Achieved results:</i> The aim of the project is to foster the academic collaboration, obtain more international funding as well as create new international routes for commercialization of institute's research findings.</p>



## 5. Matching local emerging ideas and cross-regional value chains with the selected instruments

Given the availability of detailed and exhaustive information about the existing funding instruments, this section proposes a methodology to identify potential matches among the funding instruments and the local emerging ideas and cross-regional synergies, identified in Task 3.3, which should lead to the development, in a circular sense, of the value chains selected in the previous phases of the project. The scope of this activity is twofold. On the one hand, potential routes to support the implementation of the synergies identified to unlock new circular economy business opportunities are identified. On the other hand, the existing gaps among funding instruments and cross-regional synergies that could lead to the development of new cross-regional support instruments targeted to circular economy are identified. Such gaps and the related recommendations for new funding instruments are discussed in the next section.

It should be noted that some instruments, in the current formulation, may not be dedicated specifically to the circular economy; however, the operating mechanism as well as the ability to activate multiple sources of financing make them particularly interesting for possible adaptations to support the circular economy. Therefore, they have been considered in the analysis.

The adopted matching method has been primarily based on the following matching criteria, which exploit the information reported in the funding instrument mapping tool explained at page 6 of this document:

- Target TRL of the considered initiative or cross-regional synergy matched with supported TRL of the funding instruments;
- Type of investment and funding item required by the initiative or cross-regional synergy matched with the eligible costs of the instrument;
- Type of proposer matched with type of beneficiary of the instrument;
- Objective of the initiative matched with the scope of the instrument.

These four matching criteria have been applied to all the initiatives and funding instruments of the Regions where stakeholders of the initiative are involved. The resulting mapping process is conceptually summarized in the Figure below. In this way, a map of feasible associations and areas with limited associations are highlighted thus indicating, at the same, time finding opportunities and gaps.

	Investment Instrument type 1	Investment Instrument type 2
CE Initiative 1	X	
CE Initiative 2		X
CE Initiative 3	X	X
CE Initiative 4		

GAP

Examples of feasible matching cases are provided in the table below. It is worth to notice that many synergies, being concerned with a potential cooperation between regional stakeholders focused on specific business opportunities are confidential and cannot be reported in the public version of this deliverable. Therefore, only non- confidential synergies are reported as examples.

