

Deliverable D3.1

Inventory of bottom-up governance innovation practices

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Due Date of Deliverable: 31/08/2019

Completion Date of Deliverable: 09/09/2019

Work Package: WP3 Mapping governance innovations practices in Europe and beyond

Lead partner for deliverable: K&I

Project co-funded by the European Commission within the 7th Framework Programme		
Dissemination Level		
PU	Public	✓
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including Commission Services)	
CO	Confidential, only for members of the consortium (including Commission Services)	

Document History

Issue Date	Version	Changes Made / Reason for this Issue	Author
24/08/2019	v1.0	Document creation	Daniele Mezzana, Maresa Berliri, Paolo Signore
30/09/2019	v1.1	Incorporation of team feedback	Giovanni Caiati, Maresa Berliri, Paolo Signore
03/09/2019	V2.0	Document revised version	Daniele Mezzana
08/09/2019	V2.1	Incorporation of feedback from partners	Ildiko Ipolyi, Giacomo Frisanco, George Eleftherakis, Tine Ravn
09/09/2019	V3.0	Document revised version	Daniele Mezzana
31/08/2020	V4.0	Document revised version after review report	Daniele Mezzana
28/09/2020	V5.0	Document revised version after review report	Daniele Mezzana

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EXECUTIVE SUMMARY

This document contains an Inventory of 30 bottom-up governance innovation practices (called for convenience BUGIPs) realized within the framework of the TeRRItoria project. It is part of a broader work aiming at identifying useful examples, in terms of approaches, policies and tools, for the development of the 5 “Transformative Experiments” the project will implement.

The Inventory focuses on those governance innovations, promoted by different kind of coalitions, that activate a process of “re-territorialisation”, i.e. they work for reversing de-territorialisation trends and thus to foster local development and social cohesion. In particular, the Inventory collects the experiences in which research and innovation actors, in different ways, exercise responsibility toward their territory as they play a pivotal role in governance innovation. The focus is on governance innovation that emerges in the territories as a “social processes” rather than as the application of a plan or a project based on top-down investments or funds, e.g. at European or at the national level.

The features of the BUGIPs included in the inventory are summarised in the following points.

- BUGIPs consists of the establishment of new relationships between different social actors none of whom being able, by themselves, to control the social complexity;
- BUGIPs are focused on the management of a shared territorial challenge and not on the pursue of pre-established interests, thus overcoming the contrapositions among representatives of the various actors involved;
- BUGIPs represent an inclusive way in which R&I actors exercise their responsibility through strategically cooperating with other territorial actors;
- BUGIPs are understood as open social processes rather than an implementation of fund-based plans or projects.

The inventory is based mainly on desk research, integrated with direct consultation with the responsible of some of the identified practices. The final selection of the 30 BUGIPs (which do not represent in any way a statistical sample) was made starting from a larger list of experiences, in Europe and abroad.

The selected BUGIPs have been analyzed in detail, through a specific analysis grid applied to the consulted sources, including the following items for each practice.

1. **General information**, in particular:
 - a. Strategy/Policy/Project where the practice has been implemented
 - b. Original target location/territory

- c. Objectives
- d. Coordinator/responsible organization
- e. Period
- f. Sources of information
2. **Interpretation or vision**, that is how the promoters of the practice interpret the problems of the territory and identify the strategies to solve them
3. The **approach to actor's mobilization** the promoters have adopted (i.e., the actors involved and how)
4. The **activities** done by the actors involved, which are relevant to solve the problems of the territory, with particular reference to the role of research and innovation
5. The **opportunities** enjoyed and the **obstacles** met by the actors involved
6. The main **impacts**, in terms of results, new rules, new resources, consensus, sustainability, further developments, scientific production, new behaviours, etc.

The BUGIPs have also been classified, *a posteriori*, according to some categories (certainly not exhaustive), which correspond to a series of acts typical of the “re-territorialisation” processes, where a particular role, in various forms, is played by scientific research and innovation. These acts related to re-territorialisation can be of various kinds (material, regulatory, symbolic, cognitive ones). In particular, the five categories within which the 30 practices have been grouped, considering the acts of re-territorialisation that these have expressed, are the following:

- *Re-rooting economic and social activities*, i.e. implanting or re-implanting a production activity of goods and services in the territory
- *Recovering and fostering local knowledge*, or identifying and supporting the local bearers of scientific and innovation-related skills, or even of traditional knowledge relevant to the territory management
- *New regulatory frameworks*, i.e. establishing new rules, regulations and procedures to exercise forms of economic and social innovation in the territory
- *Risk management*, or face and prevent the environmental, economic and social risks detected at the local level
- *Agenda setting*, i.e. identifying, building and making local actors accept specific strategies and actions to solve local problems.

The practices were applied by an inclusive group of a wide range of actors, joined in very different ways, and more or less extensive territories, ranging from a neighbourhood or a municipality (for the most) to a region or a whole country. For geographical distribution, these practices are located both in Europe and beyond.

INTRODUCTION

1. The Inventory of bottom-up governance innovation practices in TeRRItoria Project

This document is the deliverable D3.1 of Work Package 3 (WP3) “Mapping governance innovations practices in Europe and beyond” of the TeRRItoria project “Territorial Responsible Research and Innovation Through the involvement of local R&I actors” (Coordination and support action GA n. 824565), funded by the European Commission under H2020-SwafS-2018-1, and coordinated by the European Science Foundation.

The project started on 1 February 2019 and sees the participation of research bodies, territorial actors and regional networks. TeRRItoria overall aim is to experiment forms of RRI at the territorial level, through developing 5 Transformative Experiments in 4 European regions and 1 municipality.

One WP of the project (WP3) is dedicated to identify and analyze a set of governance innovation practices – developed in Europe and beyond – which can constitute useful examples, in terms of approaches, policies and tools, for the development of the Transformative Experiments. In this WP two inventories will be developed and delivered: a) Inventory of bottom-up governance innovation practices (D3.1.) and b) an Inventory of RRI governance innovation practices (D3.2). Both deliverables will be used as working tools to draft a “Map of approaches, policies and tools for Territorial RRI” (D3.3).

The Inventory of bottom-up governance innovation practices (which we can call for convenience BUGIPs), realized between March and August 2019, and synthesized in this document, represents, therefore, an interim result of the WP3. The document is drafted by Knowledge and Innovation (K&I) as a Task and WP leader. The team is led by Daniele Mezzana and composed by Maresa Berliri, Giovanni Caiati and Paolo Signore. Other partners have been involved in this Task providing their inputs, namely: South-East European Research Centre (SEERC), Aarhus University (AU), Norwegian University of Science and Technology (NTNU), European Association of Development Agencies (EURADA), Danish Board of Technology (DBT), Applied Research and Communications Fund (ARC-Fund), and European Science Foundation (ESF).

Before describing the inventory, the concept of bottom-up governance innovation practice and the methodology adopted for the BUGIPs identification and their selection criteria, and to select and describe them will be presented.

2. Bottom-up Governance Innovation Practices (BUGIPs)

The bottom-up governance innovation practice concept adopted for the development of the Inventory is presented through the combination of the following building blocks:

- a) Centered on Governance innovations
- b) Focused on the territorial dimension
- c) Involving research and innovation actors
- d) Connected to ongoing social processes.

The building blocks will be presented in separated sub-paragraphs and summarized below.

2.1. Governance Innovation

Governance innovations are developed when the conventional forms of government, i.e. rules, institutional roles, etc. are not able to cope with emerging problems or to adequately deploy emerging opportunities. Governance innovations can also be understood as the establishment of a new relationship among actors, none of whom being able, by themselves, to control the social complexity. In synthesis, Governance innovations can be considered as a new configuration of actors developed to achieve better policy decisions in contexts characterized by complexity and blurring boundaries.

- *Based on this definition, the Inventory focuses on practices based on the inclusion of new paradigms to resolve social conflicts and strengthen cooperation across different sectors and actors.*

2.2. Territorial Governance Innovation

TeRRItoria is interested in mapping governance innovations practices developed to face the ongoing process of *de-territorialisation*, i.e. the progressive erosion of ties between a community and its territory. This process is diffused in many European territories in which the globalisation dynamics (digitisation of the economy, ageing population, de-industrialisation, local consequences of climate change, etc.) affect the territorial dimension in a way that is beyond the control of local authorities or even national governments.

The de-territorialisation process

While modern society was based on territorially delimited nation-states as the locus of internal sovereignty, in a globalised post-modern society the government's control over a physical territory appears to be constantly challenged. We are referring here to phenomena such as the de-localisation of industrial production, the globalisation of markets, the increasing relevance of digital technologies and virtual spaces, the local impact of environmental issues (e.g. climate change), and national and international migration. This weakening role of boundaries and governmental sovereignty has been addressed as a general phenomenon of de-territorialisation¹, which undermines territorial development and social cohesion.

- *The Inventory focuses on those governance innovations that activate a process of re-territorialisation, i.e. they work for reversing de-territorialisation trends and thus to foster local development and social cohesion.*

2.3. The role of R&I in Territorial Governance Innovation

The project will be inspired by governance innovation practices in which Research and Innovation actors have a pivotal role in overcoming the existing conflicts, and for strengthening the ties between the local communities and their territories.

- *The Inventory collects the experiences in which research and innovation actors exercise responsibility toward their territory as they play a pivotal role in governance innovation.*

2.4. The bottom-up character of the governance innovation

Finally, the Inventory will focus on *bottom-up* governance innovations practices. The bottom-up character is here understood as a focus on those initiatives that emerge by the interaction of different territorial actors rather than as the implementation of a top-down plan/project. In this sense, the bottom-up character refers to the processual and peculiar character of emerging experiences, which prevails over the planning character of the policies.

- *The Inventory focuses on governance innovation that emerges in the territories as a social process rather than as the application of a plan or a project based on top-down investments or funds, e.g. at European or at the national level.*

2.5. Features of bottom-up governance innovation

In synthesis, the features of the bottom-up governance innovation practices (BUGIPs) included in the inventory are summarised in the following points.

¹ See Paasi, A. (1998). Boundaries as social processes: Territoriality in the world of flows. *Geopolitics*, 3(1), 69-88; Elden, S. (2005). Missing the point: globalization, deterritorialization and the space of the world. *Transactions of the Institute of British Geographers*, 30(1), 8-19.

- BUGIPs consists of the establishment of **new relationships** between different social actors none of whom being able, by themselves, to control the social complexity;
- BUGIPs are focused on the management of a **shared territorial challenge** and not on the pursue of pre-established interests, thus overcoming the contrapositions among representatives of the various actors involved;
- BUGIPs are a way in which **R&I actors exercise their responsibility** through strategically cooperating with other territorial actors;
- BUGIPs are understood as **open social processes** rather than an implementation of fund based plans or projects.

3. Identification and selection of the BUGIPs

The identification and the selection of the BUGIPs were based on the methodological steps described in the following points.

3.1. Preliminary analysis of the 5 transformative experiments of the project

The Inventory of Bottom-Up Governance Innovation practices was developed to support the 5 transformative experiments envisaged by the project. Before starting with the selection of the BUGIPs, based on the information already produced by the experiment leaders, a very short and preliminary summary of the experiments draft has been carried out, aimed at identifying for each experiment: the field of application (agriculture, energy, etc.); the disciplinary areas involved; the types of interventions planned on the territory; the types of institutional change envisaged; the RRI key/keys; the main players involved.

This allowed to address the selection of BUGIPs to their applicability upstream of the selection, and not downstream. This information allowed to orient the next steps: the selection of the sources, and the selection criteria (see below).

3.2. Identification: Sources and "ex-ante" threshold

The sources for the BUGIPs were above all: collections of European and International case studies and best practices, databases of European projects related to the societal challenges (Energy, Health, Security, etc.), specialized journals and magazines.

Given the great number of case studies present in such databases, a preliminary criterion was adopted for the identification of a long list of initiatives to be considered as a base for selecting the BUGIP to be included in the Inventory. The team considered as potential candidates only those initiatives that have been already acknowledged by other observers or analysts as innovative. For doing that, a thesaurus of labels was considered as an "ex-ante" threshold (thus adopted before

the selection criteria). The thesaurus includes terms as *governance innovation, social innovation, anticipatory experience, territorial coalitions, constellation of actors, social labs, living labs*, etc.

In this way, a long-list of over 300 initiatives have been identified as a basis for the selection.

3.3. Selection criteria

The following selection criteria have been used for the selection of the BUGIPs to be involved in the Inventory.

- Relevance: the selected BUGIPs should match with the concept described in par. 1.2. thus selected BUGIPs a) involve different actors; b) are focused on a territorial stake; c) are centred on R&I issues and actors; d) are processual and open.
- Significance: the selected BUGIPs must have had an impact, actual or potential (in terms of economic, institutional, regulatory, social or equality progress), in the territory where they take place.
- Transparency: the selected BUGIPs must be well documented, and must "tell" what has been done. Besides being a methodological criterion (without transparency it would be difficult to make the selection and gather information), this criterion also indicates a high degree of reflexivity of the selected innovations.
- Applicability: the selected BUGIPs should be directly useful (or at least indirectly or potentially inspiring) for carrying out the transformative experiments of the project. In this regard, the reference point will be the summary of the experiments (see 1.3.1).

3.4. Selection procedure

Starting from the about 300 practices identified, the BUGIPs have been selected with a two-step process, that led to a final list of the 30 BUGIPs collected in the Inventory.

- A *prima facie* identification of the "interesting" BUGIPs. This phase consisted of drawing up a first list of all the experiences that, at first analysis, seem to respond to the four selection criteria. The final result was a list of over 100 experiences with a score (from 3 - highest score - to 1 - lowest score) for each of the four criteria (some of them, less the 30 selected, are listed in Annex 2).
- Final selection of the BUGIPs to be included in the inventory. In this phase, the selection criteria were deepened, providing a brief description of each experience, having the objective of identifying 30 experiences. The final selection has been done considering also some further criteria, such as avoiding – as far as possible – geographical unbalances. The 30 selected BUGIPs do not constitute in any way a statistical sample.

4. BUGIPs description

4.1. The approach adopted for BUGIPs description

To study the BUGIPs, a reference is made, with some adaptations, to the Theory of Actor previously adopted by K&I researchers². According to this theory, any collective actor (including coalitions and partnerships) has a “cognitive” dimension and an “operational” one, and its efforts are both aimed to the self-construction and at modifying external reality. In short, 4 aspects of the actor’s life are relevant: Culture, Agency, Action, and Identity.

- *Culture* concerns any cognitive and cultural element providing the set of shared meanings necessary for the actor to exist as such.
- *Agency* concerns the people’s orientation to act and the energy (in any sense, from money or time to emotional energy) the people is interested in investing.
- *The action* concerns what the actor actually does, how it is to be done, and what effects are produced. While the agency represents the cognitive side of the action, the latter represents the actualisation of the former.
- *Identity* concerns how actors control their own internal and external environment. Therefore, it includes any available resource and any action aimed at ensuring this control and, especially, those practices and social relations enabling the organisation to coordinate internally and externally.

It was decided to adopt this theory to identify, albeit not in-depth, some significant characteristics of BUGIPs, as could emerge from the documentation collected. This theory, in any case, as has been said, has been applied with some adaptations, for the specific objectives of the inventory. In particular:

- As for the *culture*, we have been particularly interested in the interpretation or vision of practices’ promoters concerning the problems of the territory and strategies to solve them
- As for *agency*, attention has been focused on the approach to actor's mobilization the promoters have adopted
- About the *action*, the activities done by the actors involved in solving the problems of the territory have been identified and described, with particular reference to the role of research and innovation, at any level; we were also interested, when possible, in the obstacles met by the actors involved
- About *identity*, attention has focused mainly on opportunities (in terms of financial, institutional, human resources, etc.) enjoyed by the actors.

² See d'Andrea L., Quaranta G., Soggetti e rischi sociali: contributo per una teoria generale (Human subjects and social risks: contribution for a general theory), “Democrazia diretta”, n. 3, 1995.

In addition to these description criteria, linked to the mentioned Theory of Actor, some general descriptive elements of the practices were added, as well as a summary description of the impacts obtained (see point 4.2).

4.2. BUGIPs Description

Based on the approach mentioned, the selected BUGIPs have been analyzed in detail, through a specific analysis grid applied to the collected documents, including the following items for each practice:

1. **General information**, in particular
 - a. Strategy/Policy/Project where the practice has been implemented
 - b. Original target location/territory
 - c. Objectives
 - d. Coordinator/responsible organization
 - e. Period
 - f. Sources of information
2. **Interpretation or vision**, that is how the promoters of the practice interpret the problems of the territory and identify the strategies to solve them
3. The **approach to actor's mobilization** the promoters have adopted (i.e., the actors involved and how)
4. The **activities** done by the actors involved, which are relevant to solve the problems of the territory, with particular reference to the role of research and innovation
5. The **opportunities** enjoyed and the **obstacles** met by the actors involved
6. The main **impacts**, in terms of results, new rules, new resources, consensus, sustainability, further developments, scientific production, new behaviours, etc.

In some cases, during the compilation of the analysis grid, it was essential to address directly to the promoters of some of the selected practices, to have some information that was not available in the collected documents.

INVENTORY

This inventory contains 30 Bottom-Up Governance Innovation Practices (BUGIPs), identified and selected according to the criteria above described, each one described according to the grid illustrated in the introduction (point 4.2).

The BUGIPs were also classified, a posteriori, according to some categories (certainly not exhaustive), which correspond to a series of acts typical of the “re-territorialization” processes, that is acts with which coalitions of human actors who live and work in a given territory (subject to globalization dynamics and various social, political and environmental risks) aim to somehow regain control of this territory, thus exercising a form of governance. In this case, as already mentioned, a particular role, in various forms, is played by scientific research and innovation, which is challenged to “re-socialize” (and even reorganize itself internally) to meet the challenges of society. These acts related to re-territorialization can be of various kinds (material, regulatory, symbolic, cognitive).

The categories within which the 30 practices were grouped, considering the acts of re-territorialisation that these express, are the followings:

- *Re-rooting economic and social activities*, i.e. implanting or re-implanting a production activity of goods and services in the territory
- *Recovering and fostering local knowledge*, or identifying and supporting the local bearers of scientific and innovation-related skills, or even of traditional knowledge relevant to the territory management
- *New regulatory frameworks*, i.e. establishing new rules, regulations and procedures to exercise forms of economic and social innovation in the territory
- *Risk management*, or face and prevent the environmental, economic and social risks detected at the local level
- *Agenda setting*, i.e. identifying, building and making local actors accept specific strategies and actions to solve local problems.

