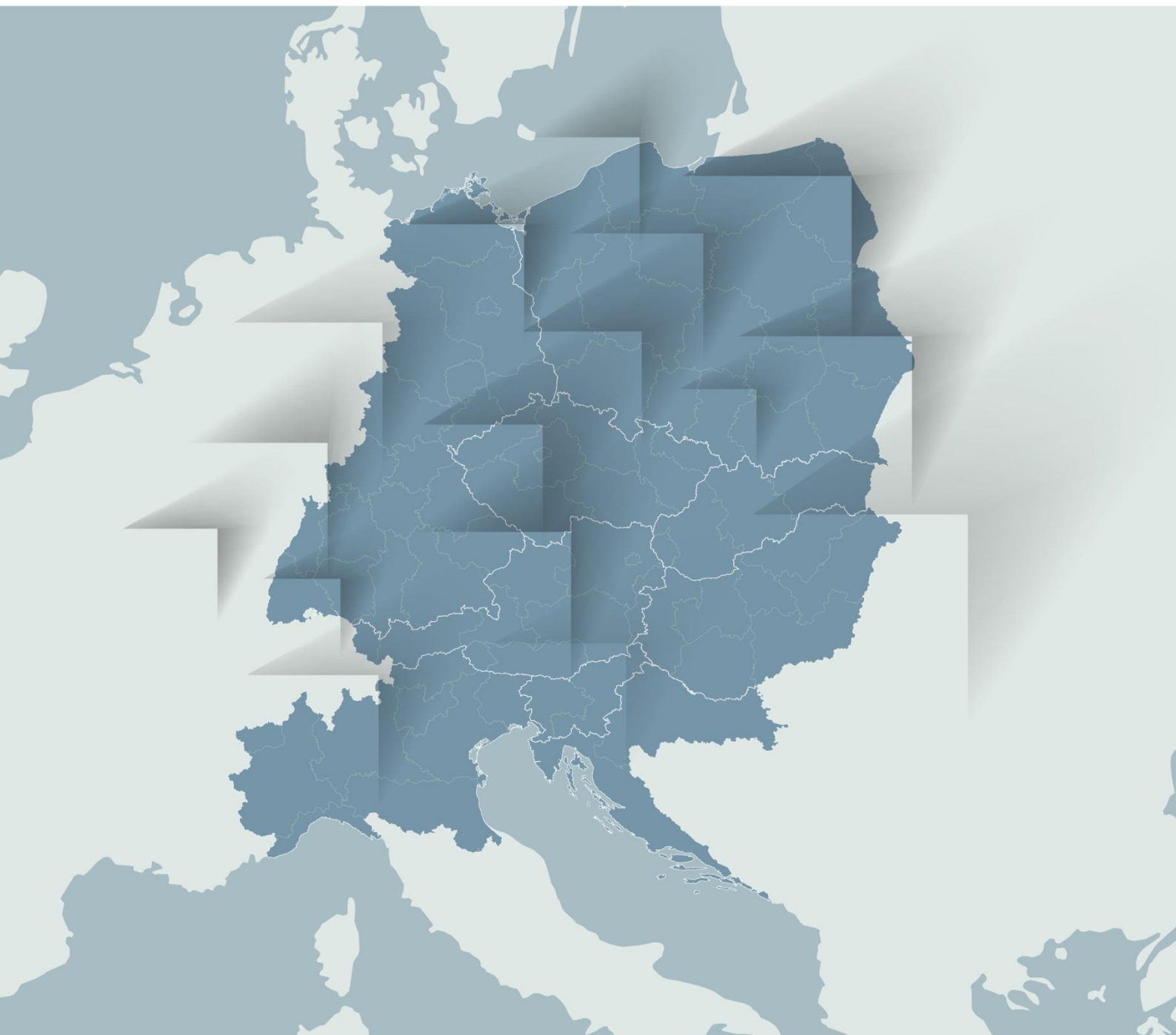


# Addressing Circular Economy in Central Europe. Case studies and perspectives.

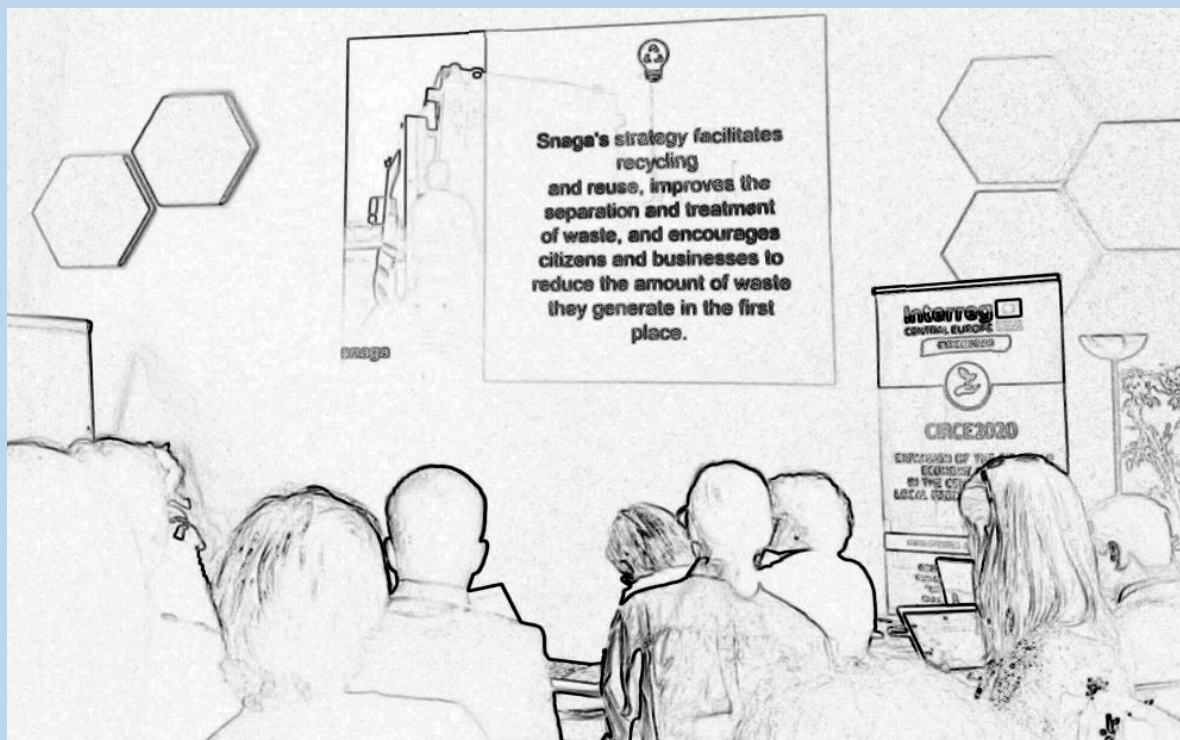
Proceedings of the CIRCE 2020 capitalisation seminar, Budapest, 20th March 2018



## The beginning

The purpose of the capitalisation seminar was to analyse industrial symbiosis successful case studies and inspire partners. Therefore several projects and good practices were introduced either by partners of CIRCE2020 or invited presenters from SNAGA Ljubljana, ARGE Styria, EIT Raw Materials project and the CIRCE project.

In order to make our project successful all partners need to be updated about the existing good practices, methods and work in connection with industrial symbiosis (IS). A usual problem of making IS effective is the lack of information. We ought to use our own knowledge and share it among each other, in addition, we should also focus on gathering more and more information of the existing IS. Being aware of the aforementioned critical success factors these were the goals of our capitalisation seminar organized on the 20th of March 2018 in Budapest, determining the key points when forming the agenda.



## Ongoing projects – ongoing knowledge

Our first presenter, **Maria Grazia Pedrana** (CircE project)

