UIA second Call for Proposals:

Policy trends from the proposals under the topic of circular economy

Author: Reka Soos

October 2017

UIA – circular economy 2017

A total of 70 proposals were evaluated in the circular economy topic. In general the proposals are impressive because they are often at district or urban scale, they involve a wide range of stakeholders and target groups and are often complex, including activities along the entire circular economy chain.

Many proposals set out to achieve impacts on different sectors at once, having positive impacts in the use of raw materials, energy, water and employment and social inclusion. Most projects had strong partnerships, including an urban authority, academia, businesses, business support organizations and NGOs. Baselines were often well described and efforts to benchmark the project against current practices to demonstrate innovation are common across proposals.

Trends per subtopics

Some 25% of the projects targeted multiple material streams with interventions for awareness raising, industrial symbiosis, introducing new governance tools and business models for a wide range of target groups. These proposals often included the establishment of platforms, labs, and hubs for citizens and local businesses around various waste prevention, repair, reuse, and collection improvement and resource recovery ideas. Both strong and weak proposals were submitted in this category. Strong proposals included good business and governance models. The weaker ones relied too heavily on open innovation.

Around 85% of the projects targeted a specific material stream with interventions on consumption, supply chain, resource recovery or manufacturing new products from waste.

The subtopic of dry waste included projects focusing on dry recyclables such as plastic, used beverage cans and waste and electronic waste equipment. Though these are important material streams, there were only a few proposals in the subtopic and most of these were straightforward waste management projects. There is room for more innovation and more effort in this subtopic.

Although food waste was a very popular subtopic, and many projects were solid in this area, it seems that it was more difficult to innovate in this field as compared to others. Most of the ideas proposed were tried and tested before and included food waste prevention, separate collection, storage, working with the food supply chain and re-use or donation of food in various ways. The best projects in this category closed the loop with treatment of refuse food waste and use of the new product as fertilizer, animal fodder production, etc.

Construction and demolition (C&D) waste and soil was both popular as a subtopic and included consistently high quality and innovative projects. Most of these focused on creating a new product from this stream, a business model for marketing the product and often combining the main activity with targeted resource recovery actions in other connected fields, such as energy, water, social services, housing and even ecosystem restoration and protection.

The bio-waste projects propose different treatment options for this stream such as composting, palletizing, anaerobic digestion, and gasification. The more innovative technical ideas fail to describe the technology in sufficient detail to make these credible. The better applications deal with different sources of bio-waste not only the urban-sourced streams and close the loop by including the use of the products from the treatment of bio-waste in the proposal.

The bio-waste projects typically did not use waste hierarchy to select the proposed solutions and did not recognize the potential problems that can arise due to the multiple possibilities for the use of bio-waste and the pressure this can create on the environment.

There have been only a few projects focusing on textile materials and though most of these included entire production and distribution chain, ideas around production of new textile, involving high fashion and creative industry, reuse, repair, rent of discarded products, the innovative elements were scarce.

Water re-use included many proposals that were out of scope as reflected in the significant difference between the best and lowest scores in this category, focusing too much on flood-prevention or waste water treatment. In the sub-topic of agriculture most projects were out of scope, focusing predominantly on perma-culture, urban gardening or healthy food and insufficiently or not at all on circular economy.

Overall policy trends

There was a clear focus on **prevention, re-use, repair** areas that are high up on the waste hierarchy in almost all proposals.

Activities targeting **consumption and supply chain** through collaborative economy measures, nudging for behaviour change, awareness raising, industrial symbiosis is widespread in the proposals.

Proposals that would have a **consumption impact** through new governance tools, such as **labelling, economic incentives and green procurement** are less widely present.

There is little emphasis in the proposals on **data management and the use of ICT** in circular economy either for supply chain management or for influencing consumption patterns. The proposals that do refer to this would benefit from more clarity on the way the systems are set up and the data would be used.

Even though re-designing services and contracts, focusing on durability and reparability can be a major factor driving change in the sector as showcased by industry, there has been less than expected focus on **governance tools and business models**.

Product design and production process, though priority areas in the circular economy, are less present in the proposals and are often addressed through open innovation. This was to be expected, considering that the program addresses urban issues and not industries.

Roughly half of the proposals **close the loop**, in the sense that a product or material is followed from supply chain to consumption, reuse or repair, discarding, collection, reprocessing, making, marketing and use of a new product.

Legal barriers arising from the current definition of waste and related restrictions of its transport, use, processing and application of derived products are seldom recognized or addressed through actions.

Strong proposals recognize the **potential risks the quality of new products** from waste materials may impose and propose ways to mitigate these risks.

More attention could be given to the **cascading use of renewable resources**, with several reuse and recycling cycles in case of all material streams.

Projects often choose solutions and activities that have pronounced positive impacts on **job creation and social cohesion.**

Tips for future applicants

• When using open innovation, it strengthens the proposal to have **innovative tools and models that tease out the innovation** from partners, stakeholders and target groups involved in the process.

• Those proposals that already at the **design stage** have done **consultations and engagement** are able to give an idea on where the open innovation elements will be heading and will likely be able to steer the innovation process

• Projects that **close the circular economy loop** and include activities that have positive impacts on the entire loop along with a description of the economic feasibility of the activities are the strongest proposals in the topic

• Focusing on **urban issues** that are relevant to other urban authorities in Europe is essential

• Taking care that beside project progress **project impact is measured** is a key to the successful proposal. The projects need not only to innovate but also to be able to demonstrate the impact of the innovation. This is how the projects become useful to other urban authorities in Europe.

• Make sure to understand the **difference between stakeholders and target groups**. The stakeholders are those who can influence the process (have a stake) and the target groups are those who will benefit from the impacts of the project.

• Make sure to **differentiate** correctly between **scaling up**, going from a pilot scale to a district or urban scale, rolling out a solution in the same urban authority or **replicating** the solution in a different city.

• Remember that integration refers to both **horizontal integration** among the elements of environmental, social and economic dimension of an issue and **vertical integration** across the different levels of governance.