These five categories are closely interconnected. Therefore, the assignment of the 30 practices to them has wide margins of conventionality as each practice can relate to more than one category. In this case, a choice was made, indicating a category that seemed prominent. This was done to better isolate and highlight the particular forms of governance that have been exercised.

The practices were applied, as will be seen, by an inclusive group of a wide range of actors, joined in very different ways, and in more or less extensive territories, ranging from a neighbourhood or a municipality (for the most) to a region or a whole country. For geographical distribution, these practices are located both in Europe and in the rest of the world. Recalling that they do not represent a statistical sample, the 23 practices located in Europe are distributed as follows: Austria 1, Belgium 2, Denmark 2, Finland 1, France 1, Germany 1, Italy 1, Poland 1, Portugal 3, Spain 3, Sweden 2, The Netherlands 2, United Kingdom 3. The remaining practices were found in Bangladesh 1, India 2, Mexico 1, South Africa 1, United States 2.

WARNING

This inventory should be considered as a working document, a tool, and a basis for subsequent in-depth analysis, elaboration and formalization of approaches, policies and tools, for the development of the 5 “Transformative Experiments” the TeRRItoria project aims to implement.

The 30 sheets published in this inventory are based on the documents that were consulted during the corresponding targeted desk research (cited under the heading “sources” of each sheet) and on a series of remote interviews.

The sheets intend to reflect the information contained in these sources mostly faithfully and include citations (in quotes), excerpts and/or passages that partially rework the texts that are present in these sources. In some cases, the team, for convenience, made summaries of topics or facts that were detected.

The sheets are, of course, based on sources that have different origins and styles. This partly explains their non-completely homogenous presentation, even if they were processed in a harmonized way e.g.: point of view of structure and intent.

1. Re-rooting economic and social activities

Here the sheets are reported about 8 BUGIPs referring to the category “Re-rooting economic and social activities”. These are governance innovation practices aimed at establishing or re-implanting in the territory an activity of production of goods and services, ranging from support to local entrepreneurship by an entire community, to the re-exploitation of arable land, from the constitution of new economic actors to manage energy, to the creation of telecommunication platforms for marginalized communities.

PRACTICE # 1: Community-supported entrepreneurship

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Totnes REconomy project

Original target location/territory: Totnes (UK), population 8.000 (2001)

Objectives: Making the local and regional economy strong, equitable, and resilient. Strengthening the local economy and creating work opportunities, through several smaller projects and activities supported by the community

Coordinator/responsible organization: Transition Town Totnes project

Period: since 2011

Sources:

<https://www.transitiontowntotnes.org/groups/reconomybusinessnetwork/>;
<https://reconomycentre.org/home/economic-blueprint/>

2. INTERPRETATION/VISION

The project is facing the negative economic trends affecting the town and finding innovative solutions. The idea is to create the conditions for new economic actors, relationships and models to emerge and thrive, through 1) catalysing a new entrepreneurial culture, 2) mobilising local social and financial capital, 3) building an 'enterprising ecosystem', 4) weaving networks of 'new economy' organisations and activists. Another main idea is that anyone can be a successful entrepreneur with a supportive community behind them.

"We wanted to inspire a new kind of economic regeneration that would create an abundance of opportunity for people to meet their needs, and to do so in ways that work with natural systems, are inclusive and fair, and that generally increase the well being of the entire community."

3. ACTORS' MOBILIZATION

- The capacity to put together different kind of actors (public, private, university, and ordinary people) is to be stressed.
- Another particular capacity is to activate the full involvement of the entire population in supporting new entrepreneurs, also through simple actions of moral and material support.

4. ACTIVITIES

- Preliminary one year research on local economy and opportunities for people (carried by members of the Town Council, the chief executive of South Hams District Council, members of the Development Trust, Schumacher College, KEVICC, and South Devon College).
- Based on the research, the “Local Economic Blueprint” was published, containing information on opportunities for local businesses and new jobs (in sectors like food, renewable energy, residential energy efficiency, health and care services), as well as ways in which the community can work together to realise some of these opportunities.
- Creation of the Local Entrepreneur Forum (LEF), to bring together people interested in starting businesses, local investors and business experts.
- Creation of the REconomy Centre (an incubator for start-up enterprises and community projects).
- Institution of a local currency: the Totnes Pound.

5. OPPORTUNITIES AND OBSTACLES

- Creation, within the LEF, of the “Community of Dragons”, supporting the new entrepreneurs through money and non-financial assets (funds, help for business plans, a place to work, land, expert advice, moral support, furniture and equipment, child care, meals, etc.). Fundraising events have been organised (raised over £ 65.000 for 14 local enterprises during 4 events). The South Hams District Council made a gift of a place for REconomy.
- On the other hand, a persisting feeling of some entrepreneurs has been noted to be under-resourced and overstretched, although they feel supported and connected to the local community.

6. IMPACTS

- Stable investor involvement.
- Massive mobilization of funding to support new local businesses.
- Increase in employment, directly or indirectly linked to the project.
- Dissemination of the LEF model in other English territories.
- Increase in local products.
- New health behaviours among the population.
- Increasing social cohesion and sustainability.
- Control and ownership of the development of energy resources.

PRACTICE # 2: Networked social innovation system in agriculture

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Land Exchange (Bolsa de terras)

Original target location/territory: Sever do Vouga, district of Aveiro (Portugal), 13.183 inhabitants in 2011

Objectives: Land Exchange is based on putting abandoned land to good use, in a territory with high depopulation and ageing population, to give an opportunity to those with interest in farming to undertake the business for the cultivation of small berries, contributing thereby to the natural vocation of the territory

Coordinator/responsible organization: Association for Management, Innovation and Modernization of the Urban Center of Sever do Vouga (Agim): a private nonprofit organization founded in 2006 by the city Sever do Vouga and the Business Association (Sema)

Period: Since 2010

Sources: http://www.scielo.br/scielo.php?pid=S0034-76122016000500795&script=sci_arttext&tlng=en

2. INTERPRETATION/VISION

The idea of the Land Exchange was born in the context of Agim, during some meetings around innovative strategies aimed at tackling the problem of unemployment in the territory. The discussions aimed to generate actions to cope with: 1. the need to bring young people to live in the territory; 2. the lack of job opportunities for young graduates and/or the unemployed; 3. the need to stem the rural exodus and desertification of the interior and the abandonment of land. The actors realized, from these problems, the opportunity to engage young farmers for blueberry plantation, through the creation of a Land Exchange.

Agim focuses on: *i)* enhancing of endogenous resources; *ii)* boosting local commerce; *iii)* promoting investment and entrepreneurship; *iv)* cooperation with public administration. Agim aims to encourage and support strategies for the development of the territory. It develops and promotes the production chain of small fruits with the mission of putting the agricultural production of small fruits in a prominent position at the national and international level; therefore seeking to promote greater profitability of production and increase the added value of these products

3. ACTORS' MOBILIZATION

- Agim carries out the role of a policy network, to establish stable links with the political actors (City Council, State and European Union), social actors (associated people, civil society) and collective actors (business associations, cooperatives), together with educational and research institutions).
- The idea of a "public bank/stock market of land" was launched by a public petition via the Internet in November 2010, to identify the interest of social actors and whether the idea would be approved or not. The petition received 369 signatures in less than 30 days. Then, the promoters developed creative social strategic planning to project the idea, a set of interrelated decisions with the formulation of public policy (public-policy-making), and elaborate a policy about Municipal Land Exchange.
- For the first experiment in Sever do Vouga (2013), a network was created formed by Agim, City Hall, Bernardo Barbosa de Quadros Foundation (organization of social economy) and a private company.
- For the training activities, Agim worked in partnership with universities, institutions of technical training, and made technical cooperation agreements with several research units at the national and international level.

4. ACTIVITIES

- In the first experiment (see above), the Quadros Foundation signed a commitment to cooperate, providing 40 hectares of their land, divided into 22 plots. Then, a pilot project was elaborated (Land Exchange for Growing Blueberries), presenting some criteria: 1. take into consideration the interest of young people over 18 who want to cultivate the blueberries and can invest at least 15% of the needed capital from their resources; 2. a priority is given to residents and people from places where the land is available and young farmers; 3. each person interested in farming activities may apply for a portion, with the average investment estimated at 76,000 euros per hectare value that could benefit from Community support through the ProDeR program, among others. The Land Exchange provides the lease (farmer/landowner) for 15 years, which is renewable every five years.
- The work of Agim, at first, was to gather contacts of those interested in the program, show the land and help define the necessary investments to get a well-installed blueberry plantation, able to provide high productivity and quality.
- The Land Exchange for Blueberry Cultivation provides a series of training and research development in the cultivation of blueberries.
- The social innovation 'Land Exchange' becomes public policy by the Legal Order 197/2013 of May 28th, and is officially named "*Bolsa Nacional de Terras*".
- The Information System of Land Exchange (SiBT) was created to gather and disseminate information among the Land Exchange participants.

5. OPPORTUNITIES AND OBSTACLES

- Besides the supporting role of Agim, it is to stress that this initiative gained greater visibility through mass media, public debates (in Parliament), and the recognition of the local Municipalities. Local governments played a role to motivate citizens who own land and do not have the profile for agricultural activities and/or agroforestry, to cede their land for sale or lease to young farmers.
- During the process, it was observed that there were, in many moments, disputes and conflicts around the innovation strategies among the actors involved. Excess of bureaucracy from the central government was noticed by some participants.

6. IMPACTS

- The Land Exchange, pilot project, created 22 permanent jobs, microenterprises that generate self-employment. Land Exchange moves also jobs, companies and people who are indirectly linked to the production and commercialization of blueberries, e.g. the production of raw materials and the distribution chain taking the product to national and international markets.
- The project also strengthens the actions of public administration aimed at the development of local characteristics. The blueberry cultivation, as a resource of the territory, opened a window of opportunity in which it was possible to promote the trademark "Sever do Vouga, the Blueberry Capital".
- A networked social innovation system supported the environment in which social innovation was generated. This system is formed of public sector agencies, private sector, organizations of social economy and higher education institutions, professional training institutions, Institute for Employment and Professional Training, Research Centers connected to universities. This system, in addition to supporting the implementation of the idea, played the role of dissemination of the social innovation, which turned into national public policy - Bolsa Nacional de Terras.
- At the national level, despite the State's commitment recognizing the social innovation as a national policy, it is observed that by February 2014 the innovation was little advanced, even though some municipalities had implemented the Land Exchange policy.

PRACTICE # 3: Cooperative to buy and built renewable energy

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Ecopower

Original target location/territory: Rotselaar, Flanders (Belgium), population 15.068. Currently all Flanders (population of 7.876.873)

Objectives: A cooperative was created, aiming at finance local renewable energy projects. Since the liberalisation of the energy market in Flanders (July 2003), Ecopower became a supplier of green electricity produced in Belgium.

Coordinator/responsible organization: Ecopower

Period: Since 1991

Sources: <http://energy-cities.eu/publication/unleashing-the-power-of-community-renewable-energy/>; www.rescoop.eu/starters

2. INTERPRETATION/VISION

The origins of Ecopower date from 1985, when a watermill was bought as part of a co-housing project in a little town, based on the vision of energy efficiency (renewable energy), cooperative nature and public service.

3. AGENCY

- The cooperative, formally established in 1991, claims 50.000 members in 2017.
- Ecopower has direct partnerships with local municipalities to support economic and social value creation and with other organizations, including NGO (like Greenpeace) and universities. For instance, a study of the production of energy was made and simulations were done by the department of fluid mechanics of the University of Brussels.
- Ecopower is now a member of the Belgium group of renewable cooperatives REScoop.be and the European group of renewable cooperatives REScoop.eu.

4. ACTIVITIES

- In 2003, following the liberalisation of the electricity market in Belgium, the general assembly of the cooperative voted to become an energy supplier in the region of Flanders.
- The cooperative buys and builds renewable electricity units, such as wind turbines and water turbines, in Belgium. Projects in recent years include the placement of wind turbines in Eeklo, Gistel and Ghent, and the placement of hydroelectric turbines in Rotselaar, Hoegaarden and Overijse, and a factory where wood pellets are produced. Together these installations produce about 100 million kWh per year.
- As an example of the kind of activity done, in the offer for the public tender in Eeklo, Ecopower had also offered several extra services to the city: the project sponsored a nature information centre, set up solar installations, and installed a co-generation plant using plant oil to supply heat to two of the city's buildings.

5. OPPORTUNITIES AND OBSTACLES

- The University of Brussels played an important role e.g. in the Eeklo project, advising the municipality to give priority to a cooperative approach, such as the Ecopower one.
- Throughout the project, there was no local opposition. This is why Ecopower is considered a best practice in the speed of the authorisation process. Project's close collaboration with the local authorities and a careful process of open communication with local citizens are success factors that contributed to speeding up the authorisation process. Ecopower members appeared regularly in the local press and on local radio.
- The members of the cooperative are active stakeholders and promoters. As the chairman of Ecopower stated some time ago: "In a sense, we have 43,000 volunteers in the organisation. All are promoting renewable energy on family days such as birthdays or any other social meetings where high energy prices are so often a topic of discussion."
- To overcome the difficulties related to the financing the pre-planning stage, the feasibility study for the first project was undertaken by volunteers, avoiding extra costs for the cooperative.

6. IMPACTS

- 40 % of Ecopower clients have installed solar panels on their buildings.
- At the end of 2010, 1% of the Flemish households were supplied by Ecopower.

- Through initiatives focused on energy efficiency, Ecopower's members have reduced their electricity consumption by an average of 50% over the past 10 years.
- Ecopower inspired other energy cooperatives across Europe.

PRACTICE # 4: Energy cooperative co-steered by the citizens

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Coopem" - Cooperative Energy of Mouscron

Original target location/territory: Mouscron, Wallonia region (Belgium), population 56.023 (2012)

Objectives: Create a joint ownership model to help households and companies to afford solar energy installations, involving city authority, citizens and companies

Coordinator/responsible organization: Cooperative COOPEM

Period: Since 2017

Sources: <https://www.renewables-networking.eu/documents/Case-Study-Mouscron-BE.pdf>

2. INTERPRETATION/VISION

The decision to launch the cooperative was taken in the framework of the city's commitment to the Covenant of Mayors' initiative, signed in 2012 to reduce CO2 emissions by 21% by 2020.

3. ACTORS' MOBILIZATION

- At the time of the action plan development, the city hosted a total of 667 photovoltaic installations of a capacity of less than 10KW, totalling 2.830 KW and producing 2.405,5 MWh, covering only 3% of the total building stock). The city thus decided to take measures for solar cells to make a bigger imprint on Mouscron's landscape.
- Following a series of consultations with citizens (assemblies) and feasibility studies (made by a team of researchers), the local officials finally opted for the joint cooperative model, acting as a one-stop-shop towards citizens and companies willing to invest in the technology.
- The project offers its citizens the choice to either directly benefit from the energy transition (as clients) or actively take part in it by becoming members of the cooperative. The Mouscron cooperative model associated the city council from the very beginning as the promoter but also the shareholder of the project. Fourteen citizens were also associated to the launch of the cooperative, together with two

trusted partners in the field (owning 30% of the cooperative shares), including Energiris, a citizens-led investment cooperative very active in the Brussels Capital region and ARALIA, a company with a strong track record of renewable electricity production projects. The local authority owns 15% of the cooperative shares. Two of the board members of the cooperative work in the energy department of the city, offering a direct contact between the citizens and the cooperative.

4. ACTIVITIES

- The cooperative has already helped several households and companies to afford solar energy installations.
 - o The households that chose to work with the Coopem benefit from a wide range of services, including Administrative handling of the whole process; Prefinancing of the energy subsidy or assistance in applying for it; Further reduction of the investment costs through joint equipment purchase; Selection of the best equipment from local suppliers ensuring early intervention in case of problems with the installation; Monitoring and validation of the installation process; Performance guarantee on the installation. By the end of June 2018, the cooperative completed its third joint purchase of 85 installations of 3 KW of capacity.
 - o As for the companies, the cooperative offers a leasing plan to local companies, which are invited to finance only 10% of the installation costs; after 10 years, the company becomes the owner of the installation (a renting option, with no buying obligation, is also possible); the cooperative chooses the equipment, offers installation maintenance and seeks to maximize production to sell the biggest possible number of green certificates.

5. OPPORTUNITIES AND OBSTACLES

- The participation of the city proved instrumental in increasing the credibility and legitimacy of the project; the city contributed €3 000 out of the initial capital of €20 000 put together for the establishment of the cooperative.
- The main challenges the City authority met at the beginning of the initiative were: Difficulty to assess actual demand and interest from citizens towards the project; High upfront costs linked to the installation of photovoltaic panels; The administrative paperwork and processes to undertake, including the application for green subsidies and certificates. These challenges were overcome simplifying the bureaucratic process and hiring experts and consultants.

6. IMPACTS

According to the promoters:

- The joint purchasing of equipment from local companies contributes to local development in the city
- The one-stop-shop approach helps citizens get easier administrative and financial access to RES solutions
- The project contributes to the city's CO2reduction targets in the framework of the Covenant of Mayors
- The city branding is enhanced thanks to the international visibility of the project and residents feel committed to climate action and become more enthusiastic towards sustainable energy policies
- Benefits from the project can be re-invested into other sustainable development activities
- The first dividends will be distributed to members of the cooperative in the 2019 fiscal year. The first 1000 shares sold benefitted from a tax rebate which decreased their price by 45% from €250 to €137.50.

Other cities in the Wallonia region are starting to copy the Coopem model.

PRACTICE # 5: Community-owned farm for sustainable food

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Sutton Community Farm, registered as Community Benefit Society

Original target location/territory: Near Sutton (UK). Sutton is the principal town of the eponymous London Borough of Sutton in South London. Population 41.483 (2011)

Objectives: Sutton Community Farm is a community-owned farm. The aims are: To increase local food supply, grown sustainably; To create inclusive, shared spaces for the community to cultivate skills; To be community-led; To achieve economic stability, supporting land-based employment

Coordinator/responsible organization: A group of local people and volunteers (a management committee of 7 members). The promoters came from the environmental charity BioRegional

Period: Since 2010

Sources: <http://suttoncommunityfarm.org.uk/about-us-sutton-community-farm/>

2. INTERPRETATION/VISION

The farm started in response to a community need with the purpose to increase access to fresh, healthy, sustainable food and provide a shared space for people to cultivate skills, get exercise and make new friends.