introduced the challenges CircE project faces based on the first year experiences to which everyone were able to connect since almost all projects dealing with circular economy face the same barriers (economical challenges, lack of regulations, social acceptance, supporting business models and access to technologies). Based on her enthusiastic presentation the possible solutions are already in mind, however not yet in motion since they need more time to be effective.

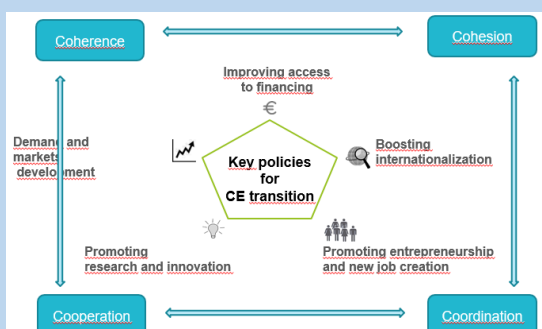
Her project partners decided to choose **one industrial area** to work on, based on their background and networking. Narrowing down the target group gives the partners the possibility to be more detailed and efficient in that area.



The project objective is addressed through a specific project approach, which is the base on which the project work plan is thought out:

1. Identification of Circular Economy Opportunities (Semester 1);
2. Identification of Barriers to the Opportunities identified (Semester 2);
3. Prioritization of the Opportunities identified (Semester 3);
4. Identification of the Policy options for overtaking the barriers hampering the priority Opportunities identified (Semester 4);
5. Drawing up an Action plan for steering the selected policy instrument, referring to the policy option identified (Semester 5).