Cross-regional synergies	Funding opportunities
<p><b>Sludge recovery and utilization</b></p> <p><b>LAZIO AND TAMPERE:</b></p> <p>Lazio in Italy and Tampere in Finland face a challenge with the production of sewage sludge that contains important nutrients. Current sewage systems dilute the sludge, making it harder to valorize and there is a lack of technologies to productively extract the valuable materials.</p> <p><b>HOTSPOT</b></p> <p><b>Barriers</b></p> <ol style="list-style-type: none"> <li>1. Lack of filtration</li> <li>2. Lacking consumer acceptance</li> <li>3. Absence of specific legislation</li> </ol> <p><b>Stakeholders</b></p> <p>Tampere University of Technology, Tech-Marketplace, Friesland University of Applied Sciences, Università di Firenze</p> <p><b>EMERGING IDEAS</b></p> <p><b>FRIESLAND:</b></p> <p>Cirtec and KNN Cellulose BV have developed a filtering technology that filters only the cellulose out of the sludge making it possible to use it for example as drainage inhibitor under roads. The extraction of the cellulose also makes the rest of the sludge easier which can lead to a cost reduction of 15-20% for aeration.</p> <p>KNN Cellulose BV, Cirtec</p> <p>Ecophos in Friesland have developed a system that can extract almost 99% of phosphate from incinerated sludge, making it easy to add this highly effective valorization step at the end of the process.</p> <p><b>SYNERGY</b></p> <p><b>TECHNOLOGY EXPORT</b></p> <p>Because the innovations are so mature in this case, we would suggest a Technology Export, from Friesland to Lazio and Tampere.</p>	<p>Exploitation of the compliance with the Art. 70 of two existing instruments:</p> <p><i>Lazio - Circular Economy and Energy fund:</i> Instrument targeted to SMEs providing subsidies requiring co-financing, with a funding rate between 10%-80%, at TRL 6-7, on the ROP ERDF- 2014-2020 fund, with a funding mix 50% EU, 35% national, 15% regional.</p> <p><i>Fryslân- Circulair Economy Call Fryslân:</i> instrument targeted to SMEs providing subsidies requiring co-financing, with a funding rate of maximum 40%, at TRL 6-7, on regional funds.</p>
<p><b>Valorization of grass</b></p> <p><b>Friesland experiences that processing of wild non-fodder grass could become much more efficient, thus leading to more value creation.</b></p> <p><b>HOTSPOT</b></p> <p><b>Barriers</b></p> <ol style="list-style-type: none"> <li>1. Feedstock needs to be fresh</li> <li>2. Lack of mature business case</li> </ol> <p><b>Stakeholders</b></p> <p>provincie fryslân, van hall larenstein university of applied sciences</p> <p><b>EMERGING IDEAS</b></p> <p>In Limburg, NewFoss has developed a method to use this kind of grass to make packaging material that is currently used for egg boxes.</p> <p>Huhtamaki, NewFoss, Staatsbosbeheer</p> <p><b>SYNERGY</b></p> <p><b>STRATEGIC INVESTMENT</b></p> <p>In this case, Strategic investment could be used to extend the use of this technology to other kinds of packaging, thus creating a high-value use for the grass.</p>	<p>Exploitation of the Art. 70 compliance of two existing instruments:</p> <p><i>Limburg- Energy fund:</i> Instrument targeted to industry providing loans and subsidies requiring co-financing, at TRL 6-7, using a mix of Regional and EIB funds, focused on energy savings and circular economy.</p> <p><i>Fryslân- Circulair Economy Call Fryslân:</i> instrument targeted to SMEs providing subsidies requiring co-financing, with a funding rate of maximum 40%, at TRL 6-7, on regional funds.</p>
<p>Name: Education for circular economy capacity building Leader: Veltha</p> <p><b>HOTSPOT</b></p> <p><b>Description</b> (new ideas, background)</p> <ul style="list-style-type: none"> <li>• Training schemes for regional officers</li> <li>• International master course</li> </ul> <p><b>Barriers</b> (hotspots, normative)</p> <ul style="list-style-type: none"> <li>• Lack of awareness</li> <li>• Legal barriers at each level, local, national, EU</li> <li>• Specific training on how to deal with these barriers</li> </ul> <p><b>Partners</b> (organisation/region/position in value chain/sector/role/contact)</p> <ul style="list-style-type: none"> <li>• Tuscia University</li> <li>• Tampere University</li> <li>• AFIL</li> <li>• VELTHA</li> <li>• Partners of previous project (ERASMUS+)</li> </ul> <p><b>EMERGING IDEAS</b></p> <p><b>Proposed solutions</b> (emerging ideas, approaches)</p> <ul style="list-style-type: none"> <li>• Raising awareness in schools (all levels)</li> <li>• Training to regional officers, stakeholders</li> <li>• Training in circular procurement</li> </ul> <p><b>Deliverables</b> (deliverables, workpackages/contributors)</p> <ul style="list-style-type: none"> <li>• Specific training courses</li> </ul> <p><b>SYNERGY</b></p> <p><b>WORKING GROUP</b></p> <p><b>Calls to action</b> (task, responsible, contributors, deadline)</p> <ul style="list-style-type: none"> <li>• ERASMUS+ projects, skills alliance, international master's course</li> <li>• International conference</li> <li>• Analyze current projects and build on them</li> </ul>	<p>No specific Regional instrument exists to support training programs for public institution officers on specific emerging topic. Opportunities from the Erasmus+ European program can be exploited to support this action.</p>