The vision of the promoters includes the aim to be transparent, professional, democratic, inclusive, passionate, collaborative, innovative, inspiring, fun, pragmatic, promote equality and demonstrate leadership. 5 pillars are part of the vision: space and community; local food supply, enterprise and diversification business activity, leadership, membership.

The farm takes inspiration from the three ethics of permaculture (care for people, care for the planet and fair shares), and 10 principles of One Planet Living (zero carbon, zero waste, sustainable transport, sustainable materials, local and sustainable food, sustainable water, land use and wildlife, culture and community, equity and local economy, health and happiness).

3. ACTORS' MOBILIZATION

- The Farm employs a small team that is supported by a large network of volunteers (young and adults); so far, 3.000 volunteers have been involved
- Wide range of partner institutions and organisations involved, including 10 local schools and National Citizen Service
- The Farm is taking part in the FEW (Food Energy Water) Meter project which aims to develop a truly comprehensive system to measure existing urban agriculture practices.
- The Farm has had a Community Engagement Coordinator in post for the past two years; this role has facilitated an expansion of community engagement in multiple directions
- Among the partners, besides the environmental charity BioRegional, are the charity Ecolocal, the Orchard Hill College, the firm Good Energy. Among the current funders are: Power to Change Community Business Fund, The James Trust, City Bridge Trust, Ernest Cook Trust, Sutton Community Fund, Elizabeth Creak Charitable Trust, Thames Valley Housing Association Community Chest, Postcode Local Trust, Growing Together, Susila Dharma International. Among the supporters, are Reed Business Information, Subsea7 and others.

4. ACTIVITIES

- The farm is an enterprise centred on its VegBox scheme serving over 300 homes per week; it is a space for learning about sustainable food production and other themes.
- In June 2018 the Farm expanded supported volunteering opportunities for those with learning disabilities.
- Since September 2018 monthly free events for volunteers and members of the public have been run - a mixture of skills-based workshops (e.g. jam making) and film screenings.
- A biannual volunteer feedback survey is conducted.
- An open share offer was recently launched, allowing new members to join the farm community at any time.

5. OPPORTUNITIES AND OBSTACLES

- 8 partners and supporters provide services, competencies for organisation and training, and structures
- 23 financing organisations have supported the initiative so far (charities, foundations, enterprises, etc.)

- Although the promoters accept donations and seek funding opportunities for new projects, they do not wish to rely on funding, moving towards self-sufficiency

6. IMPACTS

- On 2018, 17 Tonnes of produce grown.
- The farm is a recognised and valuable community asset.
- An increasing number of weekly customers is registered during the last period.
- Budget is rapidly grown.
- Many volunteers have registered improvement of their lifestyle, more confidence in growing food, healthier diet, and improvement of self-esteem.
- Produce grown at SCF emits an average of 38% less GHGs compared to equivalent supermarket produce.

PRACTICE # 6: Renewable energies in a remote island

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Renewable energies

Original target location/territory: Eigg Island, Scotland (UK), population around 100

Objectives: Provide effective and affordable access to energy

Coordinator/responsible organization: Eigg Electric

Period: since 1997

Sources: <http://www.bbc.com/future/story/20170329-the-extraordinary-electricity-of-the-scottish-island-of-eigg>
<http://isleofeigg.org/eigg-electric/>
<https://www.theguardian.com/uk-news/2017/sep/26/this-island-is-not-for-sale-how-eigg-fought-back>
https://www.youtube.com/watch?v=TrsK8_-FBSs

2. INTERPRETATION/VISION

The Scottish island of Eigg (30 km²) has a precarious connection with the outside world. Without access to a national energy network, residents relied on noisy and expensive diesel generators that only worked for a few hours a day. The project stems from the idea of transforming the island's weakness (in terms of isolation and exclusion from the national electricity network) into a resource, using the main dowry of Eigg: its natural resources.

3. ACTORS' MOBILIZATION

- The Eigg Electric is a wholly-owned subsidiary of the Eigg Heritage Trust. Scottish Wildlife Trust and Highland Council participated in the establishment of Eigg Electric in 2005.
- An element to underline is the very strong community identity, which involves a spirit of ownership of the island by its inhabitants, who a few years earlier, through a national campaign, with concerts and other fundraising initiatives, had managed to purchase the island from previous owners. All tariffs, costs and management of the energy network are decided with the consent of all.

4. ACTIVITIES

- The energy system was designed to take power from renewable resources sufficient to provide the island with a continuous reliable electricity supply with minimal use of fossil fuel generators, at all times of the year. No burn (stream) on the island has sufficient bulk flow of water throughout the year to provide our needs through hydroelectric generation alone. Wind generation provides the complement through most months of the year.
- The system consists of three hydroelectric generators a group of four small wind generators and an array of solar electric panels sited at different locations around the island as determined by optimum availability of the resource. The hydroelectric capacity is approximately 110kW, the maximum output of the wind farm is 24kW and the solar electric panels can produce up to 50kW. The total generating capacity of the whole system is approximately 184kW.

5. OPPORTUNITIES AND OBSTACLES

- As for the opportunities, the £ 1.66 million project was largely funded by the European Union's Regional Development Fund, as well as national bodies and contributions from the islanders. More, residents offered voluntary work to reduce costs. The protagonists claim to have succeeded when they found a way to settle their disputes.
- Before the community ownership, Eigg had a succession of landowners; most tenants did not have legal ownership, making development virtually impossible.
- A problem detected at the start of the project was the poor preparation of residents for the management and maintenance of energy sources.

6. IMPACTS

- Today this island continues to set an example, not only in terms of supplying electricity from renewable sources but how companies could meet their energy needs without access to a national network - a challenge that affects almost a fifth of the world's population.
- On average, Eigg works with 90-95% renewable energy. It was an essential consideration in the design and development of the whole project that it should impact upon the natural beauty of the island as little as possible.
- In the last 20 years, unlike many of its island neighbours, Eigg's population has increased - from 65 residents to around 100. New homes have been built and new businesses have been launched.
- The initiative and energy of the community in driving this unique project to its successful conclusion was recognised by the award of Best Community Initiative at the 2008 Scottish Green Energy Awards. Our unique concept and the

environmental efficiency and sustainability of the project were recognised by the Scottish and Southern Energy Innovation and Energy Efficiency award 2009 at the Scottish Energy and Environment Conference 2009.

- The project had the financial support of European Regional Development Fund; Big Lottery Fund; HIE Lochaber; Highlands and Islands Community Energy Company; Scottish Households Renewables Initiative; Energy Saving Trust; Highland Council; Isle of Eigg Heritage Trust; The Residents of the Isle of Eigg.
- Eigg's experience has been proposed as a model for all the territories that suffer a similar problem, generating twinning and partnerships, such as the Community energy of Malawi, which visited the island to learn the model.

PRACTICE # 7: Local owned integrated energy management system

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Samsø project

Original target location/territory: Samsø (Denmark), island with a population of 4.233

Objectives: To become 100% self-sufficient from local renewable energy sources for electricity, and reviving the local community endangered by unemployment and depopulation

Coordinator/responsible organization: Samsø Energy Supply Company, and Samsø Energy Academy (since 2007)

Period: Since 1997

Sources: <http://local-social-innovation.eu/islands-and-renewable-energy/#c125>; <https://www.renewables-networking.eu/documents/DK-Samso.pdf>

2. INTERPRETATION/VISION

Before 1997, the Danish island of Samsø was entirely dependent on oil and coal, both imported from the mainland. Based on the initiative of three inhabitants of the island, in 1997 Samsø participated in a national competition for islands that plan to become 100% self-sufficient with renewable energies, which they achieved thanks to a 10-year master plan. Its long-term objective is to become fossil-fuel-free by 2030. One of the objectives of the Samsø project was reviving the local community endangered by unemployment and depopulation.

3. ACTORS' MOBILIZATION

- The project is coordinated by a consortium of several local stakeholders: the local energy agency, the local development office, the municipality of Samsø and the municipally-owned energy company.
- Citizens contributed to the design and implementation of the plan through a series of workshops.
- Samsø Energy Supply Company, a local energy company funded and owned by the island's citizens, led initially the project. Samsø Energy Academy, a resource

centre on renewable energies created in 2007 and partially funded by Samsø municipality's profits from off-shore wind power, now leads this consortium.

- 90% of the windmills are owned by local people. In the beginning, some mistrust against the project was diffused among residents, but, as the owners of the Samsø Energy Supply Company, the islanders eventually benefited from the realisation of the project, and a positive shift in the public opinion occurred.

4. ACTIVITIES

- The core plan consisted of installing three district heating plants, eleven onshore and ten offshore wind turbines, and carrying out energy efficiency measures in 200 houses. The island's electricity is produced by 11 land-based wind-turbines, as for heating, the island counts three straw-based district heating systems and one district heating plant combining woodchips and solar energy. 300 houses have invested in individual renewable energy heating systems.
- Since 2014, the ferry between the island and inland Denmark runs on biogas which is produced in a multi-functional biogas plant on the island. This plant is the heart of the island's organic waste management.

5. OPPORTUNITIES AND OBSTACLES

- The project had the financial and political support of the municipality and funding at regional and national level
- Initially, islanders opposed the project, mostly due to their reluctance to have wind turbines along the coastline.

6. IMPACTS

- Samsø achieved in 10 years to become 100% self-sufficient from local renewable energy sources for electricity.
- Thanks to its 10 offshore windmills, which compensate for the heat produced from non-renewable sources and private transportation, the island is 100% CO2 neutral. The "Samsø 2.0" plan was launched, to phase out fossil fuel by 2030.
- This project is one of the most important and inspiring experiences all over the world about renewable energy.

PRACTICE # 8: Telecommunication platform for marginalized communities

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Siyakhula Living Lab (SLL)

Original target location/territory: Mbashe municipality, Eastern Cape Province (South Africa), population around 260.000 (2011)

Objectives: To develop and field-test the prototype of a simple, cost-effective and robust e-business/telecommunication platform, to deploy in marginalized and semi-marginalized communities

Coordinator/responsible organization: Rhodes and Fort Hare Universities

Period: Since 2005

Sources: <https://siyakhulall.org/>

2. INTERPRETATION/VISION

The area in which the project was tested is Mbashe local municipality, a rural area on the Wild Coast of South Africa. The idea of providing connectivity to the impoverished rural communities is at the core of this project and is linked to the fact that communications is a human right and it also facilitates local development (starting from education and tourism). Therefore, Information and Communication Technologies (ICT) are recognized as an enabler for socio-economic development of communities. It is to be taken into account that over 60% of South Africa's population has no access to the Internet or any knowledge of how it can enhance their lives.

3. ACTORS' MOBILIZATION

- The Siyakhula Project (SLL) was launched in 2005 as a large collaborative and multi-stakeholders project between Rhodes University, the University of Fort Hare (in particular, the Telkom Centres of Excellence in Telecommunication hosted in their Computer Science departments), industry, government and community, with the end-users at the core of the operations. A Living-Lab and quadruple helix approach was adopted. An existing relationship with researchers in the Anthropology Department at Rhodes University provided a connection and entry into the local Dwesa community.

- After a first test, many other national and international actors have been involved as partners, donors or member of common networks, among others: Cooperation Framework on Innovation Systems between Finland and South Africa (COFISA); European Network of Living Labs.

4. ACTIVITIES

- The test done in Mbashe started with a user requirement elicitation, to plan according to the local needs and characteristics. Then the connectivity was established, based on a wireless broadband island which connects some “Living Lab points of presence” to each other, and is attached to the internet through a satellite or a cellular link where possible.
- Several services were provided, such as an e-commerce platform; an e-judiciary service (as an interconnection between traditional justice systems and external judicial institutions such as local village courts and urban magistrate courts, for monitoring and controlling legal e-services for the region); An e-government service was created to provide access to some application forms (e.g. for identity documents) and then support remote submission of completed forms; an e-health service that uses ontologies to store indigenous knowledge regarding local practices and remedies to complement western medical information.
- Special attention was given to the aspects of understanding and translation of technical terminology into the local language.
- A continuous monitoring and evaluation activity was carried out, as well as planning for financial, technical and cultural sustainability.

5. OPPORTUNITIES AND OBSTACLES

- The project had strong support from the South African government. The private sector funders of the two university Centres include Telkom South Africa, Saab Grintek Technologies, Tellabs/ Coriant, Easttel, Khula Technologies and GENBAND.
- Technical challenges related mainly to the constraints of working in rugged, mountainous terrain with poor road and electricity infrastructure and harsh environmental conditions, such as dust and temperature variances. Social challenges related to obtaining the buy-in of the local community and to reaching consensus on the criteria for the expansion. A lack of technical training of community members also complicates the resolution of technical problems within the infrastructure.

6. IMPACTS

- The SLL's current active user base (on 2012) was approximately 200 community members and 4500 learners drawn from 17 participating schools.
- Among the impacts of the first test done in Mbashe are more opportunities for marginalised people to begin participating in the knowledge economy, not only as a consumer of information but also as producers; the collaboration between communities and researchers in creating services to meet untapped needs (e.g. new opportunities for training).
- The project has evolved to include a generic service integration platform to support services for rural and peri-urban areas in South Africa. The need to transform into robust industrial products the experimentation in the Siyakhula Living Lab has given origin to a software house, Reed House Systems, which started its operations in 2010.
- Current partners of the project promoters are Telkom South Africa, Saab Gntek Technologies, Tellabs/ Coriant, Easttel, Khula Technologies and GENBAND; Technology and Human Resources for Industry Programme (THRIP) of the Department of Trade and Industry of South Africa; Eastern Cape e-Skills CoLab: ICT for Rural Development.
- The project results allowed a large production of scientific literature.

2. Recovering and fostering local knowledge

The 8 BUGIPs shown in this section place a particular emphasis on what we have called “Recovering and fostering local knowledge”, and which aim to identify and support local holders of scientific and innovation-related skills, or even traditional knowledge bearers relevant for territory management (for example, in the agricultural field). The practices have at their core the action of science and technology parks, as well as platforms and coalitions for urban development, of networks that support grassroots innovators and traditional knowledge, or of innovative companies that are born with a strong social agency and, in somehow, anticipate and partly integrate the work of other state and non-governmental actors.

PRACTICE # 9: Science and Technology Park offering social services

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Pomeranian Science and Technology Park (PSTP)

Original target location/territory: Gdynia (Pomerania region, Poland), population 247.799 (2014)

Objectives: The main idea of PSTP is to concentrate multiple factors related to companies' development, facilitating running business activities, transfer and implementation of technology in a relatively small space, hosting and offering also social services for the population

Coordinator/responsible organization: Gdynia Innovation Centre, that is a budget entity of the City of Gdynia, established by the City Hall of Gdynia to coordinate the project of Pomeranian Science and Technology Park and to implement the tasks related to the development of innovative projects within the area of Gdynia

Period: Since 2001

Sources:

[http://s3platform.jrc.ec.europa.eu/documents/20182/84453/Guide to Social Innovation.pdf](http://s3platform.jrc.ec.europa.eu/documents/20182/84453/Guide+to+Social+Innovation.pdf); <http://www.gdyniaprzedsiebiorcza.pl/en/entrepreneurship-development-support/gdynia-innovation-centre/>; <https://ppnt.pl/en/about-us/>

2. INTERPRETATION/VISION

PSTP was set up to support the area's move from heavy industry to an information and knowledge-based economy. Initially, it focused on ICT, biotechnology and industrial design. Although the park's main activity continues to be technological innovation, over time it has developed expertise in service innovation and more recently has opened up to social innovation.

3. ACTORS' MOBILIZATION

- The activity of PSTP aims mainly to provide benefits for:
 - Entrepreneurs – low overheads and convenient conditions for running business
 - Students and graduates – user-friendly backup in starting own business, low overheads, scientific and business counselling
 - Residents of the region – favourable conditions for the development of creativity and activation of the regional community as well as new, permanent jobs

- Local economy – increase in competitiveness, economic stimulation and restructuring
- Environment – region revitalisation, support for companies dealing with environmental protection.

“We try to act as a networking hub for all actors involved in science communication and lifelong learning. To point out the most important:

- municipality: city of Gdynia is our organizer; we cooperate strongly with all the relevant departments of city hall (promotion, formal education department, culture etc.) mostly in events;
 - universities (we have formal agreements with all the universities in Gdynia and Gdansk), having cooperation in events, involving students organizations to carry out the activities in the centre, participating in job fairs, involving professors as experts;
 - teachers/teachers organizations (non-formal), supporting each others promotion, co-organizing events like conferences and workshops;
 - civil society organizations (formal agreements); mostly educational, ecological, senior and handicapped people's organizations, co-organizing events and promotional cooperation;
 - companies, because of our complicated Polish law we cannot cooperate very much; we mostly try to cooperate with young start-ups with technology which can interest our guests.
- Currently, the Park Gdynia is home to more than 250 companies working primarily in the areas of ICT, environmental protection, automation, robotics, graphics, and design.
 - The Park started also to provide social services and premises for the municipality (see below).

4. ACTIVITIES

- Pomeranian Science and Technology Park offers space for office premises and laboratories, conference and exhibition halls, prototype rooms, leisure area. PSTP host also: Gdynia Startup Zone; Biotechnological Laboratory; Gdynia Design Centre; Conference Centre, Regional Patent Information Centre.
- The Park is also home to municipal units: the Social Innovations Laboratory, the “Experyment Science Center” (interactive exhibition for groups, children, families, etc.) and the “Library with Passion”.
- The Experyment Science Center, in particular, carries out various forms of science communication activities: interactive exhibitions, science shows, workshops and lectures for both children and adults. It also carries family university and participate and organize science picnics and fests outside the centre.
- Within this framework, the park started working with the city’s social sector, bringing design into disadvantaged neighbourhoods to renovate school playgrounds. Following this success, it turned its attention to redesigning prefabricated social housing estates. Other projects were also started as a result.

5. OPPORTUNITIES AND OBSTACLES

- The budget is public-based (money from the city) as well as revenue based (tickets). The Park use EU grants (Horizon2020, Interreg Europe Programme) as well as national and local ones.
- Besides the financial and political support from the City of Gdynia, it is to be noted that the total park capacity which was made available is 250.000 m3. It is to be stressed also the availability of volunteers at the local level.
- The park did not meet particular obstacles on the beginning, as science centres are quite new in Poland, but it will have to face them in the close future (exhibitions getting old, a lot of new places growing in the neighbourhood).

