

TRIS
Interreg Europe



European Union
European Regional
Development Fund



REGIONAL ACTION PLAN

HUNGARY



Part I General Information

Project	Transition Regions Towards Industrial Symbiosis (TRIS)
Partner Organisation	IFKA Public Benefit Non-Profit Ltd. for the Development of the Industry
Other Partner Involved (if relevant)	Herman Otto Institute Nonprofit Ltd.
Country	Hungary
NUTS2 region	Central Hungary
Contact Person 1:	Eszter Tanka – IFKA Public Benefit Non-Profit Ltd. tanka@ifka.hu + 36 70 676 2215
Contact Person 2:	Eszter Nyári – Herman Otto Nonprofit Ltd. nyari.eszter@hoi.hu +36 30 224 4410

Transition Regions Towards Industrial Symbiosis (TRIS) project:

Industrial Symbiosis (IS) is a building block of the Circular Economy, a means to sustainable growth increasing resource efficiency and SMEs competitiveness and resiliency.

Despite the acknowledged advantages, IS is not yet fully widespread. The challenge TRIS is facing is to enable a systemic uptake of IS in 5 European regions, supporting policy makers to increase the competitiveness of their SMEs by introducing IS practices. To do so, the TRIS consortium will:

- Identify facilitating elements and obstacles and embed them in (or remove them from) the appropriate policy instruments.
- Reach out and engage with the actors that can drive and/or be impacted by the change and involve them in structured local networks.

TRIS is determined to cause the following CHANGES and accomplish the following RESULTS:

- Raising awareness on the concepts of IS and its economic and environmental benefits
- Causing a mind-shift and building a cooperation culture in the stakeholder groups (including SMEs and policy actors)
- Standardize IS practices into regional policy instruments
- Launching tangible initiatives in the regions: reaching out to more SMEs, supporting their business with new IS cases/projects, preventing industrial waste production, testing new governance models.
- Bringing IS to a higher position in the European political agenda.

The project raises the profile of the benefits of applying the Industrial Symbiosis approach across Europe and beyond, by involving stakeholders (SME and policy actors) across the world.

Part II Policy Context

The Action plan aims to impact	Please tick fields that are relevant
Investment for growth and jobs programme	<input checked="" type="checkbox"/>
European Territorial Cooperation programme	<input type="checkbox"/>
Other Regional development policy instruments	<input checked="" type="checkbox"/>
Name of the policy instrument addressed	Economic Development and Innovation Operational Programme (HU-GINOP)

In 2014-2020 Hungary is allocated around €21.9 billion for Cohesion Policy (ERDF, ESF, Cohesion Fund) including €49.8 million for the Youth Employment Initiative and €361.8 million for territorial cooperation. Additional €3.45 billion will be devoted to development of the agricultural sector and rural areas from the European Agricultural Fund for Rural Development (EAFRD). The allocation for European Maritime and Fisheries Fund (EMFF) amounts to some €39 million.

These funds provide financial basis for Hungary's medium and long-term development strategy mobilizing additional public national and private funding for growth and job creation and reducing regional disparities in Hungary. Investments will focus on enhancing innovation activity and competitiveness of enterprises in order to increase their added value and integration into the international value chain also through better access to financing.

EDIOP (Economic Development and Innovation Operational Programme): is the largest operational programme in Hungary and even in the EU. The programme aims to stimulate the economies of the less developed regions in Hungary. Its most important priorities are the competitiveness of small-and medium sized enterprises, research and innovation, and employment. The programme also aims to develop the tourism industry, enterprises' energy efficiency, and information & communication technologies. Moreover, it stimulates the use of financial instruments to cover other objectives, like increasing renewable energy production and improving the energy efficiency of households and public buildings.

The Programme focuses on different main priorities:

- **Pr 1: Increasing the competitiveness and productivity of SMEs**
- Pr 2: Research, technological development and innovation
- Pr 3: Info communication developments
- **Pr 4: Energy**
- Pr 5: Employment
- Pr 6: Competitive labour force
- Pr 7: Tourism
- Pr 8: Financial instruments¹

Actions

The **Action Plan** contains actions that are envisaged to be implemented in Hungary by 2 project partners of TRIS Interreg-Europe project. They are the result of national and international negotiations and workshops about the following topics:

- **Barriers** of an effective implementation of industrial symbiosis in company level
- **Clusters** and their role in a better implementation of industrial symbiosis
- **Incentives and funding** for a better implementation of industrial symbiosis.