<p>Name: Implementation of policies on raw materials for CE value chains Leader: Veltha</p> <p><b>SCREEN</b> <small>Screen is a project of the European Union under the Horizon 2020 programme</small> 11</p> <p><b>Hotspot</b></p> <p><b>Description</b> (key ideas, background)</p> <ul style="list-style-type: none"> <li>CE-SCS-08-2018-2019-2020 Sub action c) Responsible sourcing of raw materials in global value chains</li> </ul> <p><b>Barriers</b> (hotspots, normative)</p> <ul style="list-style-type: none"> <li>Wider group of end users</li> <li>Distance from recycled raw materials</li> <li>Different prices in different areas (low price)</li> </ul> <p><b>Partners</b> (organisation/region/position in value chain/sector/role/contact)</p> <ul style="list-style-type: none"> <li>SCREEN partners and business partners</li> </ul> <p><b>Proposed solutions</b> (emerging ideas, approaches)</p> <ul style="list-style-type: none"> <li>Same approach as in the policy lab</li> <li>Global business and stakeholder platform</li> <li>Promotion of responsible sourcing and businesses</li> </ul> <p><b>Deliverables</b> (deliverables, workpackages/contributors)</p> <ul style="list-style-type: none"> <li>Ideas for creating incentives</li> </ul> <p><b>MARKET UNLOCKING</b></p> <p><b>Calls to action</b> (task, responsible, contributors, deadline)</p> <ul style="list-style-type: none"> <li>Call CE-SCS-08-2018-2019-2020: Raw materials policy support actions for the circular economy → Deadline 02/2019</li> </ul>	<p>No specific regional instrument exists for supporting european level material inventory creation and to define specific policy actions to increase the recycling rate of specific strategic materials. Open innovation initiatives should be strengthen in this direction. In the short term, Coordinated and Support Actions –CSAs should be exploited as support instruments.</p>
<p>Name: Circular economy to boost rural areas Leader: Azores, Crete</p> <p><b>SCREEN</b> <small>Screen is a project of the European Union under the Horizon 2020 programme</small> 11</p> <p><b>Hotspot</b></p> <p><b>Description</b> (key ideas, background)</p> <ul style="list-style-type: none"> <li>Specific application of MoU to rural areas</li> <li>Synergies for circular economy opportunities in cheese making and wine making</li> </ul> <p><b>Barriers</b> (hotspots, normative)</p> <ul style="list-style-type: none"> <li>Wide distribution of facilities → cost of transport, insularity</li> <li>Difficulties in a right communication towards the end users</li> </ul> <p><b>Partners</b> (organisation/region/position in value chain/sector/role/contact)</p> <p>Azores, Navarra, Crete, Centro, Fryslan (Tourism)</p> <p><b>Proposed solutions</b> (emerging ideas, approaches)</p> <ul style="list-style-type: none"> <li>To replicate (and adapt) raw material and waste strategy in the rural sector</li> <li>Logistics solutions – new business model</li> <li>Close loop locally, then analyze the rest</li> <li>Local consortia to minimize transport costs separate contributions of tourism and local</li> </ul> <p><b>Deliverables</b> (deliverables, workpackages/contributors)</p> <ul style="list-style-type: none"> <li>Local analyses, involvement of local actors raising awareness, local training, certifications, best practices</li> <li>Keep the cultural identity (how to)</li> </ul> <p><b>BUSINESS MODELLING</b></p> <p><b>Calls to action</b> (task, responsible, contributors, deadline)</p> <ul style="list-style-type: none"> <li>Look for projects (Interreg)</li> <li>Possible linking H2020 Call CE-RUR-10-2019: Circular bio-based business models for rural communities</li> <li>Organize a thematic event (Workshop or conference)</li> </ul>	<p>This synergy, being promoted by several regions characterized by a wide distribution of rural areas, would be hardly implemented by exploiting existing regional instruments that shall be fine tuned and extended to support multi-regional consortia. Possible implementation through existing H2020 opportunities, with potential increase of probability of success through the extension of the Seal of Excellence schema to cross-regional partnerships advocated by SCREEN.</p>
<p>Name: Ceramic products reuse and recycle Leader: Centro</p> <p><b>SCREEN</b> <small>Screen is a project of the European Union under the Horizon 2020 programme</small> 9</p> <p><b>Hotspot</b></p> <p><b>Description</b> (key ideas, background)</p> <ul style="list-style-type: none"> <li>Potential for incorporation of waste (including from other sectors): for example construction</li> <li>Potential for incorporation as new materials in other sectors</li> </ul> <p><b>Barriers</b> (hotspots, normative)</p> <ul style="list-style-type: none"> <li>Lack of awareness of people and companies of the concept and principles of CE</li> <li>Lack of data and advanced technology</li> <li>Lack of quality standards / norms for the by products/new materials (including recycled mat.)</li> <li>Distrust of final product originated from by-products</li> <li>Strict regulations to de-classify waste and recognise it as a product ready to be used in a new production process</li> <li>Lack of eco-design techniques to allow for the RE-USE, Refurbishment, etc to extend the lifecycle of products</li> </ul> <p><b>Partners</b> (organisation/region/position in value chain/sector/role/contact)</p> <ul style="list-style-type: none"> <li>Treatment of waste from</li> <li>Producers (eg. mining sector), SMEs: several from Centro Region</li> <li>Regional / national authorities: CEDRE</li> <li>R&amp;D entities and RTO entities: Universities, polytechnic schools, research centers</li> <li>Sectoral partners: CTEV</li> </ul> <p><b>Proposed solutions</b> (emerging ideas, approaches)</p> <ul style="list-style-type: none"> <li>Creation of a platform that gathers information about waste, resources and products that can be recovered and / or recycled</li> <li>(For policy makers) increase of incentives to promote / stimulate process efficiency through innovation developments and more circular use of resources</li> <li>New and mandatory regulation</li> <li>Written agreement between partners</li> </ul> <p><b>Deliverables</b> (deliverables, workpackages/contributors)</p> <ul style="list-style-type: none"> <li>Manual / Guide / Agreement / Regulation</li> <li>Web platform for data</li> <li>Work shops / meetings for stakeholders, partners, regional authorities</li> <li>Training course</li> </ul> <p><b>MARKET UNLOCKING</b></p> <p><b>Calls to action</b> (task, responsible, contributors, deadline)</p> <ul style="list-style-type: none"> <li>Possible linking H2020 Call CE-SFS-39-2019: High-quality organic fertilisers from biogas digestate (IA)</li> <li>→ Potential partnership preparation for the upcoming call</li> <li>Analyze regional problems/barriers → consultation</li> <li>No one type solution that fits all → need to find local solutions</li> <li>Construct local synergies</li> </ul>	<p>This synergy implies the transfer of waste to be trasformed as a resource with a cross-sectorial approach. This leaning is still poorly regulated at local level within the involved regions. Moreover, an open innovation approach should be adopted to find new routes for ceramic products reuse. The synergy can be implemented only exploiting H2020 opportunities. Potential increase of probability of success can be achieved through the extension of the Seal of Excellence schema to cross-regional partnerships advocated by SCREEN.</p>