6. IMPACTS

Further the other information provided, to make an example of the people involved, the Experiment Science Center hosts about 250.000 guests a year who can “play” with science.

Among others, in 2011, after more success with social projects, the park decided to extend its mission and introduced a social innovation module.

PRACTICE # 10: Innovation Platform for Sustainable Urban Development

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Innovation Platform Gothenburg

Original target location/territory: Gothenburg (Sweden), population 572.779 (2016)

Objectives: The platform is an arena where innovative solutions for sustainable urban development are tested and demonstrated

Coordinator/responsible organization: City of Gothenburg, Johanneberg Science Park and Mistra Urban Futures

Period: Since 2010

Sources: www.mistraurbanfutures.org/en/lip/gothenburg;
www.mistraurbanfutures.org/en/project/innovation-platform-gothenburg

2. INTERPRETATION/VISION

The project is related to the 11th sustainable development goal (Sustainable cities and communities), aimed at facing the new complex challenges for the cities in the current global framework.

“The challenges facing West Sweden, and Gothenburg in particular, primarily concern effects of climate change, growing social segregation and a development from an industrial to a service and knowledge-driven economy. Gothenburg is also facing the challenge of large-scale growth of housing and premises, especially in the central parts of the city, while strengthening Gothenburg as a city characterized by sustainability and accessibility for all.”

3. ACTORS' MOBILIZATION

- The MISTRA approach is applied, which bring different actors together to co-create knowledge and understanding that promotes sustainable urban futures. The idea is to provide the arena for addressing questions and urban challenges no single actor can manage alone. People from a wide range of research fields and expertise work participate, from business, sociology, political science, architecture, biology, physical resource theory, law, human ecology, engineering sciences to design. Co-production is defined as not a single method, rather a methodological ethos that can be implemented in different ways. To do that an

Innovation Platform was created as a test and demonstration arena where new technology solutions, service innovations and processes have been explored.

- The four basic principles for the projects carried out in Gothenburg are that they should be transdisciplinary, based on co-creation, have broad funding and involve international cooperation or anchoring. The overall justice perspective also means systematically addressing gender and intersectional issues.
- A broad partnership was established, among: City of Gothenburg, Business Region Göteborg, Älvstranden Utveckling AB, HSB, IVL Swedish Environmental Research Institute, Johanneberg Science Park AB, Mistra Urban Futures, RISE Research Institute of Sweden, Tyréns AB, Region Västra Götaland (VGR).
- The largest and oldest network of the Platform is Urban Futures Research Network - a digital network that collects about 200 researchers interested in sustainable urban development.

4. ACTIVITIES

- Projects and project development are at the heart of the Gothenburg Platform's operations, where the current project portfolio consists of a dozen projects. Many of the projects include international cooperation or aspects of international comparison with Mistra Urban Future's, other platforms in Sweden and the world. The Gothenburg Platform also supports several PhD projects to interact with a future generation of researchers.
- Mistra Urban Futures Gothenburg Platform has launched an open research school based on transdisciplinarity and co-creation.

5. OPPORTUNITIES AND OBSTACLES

- The initiative stems from Vinnova's call "Developing innovation platforms for Sustainable attractive cities". The project was granted 8.5 million SEK to develop an innovation platform for sustainable urban development. The funding covers two years with the mission to build a long-term structure, starting in July 2013. The Gothenburg Innovation Platform is one of four innovation platforms for sustainable attractive cities that received Vinnova funding.
- The process of developing projects depends on funding. The core projects are partly funded with their resources - financial and in-kind - while other projects can be funded by platform partners if they meet the criteria of the Centre. The platform also has seed funding for preliminary studies and funds for obtaining applications for external funding, for example from research councils and national agencies.

6. IMPACTS

- Because the Gothenburg platform is part of an international network of platforms, exchanges of knowledge and experience are also taking place through this.
- The active networks of Mistra Urban Futures are about, among others: Urban Food; Learning about sustainable cities and regions; Urban Futures; Climate friendly vacationing Sustainable Urban Mobility; Migration and Urban Development.

PRACTICE # 11: Living Lab to facilitate learning and collaboration

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Eindhoven Living Lab

Original target location/territory: Eindhoven (Netherlands), population 223.209 (2015)

Objectives: The “Eindhoven Living Lab” is a collection of initiatives and also a philosophy and an approach to facilitate learning and collaboration in the development of the city. It does not have a formal definition, a web site, and organisational structure. Notwithstanding, several European documents and policies at the Municipal level acknowledge and give shape this experience

Coordinator/responsible organization: Eindhoven City administration

Period: Since 2010

Sources:

<http://www.transitsocialinnovation.eu/content/original/Book%20covers/Local%20PDFs/245%20TRANSIT%20Case%20Report%20-%20Living%20Labs%20-%20Final.pdf> ;
www.tue.nl/en/our-university/departments/built-environment/research/smart-cities-program/collaboration/living-labs/

2. INTERPRETATION/VISION

The Eindhoven Living Lab is used as a label for various collaborative initiatives focusing on social challenges and the use of technology and data in the city. In an important formal policy document (The coalition agreement, Eindhoven, 2104) the city is described as a smart city, focusing on pioneering, innovation, sustainability, cooperation and dealing with societal challenges.

“The Eindhoven living lab is strongly connected to narratives and discourse around doing things together as is expressed by many words that are used in documentation and conversation concerning the living lab starting with ‘co’: co-creation, co-design, co-development, collaborate, co-operate etc. But is also about experimentation and words like laboratory, testing and prototyping (in the context of design) are commonly used. Living labs are also part of a trend and discourse focusing on ICT and the use of data and often associated with smart cities, internet of things and open source developments.”

“The living lab is an approach that fits the definition of change in social relationships and new ways of doing, organizing, knowing and framing:

- *Doing: doing things in an experimental manner, where things can go wrong,*

- *Organizing: it aims to link citizens, the public and the private sector and research and education institutions as a new and experimental governance model*
- *Knowing: its main aim is to do and organise differently in order to generate new knowledge*
- *Framing: the living labs is also a label that in itself is part of process of new framing."*

3. ACTORS' MOBILIZATION

- In 2014 the Eindhoven City started to use the label of the Eindhoven Living Lab in its coalition agreement and at the 5th of September 2014, Eindhoven was formally accepted as a member of the European Network of Living Labs.
- The main stakeholders of Eindhoven Living Lab are: City Administration (as a promoter), University, Brainport (as an accelerator for innovation), Philips (as a provider in terms of light and health care technology), Hospital, Social Housing agency support neighbourhood development initiatives, Residents support local community initiatives.
- The main tool used is that of partnerships between the City Administration and the various stakeholders, depending on the areas and needs. An important factor is a harmonious relationship with existing and established institutions and structures.
- A centrality is attributed to the role of citizens, through co-decision, empowerment, transparency and openness, mutual learning.

4. ACTIVITIES

- The Eindhoven Living Lab is a series of initiatives that took place in the city. The first one (2010) was a joint initiative of the municipality of Eindhoven, the provincial government 'Noord Brabant' and Brainport Health Innovation, in the neighbourhood Doornakkers as an experiment with ICT applications to improve the health situation of senior residents of Turkish origin.
- All Living Lab initiatives relate to a challenge in the city. Several area coordinators form the link between the municipality and the citizens in a specific area and who know social, economic, environmental and physical-spatial characteristics of the area.
- The initiatives focus are about health care, urban renewal, housing renovation, sustainable mobility, lighting, culture and creativity promotion, etc.
- Innovative projects (managed by the Eindhoven University of Technology), among others, promote the "smart lighting", and develop and test mechanisms for de-escalation aggression in public spaces, through the light in the street: lowering arousal levels, inducing positive mood, shifting and broadening attention, facilitating social behaviour, increasing self-awareness, and enhancing self-control.

5. OPPORTUNITIES AND OBSTACLES

Among the opportunities to be stress:

- Political acknowledgement at the local level
- The funds come mainly from the municipality (which represents also a risk)
- High availability of voluntary work
- Well connections with other networks, at several levels.

Some obstacles identified are the inadequate resources for some decentralized community centres and the overwork for some of these centres.

6. IMPACTS

Among others, Eindhoven was elected as “Smartest Region in the world” and one of the 7 best global cities for start-ups, and it was nominated finalist for becoming the European Capital of Innovation in 2016.

PRACTICE # 12: Utilizing Living Laboratories for social innovation

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Malmö Innovation Platform

Original target location/territory: Malmö (Sweden), population 316.588 (2018)

Objectives: The platform focuses on the renovation of existing apartment buildings in low-medium income areas in the southeast of Malmö as part of the city's larger efforts towards sustainable development

Coordinator/responsible organization: City of Malmö

Period: Since the first decade of this century

Sources: <https://www.cambridge.org/core/books/urban-planet/utilizing-urban-living-laboratories-for-social-innovation/72859197DCE25B34670AA9FC2E6EF579/core-reader>;
<http://euap.hkbu.edu.hk/series/mamlo/>

2. INTERPRETATION/VISION

Malmö is a coastal city in the south of Sweden, struggled economically in the early post-industrialization years following the collapse of the shipbuilding industry in the 1980s, which led to a range of other social challenges. Recently, the City of Malmö has worked to address major societal challenges and to increase the sustainability of the city by supporting a diverse range of innovative projects initiated by the city, citizens, businesses, associations, and academia. In particular, the Malmö Innovation Platform uses physical regeneration as a motor for socio-economic development, long-term environmental goals and business opportunities.

3. ACTORS' MOBILIZATION

- The Malmö Innovation Platform' is a network of government-business-university partners, led by the Environment Department of Malmö City, in close cooperation with Lund University, Malmö University, the Swedish University for Agricultural Sciences in Alnarp, Media Evolution, EoN (Utility Company) MKB (Housing construction), the administration of the adjacent Skåne Region, and another thirteen partners from industry. Sixteen business organizations participate in the platform, including representatives of the real estate, construction and design,

energy services and information technology, and consultancy and innovation sectors.

- The platform brings together diverse actors, creates space for discussion on urban (re)development, and supports the creation and implementation of urban experiments, which aim to break away from the “business as usual” paradigm. Initiatives are designed to reorganize and restructure relationships inside Malmö and between the key actors in the platform.
- Ownership of the initiatives is shared by the companies participating in the platform. A key motivation for companies to engage is the enabling of new partnerships and opportunities. All companies invest time and resources into the activities.
- At the project level, participation encompasses also residents and local organizations, together with schools, community groups, and housing associations.

4. ACTIVITIES

- The initiative pilots and develops new technologies, services, business concepts, and local jobs while also experimenting with different organizational and collaborative setups between businesses, the municipality, and academia for supporting the renovation of buildings.
- The platform does not carry out projects or innovations itself but instead supports their initiation and implementation by bringing together individuals from different organizations and providing starter funds for idea development. Participants share experiences and knowledge gained from the supported projects via the platform, where those experiences are evaluated and, ideally, utilized in new projects. Platform participants are also attempting to embed technical experiments in a broader discussion about the social organization of the city and the flows of authority and resources.

Examples of projects supported by the Malmö Innovation Platform

Projects	Description
District heating	EoN (an energy company) performs renovations to district heating systems in existing apartment buildings to test if significant improvements can be made and what benefits for residents might be achieved
Every drop	MKB (a housing company) aims to reduce hot-water usage in apartments by influencing behaviour; MKB transfers saved funds into local schools, thereby strengthening the local community and the schools

Projects	Description
Recycling centres with maker-spaces	VA Syd (a waste management company) and Malmö University test the potential to combine local recycling centres by reusing materials and “waste” in shared maker-spaces
Local jobs	Trianon (a building owner) puts demands on building companies by including a “social clause” in their building contracts requiring the employment of local people in renovation and building projects

5. OPPORTUNITIES AND OBSTACLES

- Funds are provided from Malmö City. Private funds are provided from the involved companies
- Some problems have been noted during the project activities, such as lack of adequate evaluation process; difficulties in assessing the transferability of the initiatives; insufficient acknowledging of the power asymmetries and ways in which the lab processes may disadvantage those without technical knowledge about building construction or about technological innovation.

6. IMPACTS

- The Malmö Innovation Platform has initiated over 50 projects since its inception.
- To date, the main impact of the platform is the creation of meeting space for diverse urban stakeholders in which they can share perspectives on challenges, understand the problems from different perspectives, and feed this new knowledge into the process of developing innovative solutions.
- The platform also serves to integrate projects or experiments which were previously considered as discrete units, by highlighting the lessons learned and using these to inform the development of new initiatives.
- While the convening and coordinating function are necessary, it is still not yet a full governance innovation that transforms the existing urban governance regime.
- Participating partners and marginalized communities are still not represented by the partnership in the long term (risk of a persisting pattern of creative elite experimentation, rather than step away from “business as usual”).
- A second phase of the Malmö Innovation Platform began in 2016 to broaden the geographic scope of the lab across the entire city.

PRACTICE # 13: Supporting grassroots innovators and traditional knowledge

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Honey Bee Network

Original target location/territory: Many places of India (see below)

Objectives: The Honey Bee Network (HBN) is a volunteer-based network that seeks innovative ideas and Traditional Knowledge (TK) produced at the grassroots level by individuals and communities and disseminates them to the wider ecosystem.

Coordinator/responsible organization: Honey Bee Network

Period: Since 1988

Sources: <http://honeybee.org/>;
<https://socialinnovationexchange.org/insights/honey-bee-network>
and other papers provided by Anil Gupta (his blog: <http://anilg.sristi.org/>)

2. INTERPRETATION/VISION

According to the promoters, small local innovations can be profitable and equally useful to the rural poor if designed and marketed appropriately. Communities in the informal sector can create technologies that fit their need. The Network signifies a philosophy of discourse that stands on the three pillars: the discourse that is authentic, accountable and fair.

"The Network has been woven around three basic ideals. The Network believes that a knowledge system in order to become sustainable has to be both just and fair. Hence, while collecting knowledge from the knowledge holder, the Network has made it a norm to acknowledge the knowledge provider with name and reference, if otherwise not desired by the knowledge provider. This particular practice has come handy in protecting the IPR of the knowledge provider. In the second place, the source of knowledge i.e. in the case of Honey Bee Network, the traditional knowledge holders and grassroots innovators must be acknowledged, if otherwise desired so by the knowledge holders themselves. Finally, any proceed that accrues from the value addition of local traditional knowledge and innovation; a fair and reasonable share must go back to the knowledge holders. These have been the guiding principles of the Network, which are fundamental to the functioning of the network and constitute the major non-negotiable for the Network."

3. ACTORS' MOBILIZATION

- HBN involve like-minded individuals, innovators, farmers, scholars, academicians, policymakers, entrepreneurs and non-governmental organizations (NGOs).
- The Honey Bee Network was founded in 1988 by a group of students, teachers, farmers, artisans, roadside mechanics and others who aimed to find local solutions to the problems faced by communities at the grassroots level. Other organizations (see below) joined their effort to HBN over the time).
- The institutional collaborators of the Honey Bee Network are Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI); National Innovation Foundation (NIF); Grassroots Innovation Augmentation Network (GIAN); SEVA, Madurai; Pritvi; PEDES, Kerela; Innovation Club, Orissa; Network of Gram Vidyapeethas; Palle Srujana, Andhara Pradesh. Besides the institutional collaborators, HBN has individual collaborators from Jammu & Kashmir, Rajasthan, Himachal Pradesh and Punjab.

4. ACTIVITIES

The main HBN actions are scouting & documentation; “Shodh Yatra” (a journey for the search of knowledge, creativity and innovations at grassroots); create a market for the street (backyard art; software/websites (open source); Techpedia (putting the problems of micro, small and medium enterprises, informal sector, grassroots innovators and other social sectors on the agenda of the young technology students across the country); formal sector innovation; bridge formal/informal sector; green product; publications.

5. OPPORTUNITIES AND OBSTACLES

- Some main opportunities have been identified, such as Broad network of institutions involved; Financing from a broad range of national and international funders; Volunteers network.
- At the beginning of the initiative, the risk capital was a weak point, overcome by the creation of a Micro-Venture Innovation Fund. Other barriers to the diffusion of grassroots innovation faced by HBN at the beginning of his work are: hostility by the peers of local innovators; lack of social networking among innovators; lack of interest for grassroots innovations from the formal scientific institutions; education system ignore grassroots innovation in the different curricula (from primary school to university); lack of intellectual property protection for the grassroots innovation.

6. IMPACTS

- Dissemination to poor people in other parts of the country (see the box below).
- The network grew, reaching over 75 countries.
- Inventions and innovations sold worldwide.
- The database of the traditional knowledge and grassroots innovations and Honey Bee Network, over the last twenty years, has documented and shared in open source tens of thousands ideas, innovations and traditional knowledge practices.

"Previously, the innovations and inventions that benefited the poor used to stay local, but now with the help of HBN they are disseminated to poor people in other parts of the country who could equally benefit from the new tools and equipment.

HBN has grown and now spans over 75 countries. It has inspired other NGOs focusing on the pro poor innovation sector like National Innovation Foundation and SRISTI, which was created in 1993 as a volunteer organization to provide institutional and financial backing to the HBN. It has also gone international by having organized scouting contests with awards given to grassroots innovators from China, India and Vietnam.

In terms of products, inventions and innovations discovered by HBN in India have been sold worldwide, like Coconut tree climber in the USA, Pomegranate deseeded in Turkey, Garlic peeling machine in Pakistan, Arecanul husker in Singapore, Milking machine in Philippines, Uganda and Ethiopia, Resin grading machine in Peru and Cassava peeling machine in Kenya"

PRACTICE # 14: Co-working space to build new economic and work opportunities

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: La Colaboradora

Original target location/territory: Zaragoza (Spain), around 660.000 inhabitants

Objectives: La Colaboradora is a public co-working space of collective intelligence where people exchange services and know-how using a "time bank". It was set up in Zaragoza as a response to high unemployment and empty public spaces. La Colaboradora believes more opportunities can be created by sharing resources and making collective know-how freely available. The initiative is financed, among others, by Urbact/UE

Coordinator/responsible organization: La Colaboradora is co-governed by the local public administration and other members, promoting self-employment and public space ownership.