Having a well-planned and well-focused project approach can simplify and make the work more effective. As a summarizing thought, Ms. Maria Grazia Pedrana talked about the role of regions and their policies in the circular economy.



Next, Mr. Jože Gregorič (SNAGA) introduced their sustainable society and how it was built up during the last decades which gave a chance to all participants to see a conscious good practice. He talked about the collection and recycling of municipal waste since 2006. Comparing data from 2017 with the initial 2006 year's figures, altogether the separately collected and recycled waste became 6 times higher in Ljubljana.

The “key was to introduce the door-to door collection and the well managed communication strategy”. We believe that the latest is the key in the case of industrial waste management as well.

Communication and consciousness.

### Communication Strategy



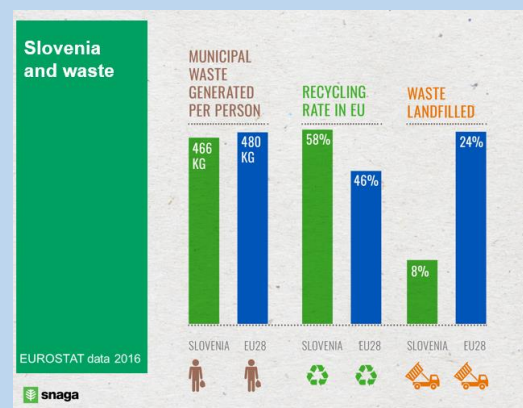
In the past ten years Snaga has successfully educated citizens on how to recycle everyday items.

In 2013 Snaga decides to move up the waste hierarchy from recycling to actively promoting reuse and waste prevention.

Because we have power and because we have responsibility.

Make an impact on the behaviour and values of citizens in the direction of adopting the philosophy of reuse and waste prevention in their everyday life.

### Results



Mr. Berthold Schleich could confirm the above mentioned idea by talking about the Austrian company, ARGE and its work. This company trains and provides municipal waste advisers to every region in Austria in order to prevent landfilling and increasing the generation of waste.

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### New profession: Municipal Waste Advisors

**What is a Municipal Waste Advisor ?**

Public employee  
Main field of employment: Organization of municipal waste management  
Main tasks: public relations, communication, marketing and campaigning, management, organization




ARGE – Waste Prevention, Ressource Protection and Sustainable Development Ltd. 

Capitalization Seminar – 20th March 2018 – Budapest - IFKA 

### New profession: Municipal Waste Advisors

**Results:**

- 350 fully employed Waste Advisors in Austria
- 1 Waste Adviser per 25.000 inhabitants target: 1 per 10.000 inhabitants
- Separate waste collection rate raised from near zero to over 70% within 15 years in many regions - for example in Styria
- Recovery rate (including energy recovery): 70% in all Austria
- Disposal rate: less than 3% !
- Recovery-income reduces costs for municipalities and waste fees for households
- 40.000 jobs in Austrian waste management (public and private)
- 1 job in Waste Management for 220 inhabitants
- 1 municipal waste consultant per 115 employees in Waste management (logistics, treatment, etc.)
- Turnover of the Austrian waste management: € 5,2 billion
- 1,35% of Gross National Product = Waste Management

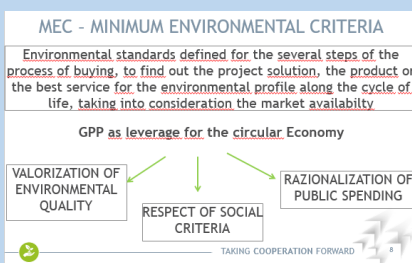
ARGE – Waste Prevention, Ressource Protection and Sustainable Development Ltd. 

They started their work in 1982 with the strategy of “prevention instead of end of pipe technology”. By educating people and helping the regions in waste management their separate waste collection rate and also recovery rate raised from near zero to over 70%.

Their motto is “Formula for Success = Public Relation”. This initiative was not only successful in waste management but it is also a success story in human relations since a new profession and new jobs were created.

If circular economy has a social acceptance, individuals, later companies then regulatory bodies start paying attention and working their way towards circularity. However, government’s support would definitely help spreading the word and accelerating the way of change. That is why most of projects have goals to foster policy change.

There are also good examples of regulatory support, such as green procurement in Italy explained by Mr. Lucio Bergamin (ARPA Veneto).



A minimum environmental criteria has been in place since 2008 which helps circular economy improve.