¹ http://ec.europa.eu/regional_policy/en/atlas/programmes/2014-2020/Magyarorsz%C3%A1g/2014hu16m0op001

The “action planning” process:

The Action plan itself is the result of a multi-step peer learning process:



The Hungarian partners - taking part in all the interregional and peer review meetings organized within TRIS - summarized the seen good practices and introduced them to the Hungarian IS Local Lab members. Based on the discussions with the relevant stakeholders present during these meetings, at the end a proposal was compiled. This proposal was later negotiated on organization level and during further meetings with the representatives of the relevant Managing Authority to define actions that really help the policy development. Last but not least, all the project partners had the chance to add some comments and amendments to the draft versions of the action plan.

So this document is a result of an interregional, but local targeted policy instrument focused multi step negotiation process – taking into consideration the demonstrated good practices, the needs of the stakeholders and the relevant managing authority, as well.

The proposed actions follow a narrowing down approach based on their target group: from higher, policy-maker level to the final, company entity-level, also from regulatory suggestions to concrete actions to be implemented.

Identified actions are targeting different scopes and they are applicable at different scale: regulatory scope, country/region level, business scope, company level and project level actions were also defined.

The focus is mainly on the initial policy instrument – EDIOP, we identified those calls on which we could focus on and we also determined some general initiatives. In order to target them, we held many meetings with stakeholders in policy change: e.g.: IS Local Lab members, the Managing Authority of the Economic Development and Innovation Operational Programmes (EDIOP). Based on the feedbacks from the IS Local Lab, the implementation of IS and circular economy criteria into the evaluation system would be more advantageous and more incentivizing, furthermore green public procurements were also mentioned as a great tool foster industrial symbiosis, circular economy business models and green innovations. That is the reason why both of them were integrated in our action plans. Dissemination also got a relevance in it – in order to make companies aware of the IS concept, realize their opportunities and this “thinking out of the box” could mobilize some new project ideas in this respect.

Part III Details of the action envisaged

Action 1: Circular economy – industrial symbiosis concept in legislation and call for proposals

<p>The background (please describe the lessons learnt from the project that constitutes the basis for the development of the present action)</p>	<p>Throughout the TRIS project it could be realized that there is an emphasized need for legislation fostering circular economy initiatives. It is even more inevitable after the European Commission has adopted an ambitious new Circular Economy Package backed with some proposals of our British partner, the Birmingham City Council and Industrial Symbiosis Limited. The Package includes ambitious targets which are not deliverable without supporting national legislations and programs.</p> <p>Emilia-Romagna has a legislation – as discussed through a Peer Review visit in Bologna on 29-30 March 2017 - which is considered as a strategic tool to catalyse the transition towards circular economy at regional level, i.e. the regional Circular Economy Law. The legislation included several innovative measures for improving the sustainable use of resources, in order to minimize waste production, and adopted incentive strategies for municipalities.</p> <p>Valencia's regional development strategies include sustainability, industry 4.0, renewable energy, circular economy not only in words but it was seen that all the projects – regional funds as well – focus on these issues in a holistic approach to become reality. Valencian Institute of Business and Competitiveness, IVACE demonstrated a great example of the management of the industrial policy and the support of innovation and entrepreneurship. IVACE was visited during a Peer Review visit in Valencia on 15 June 2018. Similar to these good practices, such a supportive legal and operational surrounding should be implemented in Hungary – not only on strategic level, but in practice, as well. A good start is to analyse the legislative background and to introduce resource and energy efficient business operation elements in call for proposals targeting the Hungarian industrial sector's development.</p>
<p>Action (please list and describe the actions to be implemented)</p>	<p>The proposed action has 2 parts:</p> <p>1: Analyzing the Hungarian legislative background and the need of companies from the point of view of industrial symbiosis and circular economy in general. A pre-study was carried out within the framework of TRIS. Based on the finding, an information package will be compiled to the relevant authorities why it is relevant to promote "circular development" and how the legislation could be more IS-friendly.</p> <p>2: Identifying tools how circular economy and industrial symbiosis could be fostered in EDIOP calls for proposals, for national supporting schemes including general and special call related remarks. This could be used in the next programming phase to support the relevant Ministries.</p> <p>2.1.: determine a list of evaluation criteria in favour of the implementation of a resource- efficient economic system.</p> <p>Based on our analysis, energy efficiency already appeared in the calls, but material efficiency is still left out. For instance,</p>