Period: since 2013

Sources: <https://urbact.eu/school-collaboration-la-colaboradora>;
<https://www.zaragoza.es/ciudad/sectores/activa/lacolaboradora/comunidad.htm>

2. INTERPRETATION/VISION

La Colaboradora was created to address difficult challenges faced by Zaragoza's people, unemployment the most pressing one of all. The lack of resources made the promoters think of a public space where people could use their talents to build new opportunities together. Just as it is based on the principles of a collaborative economy, La Colaboradora respects and integrates URBACT's values at its core. The promoters believe that more opportunities can be created by sharing resources and building human relationships based on trust, by freely opening our collective knowledge to the city and empowering its inhabitants.

3. ACTORS' MOBILIZATION

- La Colaboradora is a community of 300 very different people with an open agenda of training and events. It's the hub of a mixed ecosystem where public projects, companies, NGOs and citizens coexist. The project put at this core the importance of human contact and trust.

- La Colaboradora sees the involvement of Zaragoza's city council (project "Zaragoza activa") and the commitment of its members, the collaborators. The practice is ruled by a joint-governance between its community members and Zaragoza Activa. The participation of the collaborators is key, as they run the project through the Steering Committee, General Assembly and working groups.
- Since its opening, more than 100 members have helped run La Colaboradora by assuming an active role and joining one of the current six area teams. La Colaboradora works with other entities and institutions, local and international players, who are invited to join the events to broaden the network and learn from their good practices. Some of these stakeholders are the University of Zaragoza, the Aragonese Institute of Youth, the Impact Hub Madrid, the Secretary of Ibero-American States (SEGIB) or the European Creative Hubs Network (ECHN).

4. ACTIVITIES

- La Colaboradora is a peer-to-peer co-working space where the local council supports its community's entrepreneurial projects and job searches by offering an atmosphere to connect and collaborate through a time bank.
- Members can: develop their entrepreneurial/artistic project with no cost, by exchanging their time bank hours with their peers; enter the employability skills programme '25 Talents' and improve their job search skills by a mile; join a strong community of entrepreneurs, share interests and create opportunities; own a public space and help run a collaborative project by joining its working groups or Steering Committee; join the Social Challenges and use their skills to support third sector initiatives in our city; share their know-how and expertise through open-source training for the city.
- Citizens and members can: empower themselves by attending free training activities and rising their profiles; attend open events with special guests, debates and presentations, and expand their network.
- There are 7 management areas where one can collaborate: participation, time bank, training, dynamisation, communication, business model, space and host. The teams meet every month.
- Participants have shared 9.800 hours and organised 592 activities, 51% of them free for citizens of Zaragoza.

5. OPPORTUNITIES AND OBSTACLES

- Involvement of the Zaragoza's city council and volunteer time of participants are among the *atouts* for the activities done. The project received, among others, European Funds (Urbact).

- As for the obstacles, one of the project responsible declared us that the main ones are related to:

"1. CONCEPT: After 6 years of life of La Colaboradora we continue to have difficulties in explaining what it is. It is not a coworking, nor a business accelerator, although it has these services. What really defines The Collaborator is that it is a community of entrepreneurs who exchange knowledge, experiences and services in favour of the projects to be developed in exchange for hours of collaboration through a time bank. In addition, training, accompaniment and professional roasting projects are offered to projects in the seed phase, and fixed jobs are also offered in a coworking.

2. COGESTION: City Hall-participating community. Public administration program whose users are not passive recipients of the services but actively participate in the realization and decision making of activities. Sometimes it is difficult to achieve balance in this equation between administration and community without exceeding the limits that correspond to each of the parties.

3. TIME BANK: Participation tool that counts over time as the payment currency. Managing and supervising the time bank involves some difficulty, which is managed by the community and town hall. Belonging to a time bank requires significant involvement and commitment."

6. IMPACTS

- The promoters put among the project impacts: Improving the city's collective intelligence; Innovation, collaboration, entrepreneurship, public space ownership and capacity building; Building a deep comradeship among peers and a strong sense of public space ownership.
- Between 2013-2017, 210 new entrepreneurship have been created and 30 long-term unemployed have found jobs.
- La Colaboradora's model won the 2015 Ouishare Award Best P2P Finance Initiative in Spain and the 2016 Eurocities Award for Cooperation. It was also recognised as a good citizen-driven innovation practice by the Secretary of Ibero-American States (SEGIB).
- The responsible of la Colaboradora signed an agreement with the city council of Santa Fe, Argentina, to transfer La Colaboradora's model to the cities of Rosario and Santa Fe. In Spain, Barcelona Activa and AndoaIn's city council have submitted a proposal to transfer the model. Private hubs from Gijón, Pontevedra, Madrid and Barcelona and representatives from Santos municipality (Brazil) have also visited the project. La Colaboradora is also a member of the European Creative Hubs Network.

PRACTICE # 15: Technological education to migrants

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Hola Code

Original target location/territory: Mexico City

Objectives: Enhancing the technological contribution of migrants

Coordinator/responsible organization: Hola Code

Period: since 2017

Sources: https://www.npr.org/2019/05/26/725675214/in-mexico-new-groups-offer-aid-to-a-young-generation-of-deported-dreamers?utm_source=Solutions+Story+Tracker&t=1564652243838
<https://holacode.com/about-1>
<https://pocoapoco.co/response-and-recovery-mexico-city>
https://www.youtube.com/watch?v=Ima_UcZw6QY
[https://www.facebook.com/pg/Holacode1/about/?ref=page internal](https://www.facebook.com/pg/Holacode1/about/?ref=page_internal)

2. INTERPRETATION/VISION

A new generation of migrants is arriving in Mexico: refugees, and also young adults who were born in Mexico, raised in the United States and are now returning - some voluntarily, some by force — to the country of their birth. They've been dubbed Generation 1.5. With only limited support available from the Mexican government for these often well-educated returnees, several non-governmental organizations and at least one private company are looking to help them out and take advantage of their skills. These migrants bring a spirit of entrepreneurship and creativity to the country, offering Mexico a competitive advantage. This initiative, whose CEO is Marcela Torres, sees the importance of working with return migrants living in conditions of extreme vulnerability. They typically arrive in Mexico not knowing the country, alone, with no Spanish skills, and without the social capital or support network to help them in their rehabilitation process.

3. ACTORS' MOBILIZATION

- With the support of Hack Reactor (software engineering Coding Bootcamp education program – San Francisco, US), the project helps to bring out the technological talent of migrants through a five-month program designed around the needs of the market and the needs of the students.
- A people-centred approach is adopted, to turn talented individuals into software engineers, drawing on both the growing technology sector of Mexico and the global demand for bilingual and bicultural engineers.
- Hola Code is allied also with companies that are looking for bilingual engineers in software development.
- At Hola Code, migrants also build community, create new social links and networks, and integrate into Mexico.

4. ACTIVITIES

- Hola Code offers free tuition to its students and pays its students to attend class. The design follows a social welfare program implemented by the Brazilian government in the early 2000s called La Bolsa Família. La Bolsa Família strives to combat endemic poverty by providing small cash transfers to families on the condition that they, for example, send their children to school and ensure proper vaccination.
- The Hack Reactor's 5-month Bootcamp program is broken into three phases: a 5-week preparatory phase introduces students to the fundamentals of coding; a 12-week immersive phase takes students through intensive coding and problem-solving sessions, and a 3-week job readiness phase helps students identify potential employers and navigate the interview process.
- Hola Code also provides food, banking services, yoga classes, and even mental health support for migrants.

5. OPPORTUNITIES AND OBSTACLES

- As for the opportunities, after a year of pitching to investors and potential partners, CEO found a conspirator in HackReactor cofounder Shawn Drost (San Francisco). They worked to adapt HackReactor's 3-month Bootcamp to a 5-month program for Mexico City's returned migrant generation 1.5.
- Among the obstacles, there are: Early doubt from investors and lack of funding; difficulties in contacting the migrant's generation 1.5 (e.g. working in call centres); difficulty for the women CEO to be taken seriously by the interlocutors

6. IMPACTS

- 90% of the students in the project found work as software engineers; 9% as personnel recruiters and only 1% have changed their work sector.
- More than 400 monthly ask from Central American Mexicans and migrants seeking refuge in the country have been submitted.
- Mexican start-up Hola Code has been chosen by the IFC and the World Bank as one of the top 50 start-ups changing Latin America.

PRACTICE # 16: Technology education for development

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: NewForce

Original target location/territory: West Virginia (US)

Objectives: To solve two problems: a lack of job opportunities, and a lack of trained people for tech companies in the state to employ.

Coordinator/responsible organization: Generation West Virginia (NGO)

Period: since 2018 - ongoing

Sources: https://www.fastcompany.com/90253751/this-program-wants-to-build-a-new-tech-workforce-in-west-virginia?utm_source=Solutions+Story+Tracker
<https://newforce.co/>
<https://generationwv.org/>

2. INTERPRETATION/VISION

West Virginia is one of the few states in the US with a declining population. The state's future depends on its ability to become an ideal destination for young talent. The promoters are working toward a vision of West Virginia where challenges are seen as opportunities, young people are drivers in the state's future, and the state is a destination for young talent to live, work, and thrive.

3. ACTORS' MOBILIZATION

- NewForce aims to completely eradicate the barrier to entry for a career in tech, especially as so much of the talent pool may be people who previously worked as miners, and now find themselves having to start over in their careers.
- Jobcase, an employment platform that already reaches around 500,000 West Virginians, is partnering with Generation WV to direct potential applicants to the opportunity. Mountwest Community and Technical College in Huntington signed on as the initiative's educational partner. All of the Bootcamp courses will be held there. All of NewForce's partner organizations will share the cost of the program so it doesn't fall on the students.

4. ACTIVITIES

- NewForce is an intensive training and job-placement program to connect young West Virginians with careers in tech.
- Generation WV offers a fellowship program that places twenty-somethings at local companies; last year saw fellows go to a design firm in Charleston, an environmental consulting firm in Morgantown, and Core10, a fintech firm in Huntington.

5. OPPORTUNITIES AND OBSTACLES

- In Tennessee, the Nashville Software School has produced over 700 graduates through its intensive boot-camp model. NSS helped responsible of the project to adapt the concept and curriculum for Generation WV.
- The relationship with the employment partners has been critical to the development of NewForce.

6. IMPACTS

It is expected to train and place around 50 people in the first year.

3. New regulatory frameworks

The 5 BUGIPs reported in this section have at their centre the creation of new regulatory frameworks, in particular the establishment of new rules, regulations and procedures to exercise forms of economic and social innovation in the territory. These practices cover aspects such as the regulation of public spaces co-management, the participatory budgeting, the management of urban mobility, the creation of sustainable districts.

PRACTICE # 17: Urban commons regulatory framework

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: CO-Bologna

Original target location/territory: Bologna (Italy), population 390.636 (2018)

Objectives: Providing a regulatory framework that outlines how municipalities and citizens can co-manage public and private spaces and assets

Coordinator/responsible organization: City of Bologna

Period: Since 2014

Sources: <http://www.comune.bologna.it/media/files/bolognaregulation.pdf>; [http://documents.rec.org/publications/Seismic EnablingSocialInnovation Oct2016.pdf](http://documents.rec.org/publications/Seismic%20EnablingSocialInnovation%20Oct2016.pdf); [https://www.academia.edu/15261541/The City as a Commons](https://www.academia.edu/15261541/The_City_as_a_Commons); <https://co-bologna.it/>

2. INTERPRETATION/VISION

CO-Bologna is based on the approach of “Collaborative city”. The key is to transform the entire city or some parts of it into a laboratory by creating the proper legal and political ecosystem for the installation of shared, collaborative, polycentric urban governance schemes.

3. ACTORS’ MOBILIZATION

- CO-Bologna applies the method of “co-city protocol”. The protocol is the necessary step to create the most favourable environment for innovation through urban communing, by adopting the design principles of sharing, collaboration, and polycentrism. The protocol is articulated in three main phases: mapping, experimenting and prototyping.
- The main pillar is the regulation on civic collaboration for the urban commons, empowering residents, and others actors (i.e., social innovators, local entrepreneurs, civil society organizations, and knowledge institutions willing to work in the general interest), to co-design and collaborate with the city to undertake the “care and regeneration” of the “urban commons” across the city. The “urban commons” are defined as tangible, intangible and digital goods that are recognised as important and “functional for the individual and collective well-being”.

- The regulation is called “Bologna Regulation on Collaboration between Citizens and the City for the Care and Regeneration of Urban Commons”. The “urban commons” covered by the regulation include mainly public spaces, urban green spaces, and abandoned buildings and other infrastructure. Municipal administrators and citizens share responsibility for taking care of or regenerating the urban commons by adhering to a series of principles such as mutual trust, publicity and transparency, responsibility, proportionality and civic autonomy.
- The regulation also serves as a sort of handbook for civic and public collaboration through the introduction of a new urban governance model. The Regulation foresees also that the City supports street or neighbourhood associations, consortiums, cooperatives, foundations to manage public space, public urban green spaces and parks, and abandoned and creative spaces.
- Space is also foreseen for training activities carried out by schools and universities.
- The CO-Bologna start-up and implementation process was supported by the LUISS University of Rome.

4. ACTIVITIES

- The Regulation was approved by the Municipality of Bologna in 2014 at the end of an experiment conducted in three districts of the city.
- Organization of the first world conference on urban common assets: “The City as a Commons”, organized under the auspices of the IASC (International Association for the Study of the Commons).
- Establishment of a technical unit for civic imagination (the “polytechnic of common goods”), to accompany the process of mapping the available civic energies, through 12 meetings in the six districts of Bologna.
- In the co-bologna.it web site there is a section dedicated to the mapping of common goods.

5. OPPORTUNITIES AND OBSTACLES

- By allowing citizen (and citizens coalitions) to propose improvements to their neighbourhoods (including the possibility for the city to contract citizens for assistance) the municipality becomes an enabler of civic action geared towards building or maintaining the urban commons.
- The initiative is financially supported by the Fondazione del Monte.

6. IMPACTS

- From the beginning to 2016 the City has signed almost 260 pacts of collaboration.
- CO-Bologna is considered a best practice at European level and cited as such in numerous publications.

PRACTICE # 18: Participatory budgeting for a small-size city

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Participatory budgeting (PB) Agueda

Original target location/territory: Agueda (Portugal), population 49.000

Objectives: To foster a participative budget process, involving citizens in selecting priorities, using adequate technological solutions. The participative budget process amounts to 500 000 € of the Agueda's yearly public spending

Coordinator/responsible organization: Municipality of Agueda

Period: Since 2015

Sources: <https://urbact.eu/open-democracy-all>

2. INTERPRETATION/VISION

Taking into consideration the low rates of participation, the participative budget process was thought as a mechanism of education for citizenship and the establishment of a relationship of trust between the elected and the citizens, using ad hoc technological solutions. The PB takes also into consideration the diversity of its citizens and the different social and ethnical minorities on the town territory. The vision of this initiative is linked to the “being smart” at the core of new millennium strategies.

“‘Being Smart’ is the challenge of the new millennium. People are at the core of everything: technology meets the needs of citizens and they get the habit of easily accessing many things. We want people to feel that they live in a human, inclusive, socially, technologically and economically active city, but also that they can follow and engage with the local administration by submitting proposals, which are prioritised and voted upon in order to identify the investments that need to be included in the yearly Plan and Budget.”

3. ACTORS' MOBILIZATION

- The PB process runs across all the activities of the Municipality, embedded in the administrative modernisation and bottom-up approach. The methodology of “action-reflection-action” is adopted, and blended tools are used to collect suggestions from citizens (both internet and participatory sessions). The mixed model (both online and face-to-face interactions) and the methodology for the

consensus tables, with the support of a team of moderators, make this participatory budget process inclusive to people in terms of writing skills, digital literacy, accessibility to the participatory sessions, and conciliation of family life with the exercise of active citizenship.

- The local authority, based on sociological research about citizens' technological competences and other issues (see below), provides a set of technological solutions, allowing an adequate knowledge of the requests. Citizens can check the online dashboard of the local budget and follow the meeting of the Municipal Assembly through ÁguedaTV, with chat for comments.
- The process of PB-Águeda is worked across all the municipal services, which implies that all employees have the same degree of knowledge in the implementation and execution of projects. A team of 47 moderators was built up (employees of the municipality, who voluntarily work for the project after working hours).

4. ACTIVITIES

- Each edition of PB-Águeda comprises two cycles, with a duration of one year: the cycle of budget definition and the cycle of budget execution. The propositions received (from the Internet or participatory sessions) are scanned and entered in the computer application. This process can be done at home by the proponent, using the web services available (site or APP-based). Since 2015, when the initiative was launched, 601 projects were submitted, more than 80.000 people voted and 30 projects have been selected.
- The propositions not admitted become part of a "Bank of Ideas" which feeds a selection or recovery of 5 ideas while drafting the yearly Plan and Budget, either because of their municipal interest or because the number of votes was too close to that of the winning propositions.
- The implementation of PB-Águeda was accompanied by a sociological study about: The profile of participants (age, gender, level of education and involvement in the associative movement); The profile of the population (including the Roma community); Skills in information and communication technologies; Knowledge of the real needs of the population, even those not fitting the regulations of PB-Águeda (to include them immediately in other support programmes from the local authority); The theorisation of the practice of the processes of participatory budgeting, based on the local experience and the action of benchmarking with 7 national experiences, where the same evaluation criteria are applied.
- The PB exercise stressed that citizens are concerned with these topics: the environment, tourism, sports, urbanism and education.

5. OPPORTUNITIES AND OBSTACLES

- Municipal budget available
- Experts in sociological research involved
- Use of Internet resources
- Involvement of many municipality employees as volunteers

6. IMPACTS

- Approximately 80% of the projects were not initially part of the options of the municipal board for 2013-2017.
- In the last edition, the promoters found that 68% of the people in the sessions were participating for the first time, which means that the process is attracting more and more new participants.
- This experience permitted Agueda ranking 3rd in the Municipal Transparency Index and 2nd in the Smart City Index, and to be an interesting practice studied at international level.