ITALY LEADER IN EUROPE IN THE CONCRETE ATTUATION OF THE STRATEGY BETWEEN THE MOST EFFECTIVE FOR THE REALIZATION OF THE CIRCULAR ECONOMY



**MANDATORY GREEN PUBLIC PROCUREMENTS**

TAKING COOPERATION FORWARD 

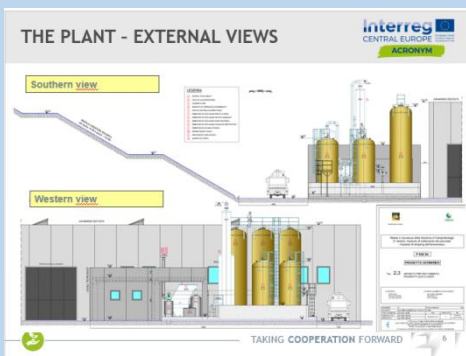
## Good practices

During the second part of the seminar, several good practices were presented to all participants with technical details.

- **Polluted limestone for example becomes cement after recycling, thanks to AUDI's waste, Lafarge Cement factory's need and Saubermacher waste management company who connected these two and made the synergy.**



- **Another interesting practice was introduced by Mr. Omar Gatto (EtraSpa) about the production of ammonium sulphate from landfill leachate.**



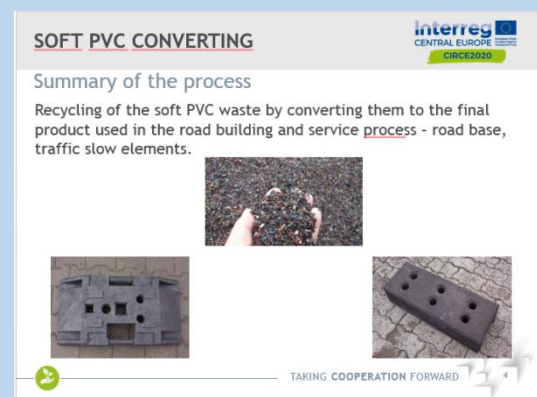
**Process:**

Heat recovery from current generator → heat recovery when CH<sub>4</sub> will be too low for motors and burners → resource recovery - ammonium sulphate as fertilizer → on site treatment - tank trucks journeys avoided → increasing of Etra's WWTP potential

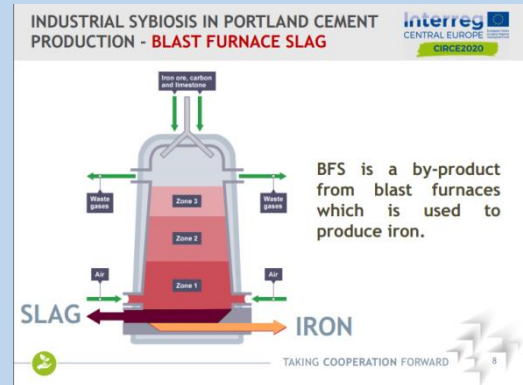
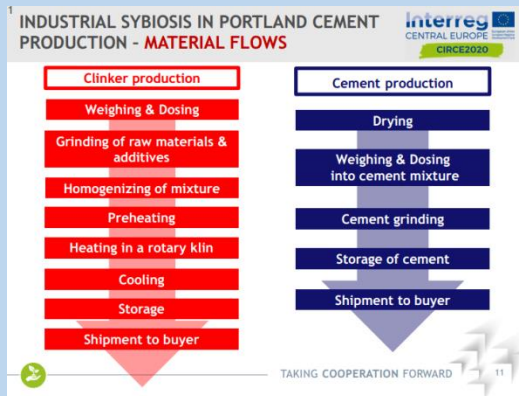
- **A popular practice was introduced by Mr. Marcin Konopczyński (Amtrans) which covered reusing soft PVC in road building.**

**Process:**

Incoming input delivers in big-bags by trucks, shape - regrind → Drying - if necessary → Humification, mixing → Extruding - critical point of the proces → Forming the ductile substance with the press → Cooling down final product



- Blast furnace slag reuse in clinker or cement production was also mentioned by Mr. Ivo Andrič (RERA).



- At the end, reuse of used denim was introduced by dr. Annamária Virág (IFKA) who talked about the SME which started its work in 2014 and today it is able to reuse almost 100 000 pieces of jeans/year.



## Lessons learned?

There was a bit of brainstorming between the presentations and all partners considered communication, networking and stakeholders' involvement the most important goals of work. As possible barriers, over-regulations, unreachable policy makers, lack of conscious communication, seasonal and regional differences were identified.

However, this is why we should work together and not only next to each other during a project. Mr. Marco Meggiolaro, while concluding the seminar, also stated the importance of knowledge transfer and working together in all projects since that is how our work can become successful and effective. As in circular economy, if we cooperate win-win situation is unavoidable.





## Partners of CIRCE2020



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