	<p>some waste management figures could be a good starting point to be analysed through the evaluation process, since there is a compulsory reporting scheme for the companies. Here industrial symbiosis could appear directly.</p> <p>Besides this, energy and material efficiency could be combined in case of calls targeting buildings' energy efficiency development, agricultural, gardening and forestry by-products, wood and other industrial waste and by-products could be used as an input material for boiler/heating systems – similarly as it was seen in Sweden Växjö.</p> <p>2.2.: in some EDIOP calls there are so called separately not financeable elements out of which at least one should be chosen to get realized besides the main development project item. This could be e.g.: the introduction of a management system, the process to acquire ISO 14001 certification, or the preparation of an environmental impact study. Based on our proposal, a circular economy strategy or an industrial symbiosis feasibility study should also be one of the chosen elements. In the future gradually the circular economy strategy could become a compulsory precondition to apply for industrial development funds.</p> <p>As a result, more circular projects could get financed and new strategic focus could appear in the EDIOP calls.</p> <p><i>The Hungarian proposal document as an annex will be part of the finalized regional action plan handed over to and got to know by the Hungarian Managing Authority.</i></p>
<p>Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action plan and their roles)</p>	<p>Hungarian IS Local Lab members, the representatives of the Ministry for Innovation and Technology and the Ministry of Finance, as the Managing Authority for EDIOP</p>
<p>Timeframes</p>	<p>May 2018 – March 2019 → working out the proposed amendments March 2019- December 2020 → continuous monitoring and communication towards the players involved</p>
<p>Estimated Cost (if relevant)</p>	<p>Circa 5000 Euro (mainly the HR cost to follow-up), the value of the influenced calls could be specified later</p>
<p>Funding source (if relevant)</p>	<p>own operational funds, other projects (CIRCE2020, Danube S3 Cluster)</p>

Action 2: Green public procurement as a tool to create demand for secondary raw materials and to foster industrial symbiosis (IFKA)

<p>The background (please describe the lessons learnt from the project that constitutes the basis for the development of the present action)</p>	<p>Public authorities are major consumers in Europe. In the EU, the public purchase of goods and services has been estimated to be worth 16% of GDP. In Sweden public procurement is between 20-25% of GDP, in Spain it is above the average, as well – 20 %.</p> <p>Public authorities are key demand elements and they should also set an example about material efficient decisions through procurement to be followed by companies. Green public procurement is a great tool to generate demand for secondary raw materials, indirectly for industrial symbiosis collaboration, as well.</p> <p>An efficient green public procurement (GPP) solution could be found in Italy as it was explained by Leonardo Palumbo and Manuela Ratta in the Peer review visit in Bologna (29 March 2017). The regional waste management plan includes an action to promote GPP via better awareness and information. The use of the “minimum environmental criteria” for some products has become mandatory at national level in Italy.</p> <p>During the Peer review in Sweden (28 September 2017) a successful procurement of waste management was also presented. Meanwhile the lack of these solutions was emphasized during the IS Local Lab meeting in Budapest (12 September 2018) by Hungarian experts.</p> <p>Good practice from Sweden shows that using byproducts as raw material is still not enough valued at procurements (Green Pipe) Throughout the Valencian Interregional meeting (15 June 2018) IVACE also informed the partners that they have quite a long experience in GPP, just like the UK. Relevant contact details could be collected by the TRIS partners.</p>
<p>Action (please list and describe the actions to be implemented)</p>	<p>Analyse the situation in Hungary and make a regional comparison how it could be done better. Based on that, set-up an analysis package and a proposal for the policy makers and other stakeholders. In 2012 a draft governmental decree was compiled for green public procurement but then it got out of the agenda.</p> <p>Even tailor made solutions could be worked out in cooperation with the Hungarian advisors for public procurement.</p> <p>IFKA is a project partner in a Horizon 2020 project - GREENIN - which could be a relevant tool for this action, draw the attention to the already existed draft decree document.</p> <p>Green public procurement could generate demand for secondary raw materials which will transform the supply side, as well. As a result of green innovations, more companies – based on a TRIS pre-study mainly SMEs - could get familiar and get involved in circular economy and industrial symbiosis. Extending the concept, green procurements could get widespread. The most important objective is to make companies aware that being circular and identify IS synergies is a great business, it is incentivized. This could lead to great project ideas, cooperation in the market - initiated originally by the public authorities. So it</p>

	is a clear win-win for all the stakeholders.
Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action plan and their roles)	PP obliged companies to understand how they apply GPP in order to identify hindering effects, relevant policy makers and authorities SMEs
Timeframes	2019-2020
Estimated Cost (if relevant)	circa 20 000 Euro
Funding source (if relevant)	GREENIN project - Horizon 2020 (15000 EUR), other sources

Action 3: Dissemination activities to promote circular economy, industrial symbiosis and cooperation