PRACTICE # 19: Participative budget for sustainable city development

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Bridging the gap

Original target location/territory: Cascais (Portugal), population 207.000. The municipality is consistently ranked highly for its quality of life

Objectives: Facing the electoral abstention rate, introducing a participatory budget (PB) mechanism, to bring citizens closer to decision-makers and promoting social inclusion, gender equality, and integration of all social groups

Coordinator/responsible organization: Municipality of Cascais

Period: Since 2011

Sources: <https://urbact.eu/bridging-gap>; <https://participa.cascais.pt/>; https://urbact.eu/sites/default/files/323_Cascais_Gpsummary.pdf

2. INTERPRETATION/VISION

With an electoral abstention rate of over 60%, Cascais (PT) faces a distance problem between its citizens, policies and politicians. A possible solution is a participatory budget approach, within the framework of smart city approach, and sustainable development for the territory, involving four fundamental axes: environmental, social, economic and cultural. Strategic intelligence and citizens' participation, knowledge and innovation, climate action eco-innovation, creativity are fundamental elements of the project' social strategy.

"In the social axis, participation emerges as a need for people's interaction in strengthening democracy. PB emerged in the 80s in Brazil as a way to bring poor and excluded citizens into prioritizing their problems and finding solutions.

Our strategy has 5 axes:

- *Territory with quality of urban life;*
- *Territory of creativity, knowledge and innovation;*
- *Territory of environmental values;*
- *Coherent and inclusive territory;*
- *Territory of active citizenship: promoting proximity and active citizenship through participatory democracy, thus fostering a spirit of community and promoting voluntarism and social responsibility."*

3. ACTORS' MOBILIZATION

- PB is a low-cost, legally binding methodology, with two cycles (decision and implementation), involving citizens from the presentation and discussion of ideas, through to the project's opening. In Cascais, PB highlights are: high voter rate, amount of investment, participants number in public sessions, voting model, follow-up work by the first dimension is the one in which are more indicators.
- PB is deliberative and emerges as a decision-making power based on and by people. The citizens have a continuous interaction in the whole process: Communication; Public Sessions; Technical analysis; Voting; Implementation of the projects.
- Cascais PB establishes new interactions between citizens, public administration and politics, projects' proponents, work executed percentage, and an exclusive PB team.
- There are three dimensions of analysis: participatory, financial and implementation that compose a diverse set of quantitative and qualitative indicators.

4. ACTIVITIES

- In 2011, a new ad hoc team was created in the municipality, and the PB was based on Local Agenda (A21). A Letter of Principles was prepared for PB promoting informed participation to bring citizens closer to decision-makers and contribute to administrative modernisation and the fostering of a dynamic civil society. A deliberative PB was structured, in which participants could submit proposals and decide projects within a stipulated budget.
- In 2013, the Division of Citizenship and Participation was created, which included A21, volunteering, cultural associations, residents' associations and the PB. With this division, the local government was committed to promoting governance, to increase the participation of the citizens in the management of the territory.

5. OPPORTUNITIES AND OBSTACLES

- Cascais had the highest percentage of budget invested in PB (18% in 2015).
- Cascais has the highest implementation rate in the country with total transparency during the process, due to high-quality technical analysis and multitask team.

6. IMPACTS

- In the last 6 years, the PB process involved 150.000 citizens. Cascais PB had a strong impact on the territory, from several points of view: participation, transparency, administrative modernisation, investments, and 88 projects carried out in several fields: education, urban rehabilitation, green spaces, sport, the public road network, security and civil protection, culture, social action, environmental protection and energy and innovation and knowledge.
- This PB has been recognised as an example of good practice and has been used by other cities on the national and international levels.

PRACTICE # 20: Urban mobility with Superblocks

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Superblocks Programme

Original target location/territory: Barcelona (Spain), population 1.600.000

Objectives: To improve environmental and health problems through a more equal distribution of urban space between private/public motorized transportation, other social uses and biodiversity functions, using the model of Superblocks

Coordinator/responsible organization: City of Barcelona

Period: Since 1992

Sources: www.bcnecologia.net

2. INTERPRETATION/VISION

The Superblock Model aims to re-design the city's neighbourhoods to foster a re-appropriation of urban space by residents by reorganizing mobility patterns in neighbourhoods and restricting private car use inside them.

Superblocks are new urban organisational units, with a size of around 400m x 400m, comprised of several smaller blocks (ideally 3 x 3). They are fringed by peripheral roads open for motorized traffic, while interior roads are closed to through traffic but open (by using a system of cards and bollards) to residents, public transport, disabled people, emergency vehicles and, in some streets, bicycles. In this way, the interior public or common areas are relieved of redundant traffic, thus leading to traffic calming of interior roads (public vehicles and loading and unloading, as well as residents, can enter superblocks, but their speed is limited to 10 km/h). Consequently, the areas can be recovered for other uses and thus returned to inhabitants of the area.

Superblock pursues a healthier, more egalitarian and more sustainable city that is full of life. It claims for a need of transforming public spaces as habitable places that served for citizens to develop a series of social and community activities recovering traditional ways of living in the neighbourhood and local communities, which used to foster interaction and social cohesion. Ecological values and environmental awareness are also remarkable motivations to launch the Superblocks Programme.

3. ACTORS' MOBILIZATION

- The Superblock project is being implemented by the Municipality of Barcelona. It integrates and coordinates several city council departments. The local government formed a Technical Secretariat in charge of the Superblock programme that provides professional support, with the assistance of different consultancies that provide support in the definition of the different measures to be implemented in each Superblock, and to the development of the participatory and communication process to be developed in each superblock area. Key support on the superblock programme is from the Urban Ecology Agency, a public consortium consisting of the City Council of Barcelona, the Municipal Council and Metropolitan Area of Barcelona and the Barcelona Provincial Council, having its multidisciplinary team. A second-level local administration involved in the programme is the level of different district administrations in which Barcelona territory is organized. Other institutional actors like the Catalan govern, and the *Metropolitan Area of Barcelona* and the *Metropolitan Transport Authority* are involved in the formulation of the superblocks programme at the city level.
- Other involved actors (through complex citizens empowerment, co-creation, trust-building, negotiation and deliberative processes: assemblies, meetings, world cafés, etc.) are universities and other expert institutions, District organisations, Non-governmental organisations and associations, private companies, and inhabitants of city blocks.
- There are also several opponents in the different neighbourhoods, complaining, for example in Poblenou, that the implementation of this superblocks suffered from several issues, such as “deficiencies of democratic procedure; incoherence between the motivations of the measure and its effects; as well as problems of connection between the neighbourhood with the rest of the city and the metropolitan area of Barcelona”.

4. ACTIVITIES

- On 1993, a Superblock antecedent was established in Ciutat Vella, but the first Superblock was established in 2003 in Vila de Gràcia. On 2014, a Superblock pilot program implementation started in five different neighbourhoods: Les Corts, Plaça de les Glories, Sant Martí, Eixample and Hostafrancs. On 2016 a pilot superblock was implemented in Poblenou and on 2017 in Sant Antoni.
- Each superblock project is being implemented with the collaboration of residents, different organisations and the city council. Meetings are held at different project levels, and interested citizens can participate directly in the vision creating process and decision-makings or contribute by taking specific actions. The same procedure of involving citizens in the implementation process is followed for each superblock, but the outcomes are different as each neighbourhood has its

distinctiveness. Large use of ICT technologies is fostered (ex. GIS maps for illustrating the main changes proposed).

- The entire process can be formalised in the following steps: 1. Definition and analysis of the area; 2. Internal work by the Technical Secretariat; 3. Technical work with the district; 4. Work with the Promotional Group; 5. Participation with specific groups; 6. Participation with residents; 7. Approval of Action Plan; 8. Drafting projects with suitable protocol and participation according to the type of initiative; 9. Implementing the initiatives.
- The Urban Ecology Agency has already developed a whole set of indicators to measure outcomes.
- To be noted that the superblock project proceeds slowly from the planned and it still involves a very limited area of Barcelona. In 2019, five superblocks are fully or partially implemented in BCN. Presently, participatory processes for the co-design of new superblocks have started in the following districts: Sarrià - Sant Gervasi; the old quarter of Horta, in Horta Guinardó; La Prosperitat neighbourhood, in Nou Barris; Sant Andreu neighbourhood in Sant Andreu; Eixample-Consell de Cent-Germanetes; and Eixample-Girona.

5. OPPORTUNITIES AND OBSTACLES

- Among the opportunities, one can note: Large availability of public funds; Broad network of stakeholders involved; Multidisciplinary advisors available
- Among the obstacles, the following can be stressed: Presence of contestation and opponents at the neighbourhood level (see above); Inadequate communication from public authorities in some zones; Insufficient public transport for commuters that might become a barrier for a real transformation on people's patterns of mobility

6. IMPACTS

- According to the City Council (2018), the main impacts the Superblocks programme has on citizens of the city are: "Empowering people, particularly children and the elderly, given the fear that traffic generates; Fostering intergenerational relationships through public areas where people can meet and carry out leisure activities; Strengthening people's emotional bonds with their environment while participating in decision making; increasing public safety by increasing vitality in the streets; making more space available for physical exercise; and so on".
- In terms of the new behaviours that superblocks encourage or facilitate, most residents refer to changes in modes of transportation, but also facilitate changes in the use of public space.

- The superblock of Poblenou receives a special mention of the European Prize for Urban Public Space 2018.
- Based on the experiences in Barcelona, the idea of superblocks is already spreading to other typologically diverse cities in Spain, and this model received large media attention and requests from other City councils all over the world.
- A critical aspect, among other, is “gentrification process” which might transform a neighbourhood such a Poblenou in a “trending place” that attracts people from other parts of the city, increasing renting prizes.

PRACTICE # 21: Eco and co-housing district

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: District of Vauban

Original target location/territory: Vauban district of Freiburg (Germany), population 5.500

Objectives: Creation of a sustainable and social innovative district

Coordinator/responsible organization: Government of the City of Freiburg

Period: Since 1994

Sources:

https://iriskunze.files.wordpress.com/2016/04/cohousing_vauban_2015_07_16_report_ik_ap_publication_transit.pdf;

<https://www.smartcitiesdive.com/ex/sustainablecitiescollective/words-most-successful-model-sustainable-urban-development/229316/>

2. INTERPRETATION/VISION

Vauban has been a collaborative project of the City of Freiburg, intending to plan a new district (an area which had been a French military base until 1992) to meet the extremely high demand on living space in Freiburg and the Forum Vauban, formed by engaged citizens who had the vision of an ecological, socially just and self-organized city quarter with lots of green space and affordable housing.

3. ACTORS' MOBILIZATION

- The Vauban district was created through cooperative decision-making. The creation of the new district was a bottom-up process (through self-organized housing initiatives of cooperatives and privately organized building groups - Baugruppen); at the same time, the overall planning of infrastructure, the selling of land property, and the ecological building laws were set-up and coordinated by the government of the City of Freiburg including participatory planning processes with the future residents.
- An architect, Michael Gies, and a biologist, Jörg Lange, developed the idea of a people's forum to make sure that the people already living there had their views heard and could determine their future. They also realized there was an

opportunity to create a low impact development and, together with experts in the world-famous Fraunhofer Institute for Solar Energy Systems (Martin Ufheil) and the Passive House Institute in Darmstadt, developed their plans.

- An important aspect of Vaubans' innovation is the negotiation process between the City's urban planning office and the strong citizen initiative of Forum Vauban. This citizen initiative had a strong vision to realize a sustainable, ecological, green district with participatory planning, cooperative ownership and affordable housing.

4. ACTIVITIES

- In Vauban district, 2.000 housing units have been provided for 5.500 residents. Building activity started in 1996 and was achieved in 2015.
- The district was planned around green transportation. All buildings must meet minimum low energy consumption standards of 65 kWh/m²a (i.e., at least half the average German energy standards). Public energy and heat are generated by a highly efficient woodchip-powered combined heat and power generator connected to a district heating grid. Organic household waste is treated with an anaerobic digester.
- The project is being monitored using lifecycle and regional material flow analysis with the GEMIS software. This is the first time that a complete urban neighbourhood has been analysed concerning buildings, infrastructure, electricity supply, heat supply, water and waste, traffic and private consumption with a full life-cycle perspective and using regional data.

5. OPPORTUNITIES AND OBSTACLES

- Renewable energy production is encouraged with tax credits from the federal government and subsidies from the regional utility.
- Some differences in motivation between civil society activists and government officers have been noted.

6. IMPACTS

This project is considered one of the most important experiences of sustainable urban development at the European level.

- As an example, for energy, the following provisional figures have been developed: Energy savings per year: 28 GJ (calculated as "CER", cumulative energy requirements); Reduction of CO₂-equivalents per year: 2100 t; Reduction of sulphur-dioxide (SO₂-) equivalents per year: 4 t; Saving of mineral resources per year: 1600 t.

4. Risk management

The 5 practices in this section, dedicated to the "Risk Management", have at their core the orientation to address and prevent environmental risks, economic and social recognized at the local level, and how this orientation is realized. These practices cover aspects such as the prevention of social exclusion in deprived neighbourhoods and the management of environmental risks of various kinds (floods, cyclones, waste, etc.).

PRACTICE # 22: Cooperation among public services around a local library

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Community Centre Gellerup (CCG)

Original target location/territory: Gellerup, Aarhus (Denmark); Gellerup population 11.406 (2012)

Objectives: Education and services for marginalized groups, with a particular focus on Information technologies, health, job counselling

Coordinator/responsible organization: Community Centre Gellerup (CCG)

Period: since 2005

Sources: <http://simpact-project.eu/evidence/sicases/pdf/SIB34.pdf>
https://www.smartaarhus.eu/sites/default/files/media/smartaarhus_2015.pdf

2. INTERPRETATION/VISION

Community Centre Gellerup is located in one of the poorest housing estate areas in Denmark in Aarhus (Gellerupparken). Among the main challenges is a high share of inhabitants living on temporarily or permanently on social security benefits (about 60%). The area is characterized by low-income level, high level of crime and low educational attainment among many inhabitants. Many families have problems related to trauma or illness resulting from torture or war. Consequently, there is a high share of community members who are associated with public silence, are at risk of social marginalization, have poorer health and a weaker connection to the job market. CCG vision came from the library branch in Gellerup and is in line with Aarhus Municipality's Integration Policy, which aims at strengthening cohesion in the municipality and promotes active citizenship and democratic values irrespective of ethnic or cultural background. It is stated in the Policy that ethnic minorities must have the same opportunities, rights and obligations as the rest of citizens in Aarhus. CCG is also integrated into a broader community empowerment strategy, which addresses integration issues and residents' engagement, and aims at strengthening a sense of belonging to the community, as well as the capacity for action among public employees in Gellerup.

3. ACTORS' MOBILIZATION

- Community Centre Gellerup (CCG) brings together separate, otherwise not connected institutions, social associations and organisations of the city under one roof. CCG is housed in a library building and in addition to the library services provides training in Information technologies, health care, public information, voluntary social work, education and job counselling services. The basic idea has been to develop new co-operation models between different social services and the public library to better respond to the needs of the inhabitants of the area. CCG promotes active citizenship, knowledge sharing, networking and capacity building and thereby increases social capital. CCG is a 'public sector bottom-linked innovation', which has had a high degree of institutional support and active involvement of citizens, volunteers and associative networks. CCG was established as a permanent activity in 2007.
- The approach of CCG attempts to expand the traditional library concept to a multifunctional service platform for improved neighbourhood and internal governance based on close cooperation and horizontal empowerment between various actors in the local community. The guiding principle of CCG work has been a holistic, cross-sectoral and integrated approach based on territorial decentralization, and horizontal collaboration between various institutions in the area. All citizens are given the possibility to participate in the development and each participant in the cooperation is given equal weight. This way, CCG promotes active citizenship, knowledge sharing, networking and capacity building and thereby increases social capital. CCG is part of the 'Gellerup model', which is a model of collaboration between various public institutions in the local community, such as volunteer associations, police, schools, kindergartens, job centres, and the library. An integral part of the model is regular meetings at management level between the public institutions with a purpose to discuss what improvements can be made in the area.
- One of the underlying principles of CCG work is cooperation in the form of knowledge and experience exchange between various institutions and across different professional fields. Since the establishment, CCG has been in close collaboration with the public actors (first of all, Aarhus County), service providers, the Police, local housing associations, volunteers and the community. Some additional expertise and knowledge were acquired from Roskilde University (RUC) and IT-Guide Association.

4. ACTIVITIES

- Until today CCG consists of Gellerup Library, Health House, Public Information and Job Centre.

- Gellerup Library provided free IT-courses for citizens who lack fundamental IT-competences until 2010. The courses were run by volunteers at the IT-Guide Association which was established as a follow-up of the Urban II project. The Library offered language courses for immigrant women, homework help, reading activities, arranged various events and debate meetings etc.
- Health House (Sundhedshuset) was running as a project for 2 years before it was established as a permanent activity at CCG in the mid-2000s. Health House is integrated as part of CCG until today and employs 4 staff members. Health House is a cooperation between several municipal departments in Aarhus and Central Denmark Region. In 1999, Public Information was developed under Urban II project. The centre works as a mediator and a conflict manager between the citizens and the system. It provides counselling for citizens of Aarhus when it comes to the social and labour market issues, education, social services, housing benefit, legal affairs etc. It became a permanent activity in 2010. Public Information is organized under the Social and Employment Department in Aarhus County. Job Centre is a former library service, which was organized under the Department of Employment in 2007. Job Centre provides counselling and guidance on job-related issues, as well as focuses on physique and state of health of the job seekers.
- Several activities and events were realized through citizen-driven initiatives at CCG. Working with citizens, CCG uses the appreciative inquiry method which is based on acknowledging and enhancing what is already working well, focusing on already existing solutions. Community empowerment strategies are also used by CCG as a method for the strengthening of citizens' involvement and integration.

5. OPPORTUNITIES AND OBSTACLES

- CCG has been primarily using public funding from the Danish government. Some financial support also came from the EU Community Initiative Urban II (promoting sustainable urban development). Public Information and the IT-Guide Association were established under the Urban II initiative. The Danish Agency for Libraries and Media provided financial support.
- CCG approach has been supported by both employees and politicians from the very beginning who thought it was the right way of working. Hence CCG has not encountered any conflicts with the given institutional setting.
- There were no considerable obstacles to the establishment of CCG. However, the realization of the original CCG vision and principles was challenging after 2010 due to a library reform in Aarhus. As a result, the extent of development activities targeting staff and organizational development has been reduced.

