Good Practice on Aesthetic Integration in the Urban Décor of the Waste Solutions in Heritage City Centres		
Nº.	Section	Description
0.	**Title of the practice**	*Experiences from Bornholm*
1.	**Photograph**	
2.	**Proposers**	Bofa, The Municipal Solid Waste Management of Bornholm in collaboration Institute Of Planning and Development, Aalborg University - Resourcelab Bornholm.
3.	**Contacts**	Resourcelab Bornholm, Hans-Christian Holmstrand, +45 51 41 80 01, hch@plan.aau.dk / hch@bofa.dk.
4.	**Useful links**	www.bofa.dk; www.aau.dk.
5.	**Start date**	2015.
6.	**Activities' state of the art**	Ongoing.
7.	**Location**	Denmark, Bornholm.
8.	**Inhabitants in the area**	40.000 inhabitants (500.000 tourists).
9.	**Description of the practice**	
	Summary of what the practicve is about:	
	The Danish Government has communicated in a governmental Resource Strategy paper based in the EU Waste Directive, that the danish municipalities at 2025 should recycle at least 50 % of the household waste. The MSWM company Bofa, owned by the municipality of Bornholm and responsible for the waste handling, in 2015 established a pilot project with the aim of testing two alternative MSWM design strategies for reaching the objective of 50 % recycling. The first design strategy was a re-design strategy testing the existing collection equipment (solutions) available on	

the market. The second strategy tested was a co-design strategy where the need of new solutions where developed by a team of designers in collaboration with the users (citizens and stakeholders).

The pilot project showed that the re-design strategy using existing solutions was not effective and responsive in the context of Bornholm. The existing collection systems and implementation approach were not functional in the old heritage cities of Bornholm, and not responsive to the demand of social, cultural and aesthetic collaboration and integration of the cities and their communities.

On the other hand the pilot project showed that the co-design strategy could develop new collection solutions that would be both effective and responsive in the context of Bornholm. During a month the co-design strategy developed a system of arch type solutions, all addressing the special needs and challenges of Bornholm.

The experiences of the pilot project has been integrated in a project application directed the Interreg South Baltic programme with partners from Poland, Denmark and Lithuania (under evaluation of the programme). The project methodology integrates three guidelines:

- **OECD:** Systems Approaches to Public Sector Challenges - Working with Change. 2017.
- **World Bank:** Citizen-Driven Innovation - A guidebook for city mayors and public administrators. 2015.
- **WASTE:** Putting Integrated Sustainable Waste Management into Practice - Using the ISWM Assessment Methodology. 2004.

Origin:

The origin of the project is the municipality and island of Bornholm. The special heritage conditions and challenges of the islands small towns and villages originate from the historic development of the island coast cities established in relation to the fishery.

Development and Timescale:

The pilot project, testing the two design strategies were developed as part of the official municipal waste plan. The timeframe of the pilot project was 6 months. The expanded development project directed at the South Baltic programme, has a timeframe of 2,5 years.

Actors involved:

The pilot project management was conducted by Resourcelab Bornholm. The project included the citizens of Hasle, the private waste collection company, a group of designers, and several stakeholders, including the local school, the local trade, the local community, the local cultural institution and the local media.

Legal framework:

The pilot project was a part of the formal municipal waste management plan.

Financial framework: (activities´ cost, activities´ revenues (if any), model/s of financing used)

The pilot project was financed by Bofa, the Municipal Solid Waste Management Company of Bornholm.

Use degree: (%) or number of users (if possible):

The pilot project included 933 households.

10.	**Results**	
	Proven results (through indicators): **The Re-Design strategy** demonstrated that the existing waste service solutions and waste management approach does not work responsively, effectively or efficiently – and do not live up to the strategic challenge of the circular economy. **The Co-Design strategy** demonstrated that it is possible to innovate technical feasible, economic viable and social desirable waste solutions – in co-creation between citizens, designers and waste management companies. Possible success factors: The key to success is co-designing waste management solutions in conducted in cooperation between designers, citizens waste management companies and stakeholders. The two main success factors are 1) a high effectiveness on the recycling potential (goals) and 2) a high responsiveness to the meaning of the recycling communicated by the citizens. Main difficulties encountered: The special conditions of the heritage cities of Bornholm is partly the narrow, and usually steep streets as well as the small houses with no very limited space outside for waste collection gear. Further, the cultural heritage of the city aesthetics demands collection facilities that are designed on the same aesthetic criteria. This is only possible based on a co-design strategy.	
11.	**Main lessons learnt from the practice**	The traditional waste management systems, redesigning collection solutions on the basis of the existing market supply, does not address the new, expanded recycling objectives of the EU Waste Directive – especially not in the heritage cities of the EU. The pilot project shows that a sustainable way to develop and implement new solutions should be based on a co-design strategy integrating citizens and stakeholders in the innovations process.
12.	**Additional information**	Websites www.bofa.dk