<p>The background (please describe the lessons learnt from the project that constitutes the basis for the development of the present action)</p>	<p>Cooperation and sharing of knowledge is essential within circular economy. This is one of the most relevant outcomes of the interregional learning process: so dissemination has a key role. There is not enough information and good practices available about what circular economy means, and the benefits related to it. The work experience of the TRIS project partners and the discussions during the meetings of the Hungarian IS Local Lab have made it clear that within the framework of the TRIS project it is very important to provide SMEs with relevant information and knowledge on circular economy and on resource efficiency: it is necessary to raise awareness and inspire production and material managers, logistics experts to push circularity.</p> <p>Throughout the peer review held in Budapest (5-6 February 2018) the presentations and the discussions clearly showed that clusters are relevant players of information sharing and networking in business sector. Clusters are keen to develop networks with professional bodies, therefore they are identified as great partner to spread knowledge as an extra service provided to their member organisations, companies.</p> <p>The Valencian peer review (Koopera visit), and Interregional meeting (Vaersa visit) in June 2018 also showed the importance of networking, the role of different platform(s) at local, regional and even country level (exchange of experience, information, professional cooperation).</p> <p>The Interregional meeting in Bologna in September 2017 made us recognize the importance of the environmental awareness within the population, consumers in the circular economy, and of the communication that focuses on households.</p> <p>Based on these interregional practices the 3rd action is determined targeted SMEs through clusters, relevant platforms and nationwide initiatives, programmes and also targeted the customers in one pilot initiative.</p>
<p>Action (please list and describe the actions to be implemented)</p>	<p>The objective of this action is to spread the word of IS advantages to different stakeholder groups and to demonstrate some good</p>

practices that could be followed. Whilst the first two actions have a kind of top down approach, this one aims a bottom-up concept. To make the companies interested in circular economy and industrial symbiosis.

a; Dissemination of the industrial symbiosis concept through info days of programmes related to the use of EU funds

One presentation should be about circular economy and industrial symbiosis held to those companies interested in the calls for proposals. IFKA volunteered to held these presentations or at least, to give some input for them. This could create a change in the companies' strategic focus, a different perspective could be added to their future project proposals.

The publication booklet prepared from TRIS funds - TRIS deliverable already produced during phase 1 - could be used during these dissemination activities. It contains information tailored for SMEs about the radical economic change which we identify as circular economy. The booklet demonstrates the magnitude of changes to be expected, display the basic correlations identify the challenges. Examples of countries are listed where the transition to circular economy is a national programme, and a comparison will be shown to differentiate types and levels of SMEs participating in this process. This booklet could be used also in case of action b and c.

b; Dissemination of the industrial symbiosis concept through workshops for SMEs with the support of regional clusters

1. Create an active collaboration with clusters to identify their potential connection and roles to foster circular economy and industrial symbiosis.
2. Organize and hold workshops for regional and local industries with the help of the regional clusters to introduce the "whys" and "hows" of circular economy and IS. After raising awareness depending on the interest and the target audience even quick wins workshops could be held to identify potential synergies;
3. As a result, new project ideas could be identified and appeared in EDIOP proposals, cooperation could be strengthened among companies.

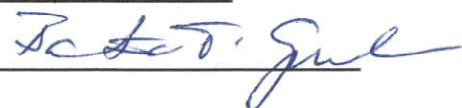
c; Join the Circular Hungary Programme and participate actively in its activities by both project partners and joining the first Hungarian Circular Economy Platform founded in November 2018.

Both are economy development, innovation and company cooperation initiative aiming to enhance and accelerate the conversion to circular economy in Hungary. Focus is on good practices to contribute to the rise of resource efficiency of Hungarian companies, to reduce the use of natural resources and to enhance the importance of maintenance, repair, reuse, refurbishment, etc. These initiatives could run of course without the TRIS partners, but IFKA's presence amongst the founders and the

	<p>fact that HOI later also joined these programmes, is relevant to promote the learned interregional good practices and the actions of the Hungarian regional action plan could also be strengthened during the events organized in the future. These forums are important platforms to spread the word, to keep TRIS project results in the loop.</p> <p>d; Environmental awareness within the population Environmental consciousness starts at home. Herman Otto Institute Nonprofit Ltd. strives to disseminate information about waste management and circular economy to all age groups. The modern waste management principles should also be well known to the public. To achieve this, based on the Italian example http://www.economicircolare.com., on of the counties of Hungary (Csongrád county) has been chosen to develop an online information page, a reuse-recycling website. The website is under construction with an information database for the public on waste takeover spots, collection spots, and all important information on collecting waste.</p>
Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action plan and their roles)	Project partners (IFKA, HOI) Foundation for Circular Economy representatives of Ministry of Agriculture and Ministry for Innovation and Technology and Ministry of Finance accredited and other clusters, chambers of commerce SMEs, Waste collection point operators
Timeframes	2019-2020
Cost (if relevant)	circa 15000 EUR (could be specified later)
Funding source (if relevant)	own operational funds, other projects (CIRCE2020, Danube S3 Cluster, Climate-KIC projects)

Signature

Date: 10/07/2019

Signature: 



Stamp of the organisation (if available): _____

The Deputy State Secretary for Economic Development Programmes of the Ministry of Finance, as EDIOP Managing Authority got to know the document, and strives to implement the actions contained therein in the current or in the next programming period.

Date: 18 July 2019

Signature: 



Stamp of the organisation (if available): _____