6. IMPACTS

- CCG challenged traditional governance relations by changing existing norms and producing new practices and policies for sustainable place-making, which promote multi-level engagement and participatory practices. The main results include the establishment of new management models for various organizations and associations in the area which improved their cooperation and dialogue (Gellerup model) and contributed to improved use of resources and sharing of knowledge among previously separate actors.
- The CCG was monitored between 2005 and 2007 by the national (Roskilde University) and European (Urban II) evaluation studies. The evaluation report by Roskilde University served as an inspiration for the creation of the national development program 'Building community centres in at-risk neighbourhoods'. In 2008, the Danish Agency for Libraries and Media granted a EUR 2.4 million funding for replicating CCG model to 16 public libraries in at-risk neighbourhoods in Denmark. CCG was having the role of the consultant for these initiatives, providing the libraries with guidance and knowledge needed for starting up.

PRACTICE # 23: Joint flood risk management

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: RainReady Midlothian

Original target location/territory: Midlothian, Illinois, Chicago (USA), population around 15.000 (2017)

Objectives: Management of risks related to frequent flooding

Coordinator/responsible organization: Floodlothian 5 (residents' association) and others

Period: since 2013

Sources: <https://thefloodreport.wordpress.com/2015/04/26/helen-lekavich-the-floodlothian-5-and-team-floodlothian-midlothian/>
<https://www.cnt.org/blog/the-suburb-that%E2%80%99s-reinventing-resilience>
<https://chicago.cbslocal.com/2014/07/17/midlothian-residents-fed-up-with-chronic-flooding/>
<https://www.youtube.com/watch?v=SMEaOUb7Rig>

2. INTERPRETATION/VISION

Village of Midlothian residents sought help with Natalie Creek, with a terrible history of flooding the surrounding neighbourhood. The village has dealt with it since the 1920s. But in recent decades, residents were alarmed at the frequency and severity of flooding in the village, with entire blocks underwater. 85 per cent of residents expressed concern about the impact of water-related problems on quality of life in the community. Flood damages were cited as a common cause of foreclosures and abandoned properties. Within this framework, some initiatives were aimed at building a community where residents and businesses benefit from flood relief in a way that also brings neighbourhood beautification, retail activity, jobs, recreation, and habitat conservation.

3. ACTORS' MOBILIZATION

- A residents' association (Floodlothian 5), with a strong women leadership, was created and worked together with other local civic initiatives, and the municipality, that founded the RainReady Community, that began working in

Midlothian in early 2015 in partnership with the U.S. Army Corps of Engineers. The Chicago Metropolitan Agency for Planning (CMAP) is working closely with village leaders and community members to determine the best mix of improvements for the community, which could include bike lanes, crosswalks, tree plantings, and pedestrian-scale lighting.

- This initiative contributed to mobilize, and also create, research centres in the field of flood management (see Impacts).

4. ACTIVITIES

- A village-wide risk assessment was carried out to determine the source and scope of flooding in the community.
- Floodlothian 5 has compiled a list of small projects that would mitigate the constant flood problem.
- Various monitoring activities were carried out on the territory and documentation of the damages detected.
- Intense advocacy work has been carried out in public administrations

5. OPPORTUNITIES AND OBSTACLES

- Several funds have been obtained (see below) allowed the foreseen interventions, together with the strong commitment of the different actors involved.
- An initial indifference of the administrations was found, who underestimated the problem of floods, perhaps also because they had caused very few deaths

6. IMPACTS

- Approximately 10 million dollars of extraordinary public funds have been obtained to finance projects designed by Floodlothian 5.
- In the fall of 2014, Metropolitan Water Reclamation District (MWRD) has developed an \$8.3 million project to reduce flooding on Natalie Creek. Together with the National Park Service, South Suburban Mayors and Managers Association, and Trails for Illinois, RainReady is looking to leverage this investment to install a multi-use trail that would connect Midlothian to the Forest Preserve and the Cal-Sag Trail. The creek, which has been a hazard for Midlothian for decades, is being transformed into a beautiful community asset that helps to restore a sense of place in the village.
- Immediately there was a tendency to communicate and spread the experience of Midlothian, coming into contact with numerous groups of citizens affected by floods all over the world, who have now founded their worldwide network

(<https://anthropocenealliance.org/>). An example is Higher Ground, which currently connects 43 groups of flood survivors in 20 US states. The responsible Harriet Festing (<http://www.climigration.org/>), inspired by the experience of Midlothian, founded the Centre for Neighbourhood Technology (<https://www.cnt.org/>) which aims to act as a shoulder scientific and technological to all communities of citizens affected by environmental risks. She said:

“Anthropocene Alliance combats climate change and environmental abuse by building grassroots coalitions in the communities most badly affected. We provide support and training to community leaders, and connect them to the government agencies and non-profit programs that can help them the most.”

PRACTICE # 24: Climate-proof management planning

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Climate-proof management planning

Original target location/territory: Ylivieska-Alavieska region within the Kalajoki basin (Finland), population: 620

Objectives: Participatory planning to face the interdependent challenges of managing flooding and poor water status

Coordinator/responsible organization: Centre for Economic Development, Transport and the Environment for North Ostrobothnia (The Regional authority) is responsible for both flood risk and river basin management planning

Period: 2011 ongoing

Sources: <https://base-adaptation.eu/sites/default/files/BASE%20Inspiration%20Book.pdf>; <https://base-adaptation.eu/adapting-flood-risk-and-river-basin-management-climate-change-kalajoki-finland>

2. INTERPRETATION/VISION

The Kalajoki river basin is a typical Finnish flood risk area that faces the interdependent challenges of managing flooding (caused by snowmelt, heavy rains and ice dams) and poor water status, originated mainly from agricultural activities in the river basin. Seasonal changes in discharges in Finland are the most distinct anticipated impacts of climate change. Changes in precipitation and temperature may also increase the nutrient load from catchments to water bodies in future climate. Climate adaptation, in this case, includes an integrated river basin management plan and a flood risk management plan.

3. ACTORS' MOBILIZATION

- To initiate and develop the plan, a broad set of actors was involved, both at the national and local level, including the Finnish Environment Institute (Syke).

"Water authority experts and officials/legislators from the local and national level played an important role in the initiation and development of the plans. Typically, official public hearings and events have not benefited from the participation of stakeholders and citizens. The implementation of

measures will rely heavily on municipal politicians, water experts, private actors and officials. The stakeholders invited in two workshops included local municipalities, authorities from different sectors, local enterprises, farmers' unions, fishery collectives and youth organisations. Participatory multi-criteria analysis was used to compare the acceptability of different flood risk management strategies."

- There are different actors responsible for implementation, e.g. inhabitants (for protecting their property in case of floods, sewage treatment in scattered settlements), farmers (for Common Agricultural Policy - CAP measures), municipalities (land-use planning), private actors like hydropower companies, water supply and sewerage companies and other private and public actors implementing projects, authorities and researchers for developing policy instruments etc.

4. ACTIVITIES

- The first flood risk management planning cycle, according to the Floods Directive, started at the end of 2011, when nationally significant flood risk areas were nominated. The flood risk management plans were prepared for years 2015-2021 and are currently being updated for the second cycle. For river basin management planning, the cycles are identical.
- In the beginning, a case study was carried out, allowing the identification of some measures: Land use planning (i.e. new construction is not allowed in flood risk sites; ensure the resiliency of existing infrastructures); Increasing citizens' awareness and preparedness; Developing watershed regulation to cope with increased variation in hydrological conditions; Maintenance and heightening of dikes; Increasing the river basin's retention capacity; Building permanent flood walls to protect single buildings. A questionnaire on the issues of citizen flood awareness, risk perceptions, acceptability of and willingness to pay for flood risk management measures and flood protection was sent to 1,300 citizens in the flood risk area. The questionnaire served both the purpose of informing and consulting the citizens.
- Then several measures were implemented, in particular an integrated river basin management plan and a flood risk management plan.

"Some of the identified measures were left out from the plan due to their small benefits compared with costs and negative side-effects. The measures based on water retention were found to be too uncertain or their capacity insufficient in case of an extreme flood event. While other measures, such as using agricultural land as temporary water storage, still require further specification and studies of technical feasibility. The case study also analysed the cost-effectiveness of the planned river basin management measures aiming at reducing the nutrient loading in different climate change and socio-economic scenarios using hydrological modelling and the KUTOVA-tool. These measures included optimised fertilisation, wintertime vegetation, wetlands and buffer zones. The results show that the need for mitigation measures and their cost-effectiveness are influenced by both climatic factors and the level of agricultural adaptation."

- At the end of 2015, the Flood Risk Management Plan for the Kalajoki river basin (2016–2021) was approved by the Ministry of Agriculture and Forestry and the

River Basin Management Plan for the Oulujoki-Iijoki River basin (2016-2021) was approved by the Finnish Government.

5. OPPORTUNITIES AND OBSTACLES

- For both processes, resources for planning are available, but no budget is earmarked for implementation. Funding sources are also various: CAP, EU structural funds, municipalities, state, private actors etc.
- In the process of preparing the flood risk management plans (above all at the beginning), various challenges have been identified, such as unclear targets and role definition; limited participation; lack of local specific information about climate change impacts; difficulties in shifting responsibility in flood risk management from the state to the local authorities; limited awareness among local stakeholders (even due to low population density and no strong pressures for environmental interventions); tensions between municipalities on the distribution of costs and benefits. A guidance process from the project responsible during the whole process contributed to overcoming these obstacles.

6. IMPACTS

- The implemented (structural) flood protection measures can be summarized as Protecting households and cultural sites with flood embankments along the main channel; Protecting agricultural land with embankments (about 70 km); Dredging of the river channel and building submerged weirs; Building hydropower plants; Regulating natural lakes; Building reservoirs. Also, the following measures are at the place: Operational flood protection activities; Land-use planning; Guidelines for building; Flood modelling, forecasting and warning; Flood risk mapping; Evacuation and emergency planning; Emergency rehearsals; Preparedness of landowners and citizens; Flood documentation.
- The case study was done at the end of planning and provided data on the costs and benefits of different adaptation measures in the water sector. Additionally, the case study offered examples and experiences on involving stakeholders in adaptation planning.
- The analysis done at the beginning of the planning process produced an important impact on the final outcome of the plan draft.

PRACTICE # 25: Rural development to manage environmental risks

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Integrated Tribal Development Programme (ITDP)

Original target location/territory: Odisha state (India), population 46.000.000 (2018)

Objectives: Promoting in at-risk areas development processes and technology transfer which are sustainable, socially inclusive and gender-equitable, to enable critical masses of poor and marginalized rural people or communities to achieve a dignified quality of life

Coordinator/responsible organization: Gram Vikas

Period: since 1979

Sources: www.gramvikas.org

https://en.wikipedia.org/wiki/Gram_Vikas

<https://idronline.org/sanitation-efforts-must-focus-on-quality-equity-and-social-inclusion/>

<https://yourstory.com/2014/06/gram-vikas>

https://www.facebook.com/pg/gramvikasodisha/about/?ref=page_internal

<https://www.facebook.com/gramvikasodisha/videos/473167696778919/>

<https://www.facebook.com/gramvikasodisha/videos/>

2. INTERPRETATION/VISION

Gram Vikas' partners with rural communities to address their critical needs of education, health, safe drinking water, sanitation, livelihoods and alternative energy in a manner that is sustainable, socially inclusive, gender-equitable and empowering. Gram Vikas, literally Village Development, is a not-for-profit, development organisation working in partnership with rural communities with the support of governments, private sector entities and academic institutions to help improve the quality of life in the villages of Odisha and neighbouring States.

3. ACTORS' MOBILIZATION

- In 1971, Joe Madiath led 400 volunteers from the University of Madras' Young Students' Movement for Development to West Bengal to manage relief camps for

refugees of the Bangladesh Liberation War. Witnessing the devastation of the 1971 Orissa cyclone, and realising the comparatively little attention received by the disaster victims, Madiath and a small group of 40 volunteers shifted their attention there. The group decided that the best way to help the cyclone victims was to provide irrigation facilities. Once these efforts were completed, the group handed over the facilities to the villagers and left. But Madiath and a small group of YSMD volunteers realised that the irrigation facilities benefited mostly the landlords, and decided to stay in Orissa to become social activists. Joe Madiath and remaining volunteers moved to Ganjam district at the invitation of the local authorities and established Gram Vikas in 1979.

- A key element of Gram Vikas is the principle of subsidiarity and the fact that the local populations are involved in the realization of the projects and within the infrastructure itself.

4. ACTIVITIES

- After its inception, Gram Vikas started by focusing on education and awareness, secure sources of income, improve the health and living conditions of the tribal communities. Interventions and work with these communities led to The Integrated Tribal Development Programme (ITDP). The campaign to recover mortgaged land was a major step both in the history of Gram Vikas and in the tribal people's life. In addition to interventions in these areas, a campaign was started for Community forestry, encouraging people to plant fuel, fodder, fruit and timber species over all private and common wastelands. In collaboration with the National Programme for Wasteland development, over 10,000 acres of wasteland were regenerated between the years 1985-1996. Further, Gram Vikas assisted communities to obtain legal titles over the revenue wastelands regenerated and protected by them.
- Gram Vikas decided to approach water and sanitation by first building solid partnerships with the villages. Villagers are asked to contribute to a "corpus fund", which is invested in an interest-earning deposit and used to pay the costs of families moving to the village. Gram Vikas also require that all villagers, regardless of economic, social, or caste status, receive the same types of toilets and bathing rooms. Additionally, the entire community must be involved in the planning, construction, monitoring, and maintenance of the system. Gram Vikas also promotes gender equality as an inherent part of their programs.
- Another significant programme intervention of Gram Vikas was in the area of "Biogas". In the initial days of its operations, the organisation noticed the threat to the forests in the vicinity due to indiscriminate cutting of trees, both by the locals and by timber traders. This is when Gram Vikas stepped in and decided to take the biogas technology to the rural communities as an economical alternative means of energy. By the year 1983, even the Indian government took up the promotion of biogas through the National Biogas Development Programme across India. Between the years 1984 and 1994, Gram Vikas constructed 54,047 plants in over

6,000 villages spread over 13 districts of Odisha. From the year 1994, Gram Vikas started the process of spinning off the biogas programme by leveraging the capacities of the supervisors and trained masons to turn into independent turnkey operators and entrepreneurs. In a survey conducted in the year 1997, it was found that 82% of the plants constructed by Gram Vikas were still in operation.

- In the area of rural social housing, Gram Vikas has provided financial and technical support for the construction of permanent and disaster-resistant homes. The houses are designed so that bathrooms can be built next to each house. Gram Vikas also provided training, technical guidance, masons and support for the purchase of building materials. Housing financing activity has evolved over the past two decades from a total grant approach to a loan approach.

5. OPPORTUNITIES AND OBSTACLES

- Among the opportunities, there are the public funds for the different activities done, and the large availability of volunteers, researchers and technicians.
- Among the obstacles, there are, among others: conflicts with landlords; doubts from some governmental leaders; difficulties related to ask for 100% participation and community equity

6. IMPACTS

Since 2004, Gram Vikas strategized its approach - MANTRA (Movement and Network for the Transformation of Rural Areas), which defines the strategic orientation that Gram Vikas has chosen to adopt, seeking to unify the parallel approaches being followed in the Integrated Tribal Development Programme (ITDP) and the Rural Health and Environment Programme (RHEP). It is an approach towards holistic and integrated rural development adopted in different states across India and a few countries in Africa.

PRACTICE #26: Partnership for waste management

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Decentralized community-private-public partnership model for waste recycling

Original target location/territory: Dhaka (Bangladesh)

Objectives: To build a new waste recycling model to transform the solid waste into organic compost using low-cost, low-tech and labour-intensive method

Coordinator/responsible organization: Waste Concern (a research-based non-governmental organization)

Period: Since 1996

Sources: <http://wasteconcern.org/>
[http://growinginclusivemarkets.com/media/cases/Bangladesh WasteConcern 2011.pdf](http://growinginclusivemarkets.com/media/cases/Bangladesh_WasteConcern_2011.pdf)
https://en.wikipedia.org/wiki/Waste_Concern

2. INTERPRETATION/VISION

The perilous waste management situation in densely populated Dhaka city (with about 12 million people) motivated Iftekhar and Maqsood, two young urban planners, to form a research-based non-governmental organization (NGO) in the field of waste management and environment, called Waste Concern.

3. ACTORS' MOBILIZATION

- To address the waste management challenge Waste Concern developed a decentralized community private-public partnership model for waste recycling, to transform the solid waste into organic compost, using low-cost, low-tech and labour-intensive method. Waste Concern involves poor women in the community at a reasonable wage rate. About 70% of the staff is comprised of women workers, and there is no discrimination of payments by gender.
- The responsible of Waste Concern motivated the business community to participate in the initiative through demonstration of its commercial viability, social desirability, and potential large-scale environmental benefits for community people. The Bangladesh Agriculture Research Institute and ALPHA Agro, the

largest fertilizer company in the country, were involved. The success of Waste Concern earned the promoters prestigious international and national awards and raised their profile to a high standard within the country. As a result, they were invited by the government to participate in environmental policy formulation committees.

- The success of this innovative model that involves the key players in society has been able to attract a large amount of foreign direct investment in the area of organic composting and carbon trading using the Clean Development Mechanism (CDM) of the Kyoto Protocol.

4. ACTIVITIES

- The major activities of Waste Concern are in the field of waste management, climate change and environment. They focus on pilot projects on all types of waste and cleaner energy, especially solar and bio-energy projects. Waste Concern conducts research, provides consultation services, project assistance, support for institutional development, policy development, capacity building, and innovation and implementation of waste management and environmental projects with its capacity comprising about 21 professionals and a team of committed support staff.
- The development of composting model follows these steps:
 1. RESEARCH BEFORE PILOTING
 2. FIRST PILOTING OF THE MODEL
 3. COMPOSTING PROCESS (The composting process, regardless of the scale of operation, starts with the collection of solid waste by the waste collectors from the households in the community. The first pilot project of Waste Concern involved four waste collectors to collect waste from about 800 households. They recruited interested poor people from the locality through the local people. The wage rate for these workers was set based on two things - minimum wage fixed by the government and the charges paid by households for waste collection).
 4. THREE YEARS OF MOTIVATION CAMPAIGN (After successful piloting, Maqsood and Iftekhar moved on to attract the attention of the concerned authorities. From 1995 to 1998, they made several presentations in seminars and conferences on their decentralized community-based composting model. It has been observed that centralized composting plants involve high operational, transport and maintenance cost, and often fails to reach the target in the developing countries. A decentralized system, on the other hand, has several advantages in the context of Bangladesh as it is labour intensive, less costly, and suited for the waste stream. It also improves community participation in source separation and reduces costs incurred for collection, transportation and disposal of waste by the municipal authority).