#### SCREEN

For example, focusing of the first cross-regional synergy, entailing a technology export from Friesland to Lazio for improving sludge recovery, the following fair mechanism could be implemented in support of the implementation of the synergy. Since both the funding instruments in Friesland and Lazio are compliant with the Art. 70, a fraction of the funding provided by the local instruments could be dedicated to (i) support stakeholders from Lazio in the activity of formulating the requirements and validation protocols for the technology export – in the case of funds distributed by Friesland -, and to (ii) support stakeholder from Friesland in the activities of validating and demonstrating the developed technology, based on the defined specifications – in the case of funds distributed by Lazio. With this bilateral support to cross-regional cooperation a trans-regional technology export could be promoted, within the framework of the existing Art. 70.

As it can be noticed, the collected information fully supports this matching activity, providing a powerful mechanism to associate initiatives with funding instruments which can be replicated at wide scale, both at local and EU level.

## 6. Existing Barriers and Recommendations

According to the analysis carried out in this task, few existing gaps that, if not removed, could prevent the development and future implementation of cross-regional circular economy initiatives have been identified, giving origin to specific recommendations for the future. The preliminary recommendations are listed below:

- Although the Art. 70 exists it is usually not exploited by the regional authorities to support cross-regional cooperation. According to the discussion carried out with the regional authorities this seems to be due to (i) the complexity of managing cross-regional funding, (ii) the complexity of monitoring cross-regional funded projects, (iii) the lack of incentives at regional level to provide funding to stakeholders outside the region, and (iv) the lack of a monitoring framework to guarantee a fair balancing among cross-regionally invested resources.
- Although "Existing funding Instruments" at regional level are usually applied in isolation, even if they could be partially used to support cross-regional initiatives, there exist recently developed instruments favoring a cross-regional cooperation (e.g. Fund of funds). However, these are relatively new instruments that do not yet provide evidence of success.
- In general, cross-regional cooperation is not reflected in the evaluation of projects. This makes it difficult for project proposers to see added value in the definition of cross-regional cooperation activities in local projects.
- The transfer of technologies and solutions from one region to another, among sectors, is usually not supported by specific instruments.
- The "Seal of Excellence" approach is currently only applied only to the SME Instrument and is not exploited to support cross-regional cooperation within project consortia.
- Only few instruments support the development of innovation infrastructures through ERDF to de-risk by demonstration future industrial investments in circular economy.
- The establishment of an ERA-NET like fund for circular economy would support the development of focused projects originated by the identified SCREEN synergies.
- A cross-regional open innovation initiative may be useful to promote the systematic identification of inter-regional actions, extending the SCREEN methodology beyond the project life.

## 7. Concluding Remarks

This Deliverable has reported the main results of the work carried out within the SCREEN project Task 3.4 "Definition of the specific measures, including a multi regional portfolio of investment instruments". The developed procedure has enabled to highlight the features of existing instruments in view of their capabilities to support cross-regional circular economy initiatives. Moreover, for actions that are not actually supported by existing instruments, specific gaps and possible actions to fulfill this gaps have been identified, resulting in a set of recommendations for new funding instruments to be developed in the next regional and European funding programs. This work paves the way to the development of the operational plan of Task 5.2 and the manual of recommendations to be developed in Task 5.3.