5. OPPORTUNITIES AND OBSTACLES

- The main financial resources for developing this initiative were the money they earned from offering consultancy services and financial assistance from one of their friends.
- Despite challenges at the start-up phase in mobilizing funds, and other physical resources including land, marketing, laboratory testing etc., Iftekhar and Maqsood succeeded in overcoming those with the help of private sector, academia, the Ministry of Environment and Forest, local government, and international development agencies.
- The responsible for Waste concern faced several phenomena of harassment of the women collectors against some households. For that reason, they changed the approach and replaced them by male collectors and engaged the women in sorting and composting.
- Some further constraints faced by Waste Concern, above all at the beginning, are Lack of financial resources for pilot projects; Lack of adequate fund for R&D; Lack of access to credit facilities; Lack of information about the fertilizer market; Lack of proper understanding from the concerned government agencies; Negative attitude of the government agencies; 53 permissions required instead of the usual 35 for general projects on the environment; Scarcity of land in the urban areas, particularly in Dhaka City; Physical infrastructure; Lack of office space, furniture, etc.

6. IMPACTS

- The initiative has multiple economic, social and environmental implications for the country. It contributes to creating employment opportunities for the urban poor in its activities like a waste collection from the households, and other activities in the composting plants. Involving women in the composting process contributes to their empowerment in the society, and improve quality of life in the households. Other benefits generated by this initiative include saving of landfill area, reduction in topsoil fertility degradation, increased agricultural yield, reduction in greenhouse gas emissions and reduction in harmful effects of chemical fertilizers on local fish and wildlife.
- This innovative partnership model and composting technique have created lots of enthusiasm among the government, policymakers, researchers, international agencies and local authorities. Their success in the area of waste management has earned them several national and international awards that have raised the profile of Waste Concern to a very high standard. As a result, they have been able to contribute to formulating and enacting some environment-related policies and rules of the government.
- The model was successfully piloted in Dhaka in 1995. Later it was replicated in other parts of the country with financial support from international development agencies. Replication of this model has also been done in Vietnam, Sri Lanka and

Pakistan with their technical assistance. Recently, this model is being replicated in ten cities in Asia and the Pacific countries in partnership with the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).

- Scaling up of the Waste Concern initiative has also been done through its commercial venture, undertaken by its joint venture concern WWR Bio Fertilizer Bangladesh Ltd, in the area of carbon trading-based composting, the first of this kind in the world.

5. Agenda setting

The next 4 BUGIPs, concerning the aspect of the "agenda-setting", have at their centre the aptitude to identify, build and make accept by local actors, through negotiation and deliberation, certain strategies and actions functional to the solution of the problems of territory. These BUGIPs concern aspects such as the construction of shared visions on energy policies, the adoption of the Gender impact assessment for urban planning, the joint definition of a research agenda on water, the participative definition of a health research agenda on burns.

PRACTICE # 27: Guiding vision to change the Energy system

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: “Energy Vision”

Original target location/territory: District of Murau (Austria), population around 30.000 (2015)

Objectives: Creating a broader process of participation to kick-off, facilitate and coordinate the implementation of various projects for renewable energy and energy efficiency in the region

Coordinator/responsible organization: Regional energy agency of Upper Styria, with the help of a professional facilitator of participatory processes

Period: since 2003

Sources:

['Energy Regions' The transformative power of regional discourses on socio-technical futures](https://www.researchgate.net/publication/215616201)

2. INTERPRETATION/VISION

To embed the renewed interest in biomass heating into a more comprehensive approach of energy system change and regional development, and to create synergies between and legitimacy for a variety of agendas and projects.

3. ACTORS' MOBILIZATION

Some characteristics of the approach used in this project are:

- Establish a “guiding vision” for the region about energy
- Involvement of actors such as Politics/Government, Enterprises, Citizens/energy consumers, Media, R&D experts
- Delimitation of scope, together with the avoidance of contentious issues which did not promise to yield consensual win-win solutions
- Build new heterogeneous actor networks

- Elaborate socially robust and operational solutions that reflect some sort of 'public good', rather than 'partial interests'
- Referring to storylines and specific ideas related to 'energy autarky' or 'self-reliance' that are very attractive to Austrian farmers
- Elaborate a "discursive hegemony" about the strategy.

4. ACTIVITIES

- Workshops with local organisations, companies and citizens, about the situation of the region related to energy and to negotiate/elaborate visions and concrete priorities about sustainable energy futures, regional development and climate protection.
- Elaboration of the "Murau Energy Objectives for 2015", having these main points:
 - a. The district of Murau is energy-autonomous concerning heat and electricity i.e. a positive balance for renewables in primary energy flows has been achieved
 - b. Prospering regional economic circuits of energy production and consumption have been established and a surplus of economic value is created by a net export of energy carriers
 - c. A high level of public awareness concerning the need for an energetic circular flow economy ('energetische Kreislaufwirtschaft') has been achieved (especially among pupils).
- Creation of sub-groups to elaborate specific points of the strategy.
- Frequent meetings among all stakeholders.

5. OPPORTUNITIES AND OBSTACLES

- Availability of a broad range of actors at the local level (see above)
- Primary energy potentials
- Early resistances were noted among some local companies

6. IMPACTS

- "Guiding visions" aligned actors *across governance levels* to increase authority and resources for the promotion of their visions.
- Guiding visions from a regional level can 'translate' broader and rather abstract visions of sustainable energy futures into more concrete agendas reflecting the specific requirements and opportunities of a particular regional context.
- Increasing social compliance with the vision has been noted.

- The Murau Energy Objectives for 2015 – though not binding in a legal sense – have played a major role in the negotiation of many plans, projects and concrete decisions of public authorities and private enterprises alike (e.g., private investments).

Examples:

- Four companies offering and installing heating systems for example decided to merge their marketing under the brand of 'Natur-Installateure' ('nature installers') and committed themselves to a minimum quota of bio-based system whenever offering new heating systems
 - One of the four companies even committed itself to installing nothing but renewable energy based
 - Options in all newly built houses, a commitment which brought the company a lot of attention and its charismatic leader the prize "entrepreneur of the year 2005"
 - Various calls for tender concerning the replacement of old heating systems in public buildings explicitly called for renewable energy based solutions.
-
- The whole process has created a new 'in-between' arena for negotiating and coordinating common agendas.
 - Scaling up and further institutionalisation of this strategy.
 - Fostering further R&D effort in this field.
 - Positive resonance in media.
 - The initiators won the "Energy Globe Award" on both the Styrian and national level in 2004 and other prizes.

PRACTICE # 28: Gender impact assessment for new urban spaces

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Project Madrid Nuevo Norte

Original target location/territory: Madrid (Spain)

Objectives: Integrating the needs of women and gender issues throughout the design and approval process of a project aimed at creating new urban spaces and facilities

Coordinator/responsible organization: Comunidad Autónoma de Madrid, with the support of UNESCO Chair on Gender Equality Policies in Science, Technology and Innovation at Universidad Politécnica de Madrid

Period: ongoing

Sources: <https://www.gendersteunescochair.com/project/mnn/#fullproject>;
<https://distritocastellananorte.com>

2. INTERPRETATION/VISION

“Madrid Nuevo Norte” is a big redevelopment project, involving the construction of a new Central Business District, 10.000 new housing units of which 20% will be social housing, many new urban facilities, new public spaces, parks, and infrastructures including several new subway stations a new rapid bus system, and renewal of the Chamartín train station (which will become the main transportation hub in the city). The project has the aim to create new urban spaces and facilities in a Brownfield area today occupied by railroads and related obsolete activities, interconnecting areas of the city which today are separated by the railroads.

Within this context, a broad consultation of women was foreseen, to put the gender at the core of the planning activities, and go beyond the Gender Impact Statement required by the Spanish legislation for all public regulations and all land-use plans.

3. ACTORS' MOBILIZATION

A broad set of public, private, research and community actors was involved in the planning of the whole project. For the gender impact assessment, the responsible was the UNESCO Chair on Gender Equality Policies in Science, Technology and Innovation at Universidad Politécnica de Madrid (see also below).

4. ACTIVITIES

- The Gender Impact Statement for the project has integrated the needs of women and gender issues, as well as those of children, adolescents and the elderly, throughout its design and approval process, and in all relevant areas of planning, from housing to public space, from transportation to spaces for employment, from facilities to safety.
- The contribution of the UNESCO chair to this process has involved an integral consultancy work, integrating additionally gender concerns within the planning process through participatory processes with neighbourhood women and the training of all technical teams participating in the design, including decision-makers. The UNESCO Chair, in particular, provided: Ad hoc training to all departments involved in the project; Continuous advice in the preparation and drafting of the technical document; Continuous advice for communication and social commitment departments; Advice on public participation activities.

5. OPPORTUNITIES AND OBSTACLES

No particular opportunities and obstacles have been reported in the implementation of the assessment. The critical points found in the sources are only those relating to the entire Madrid Nuevo Norte project as a whole, which is however still in the start-up phase.

6. IMPACTS

- As the UNESCO chair responsible stressed, a fundamental work has been done to ensure that the project includes the specific needs of women in the most relevant urban variables in this regard. For example, the mix of uses, the proximity of services and equipment in residential areas, the quality and safety of public space and the transportation system, and the adaptation of residential areas to the current social context.
- The Gender Impact Statement drafted for Madrid Nuevo Norte is the first such document being done for a main land-use plan in Spain.

PRACTICE # 29: Joint definition of research agenda on water

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: Water Agenda

Original target location/territory: Bordeaux (France), population around 250.000 (2014)

Objectives: Define the scientific program in the field of water and related issues, in collaboration with the stakeholders

Coordinator/responsible organization: IdEx – University of Bordeaux

Period: since 2015

Sources: <https://idex.u-bordeaux.fr/n/InfoList-0-5.html>

2. INTERPRETATION/VISION

The initiative has its origins in the idea of building a participative agenda for water research. The Water Agenda is an original and experimental approach desired by the IdEx Bordeaux to define its scientific programming in the field of water and related issues. The aim is to identify the major issues in the field of water for the coming decades, adopting a collaborative approach bringing together scientists, socio-economic actors, public managers and civil society.

3. ACTORS' MOBILIZATION

The promoter is IdEx, that is the University of Bordeaux Initiative of Excellence, which, in close collaboration with research bodies and partner institutions, offers innovative research, training and knowledge transfer programs. A prospective group made up of researchers, socio-economic actors, managers and representatives of civil society have been formed from actors in the Bordeaux region.

The prospective group brings together 38 contributors from the water Agenda, It was made up of a multi-disciplinary group of local researchers working on the subject of water and representing different research centres and the university; international researchers (Canada, India, Latin America, Spain, USA); socio-economic

stakeholders (LyRE – Suez Eau France research laboratory, the France Nature Environnement association, the Energie de la Lune company, GIP Littoral, Cluster Eau d'Agen).

4. ACTIVITIES

- The prospective group got together for 3 research seminars to establish the scenarios by reflecting on research, societal challenges, and research organization and science instruments.
- 4 possible scenarios for future research focusing on the water were identified: Knowledge Economy; Upstream Sciences; Resilient Territories; Global Science. These scenarios are divided into 2 groups: "Local/Global" and "Challenge-based/Curiosity-driven" (research guided by societal challenges or by other academic research).

5. OPPORTUNITIES AND OBSTACLES

The initiative has benefited from the strong commitment of the University of Bordeaux as a whole and its organizations. No particular obstacles have been reported regarding its realization.

6. IMPACTS

- Through round tables and scenario presentations, the stakeholders' forum was a moment to debate knowledge needs, the different proposed scenarios and the questions that had been raised throughout the process. The remarks have been taken into account for the definitive water Agenda report that has been given to IdEx Bordeaux at the end of 2015.
- Even if it is premature to speak of impacts in the strict sense, the water Agenda proved to be original and experimental approach (and transferable model) to define the future science program in the area of water and the socio-economic and societal stakes associated with it. Compared with the traditional "curiosity-driven" research approach, which consists in going into a research subject by following the thread of scientific questions, multi-disciplinary research agendas explore societal (and territorial) challenges to get to the underlying research issues.

PRACTICE # 30: Application of the Dialogue Model for health research agenda-setting process

1. GENERAL INFORMATION

Strategy/Policy/Project where the practice has been implemented: the BhURN project

Original target location/territory: Amsterdam (the Netherlands)

Objectives: The exercise aimed to compose a health research agenda on burns, launch research covering the entire field and highlight priorities by involving all the relevant stakeholders

Coordinator/responsible organization: Dutch Burns Foundation (Nederlandse Brandwonden Stichting); Athena Institute (VU Amsterdam) as a facilitator

Period: 2006-2007

Sources: Peter Raeymaekers, Mind the gap! Multi-stakeholder dialogue for priority setting in health research. Based on a Workshop held by the King Baudouin Foundation in Brussels on November 27 and 28, 2015, available at <https://www.kbs-frb.be/en/Virtual-Library/2016/20160426PP>; Broerse JEW, et al. Involving burn survivors in agenda setting on burn research: An added value? Burns (2009), doi:10.1016/j.burns.2009.04.004, available at: <https://brandwondenzorg.nl/wp-content/uploads/2019/01/Broerse-et-al-Burns.pdf>

2. INTERPRETATION/VISION

The project aimed at creating an equal partnership among patients (burn survivors) and other stakeholders (e.g. health care professionals and researchers) during the agenda-setting process, to improve the relevance of the research.

3. ACTORS' MOBILIZATION

- The “Dialogue Model” was applied, based on the methodology of Responsive Evaluation and the Interactive Learning and Action (ILA) approach, which enables end-users to have a role in decision-making on innovation processes in various societal domains. The model is grounded in participatory and interactive approaches and has been adjusted based on pilot work.

- The stakeholders involved included 37 patients and relatives (parents and spouses), researchers biomedical and clinical) and health professionals (medical specialists, physiotherapists, psychologists, paediatricians and others), as well as NBS (the Dutch Association of Burn Survivors) and ADBC (Association of Dutch Burn Centres).

4. ACTIVITIES

- The Dialogue Model was applied, having 5 phases:
 - o Exploration (identification of key stakeholders, an initial list of issues, first perspectives and ideas from patients and other stakeholders, a methodology for desk studies; creation of social conditions for collaboration)
 - o Consultation (meetings with separate stakeholders' groups: patients, and researchers + health care professionals)
 - o Prioritization of the topic and problems
 - o Integration into a single broadly supported research agenda
 - o Programming and implementation.

5. OPPORTUNITIES AND OBSTACLES

The availability of a participatory method elaborated by the VU Amsterdam was an *atout*, while some people felt Delphi method too time spending.

6. IMPACTS

- High satisfaction of all the participants.
- Added value from the participation of patients (putting into agenda also issues not usually considered by the specialized researchers).
- An integral research agenda was built, which was translated into a funding programme or plan, and action was taken to translate the plan into actual research.

ANNEXE 1

List of the 30 selected bottom-up
governance innovation practices

No.	Practices	Location	Country
	<i>Re-rooting economic and social activities</i>		
1	Community-supported entrepreneurship	Totnes	UK
2	Networked social innovation system in agriculture	Sever do Vouga	P
3	Cooperative to buy and built renewable energy	Rotselaar	B
4	Energy cooperative co-steered by the citizens	Mouscron	B
5	Community-owned farm for sustainable food	Near Sutton	UK
6	Renovable energies in a remote island	Eigg island	UK
7	Local owned integrated energy management system	Samsø	DK
8	Telecommunication platform for marginalized communities	Mbashe Municipality	ZA
	<i>Recovering and fostering local knowledge</i>		
9	Science and Technology Park offering social services	Gdynia	PL
10	Innovation Platform for Sustainable Urban Development	Göteborg	S
11	Living Lab to facilitate learning and collaboration	Eindhoven	NL
12	Utilizing Living Laboratories for social innovation	Malmö	S
13	Supporting grassroots innovators and traditional knowledge	Many places of India	IND
14	Co-working space to build new economic and work opportunities	Zaragoza	E
15	Technological education to migrants	Mexico City	MEX
16	Technological education to migrants	West Virginia	USA
	<i>New regulatory frameworks</i>		
17	Urban commons regulatory framework	Bologna	I
18	Participatory budgeting for a small-size city	Agueda	P
19	Participative budget for sustainable city development	Cascais	P
20	Urban mobility with Superblocks	Barcelona	E

No.	Practices	Location	Country
21	Eco and co-housing district	Vauban	D
	<i>Risk management</i>		
22	Cooperation among public services around a local library	Gellerup (Aarhus)	DK
23	Joint flood risk management	Midlothian (Illinois)	USA
24	Climate-proof management planning	Ylivieska, Alavieska	SF
25	Rural development to manage environmental risks	Odisha State	IND
26	Partnership for waste management	Dhaka	BD
	<i>Agenda setting</i>		
27	Guiding vision to change the Energy system	District of Murau	A
28	Gender impact assessment for new urban spaces	Madrid	E
29	Joint definition of research agenda on water	Bordeaux	F
30	Application of the Dialogue Model for health research agenda-setting process	Amsterdam	NL

ANNEXE 2

Other bottom-up governance innovation practices

The following 40 practices are some of the most interesting ones chosen from among those that did not fit into the inventory. For each of them, a conventional name and a source are simply provided.

	Practices	Sources
1.	Innovation lab for new urban services	http://nws.eurocities.eu/MediaShell/media/2019_ROCK_CaseStudies-Governance-Skopje.pdf
2.	Partnership for co-housing	www.desisnetwork.org/wp-content/uploads/2018/02/Designing-coalitions-Design-for-social-forms-in-a-fluid-world.pdf
3.	Sector Skills Agreements	http://www.ssda.org.uk/sectorskillsagreements.htm
4.	Community organizing	http://www.dico-berlin.org/english.html
5.	Community Led-Housing hub	https://realisingjustcities-rjc.org/blog/community-led-housing-new-era-cross-party-support
6.	Participatory co-design in the urban environment	https://urbact.eu/town-team
7.	Territorial social responsibility	www.econ.uniurb.it/RePEc/urb/wpaper/WP_12_04.pdf
8.	Increasing interconnectivity and data accessibility	http://www.transitsocialinnovation.eu/content/original/Book%20covers/Local%20PDFs/245%20TRANSIT%20Case%20Report%20-%20Living%20Labs%20-%20Final.pdf
9.	Social money	https://councilcommunity.com/2017/12/05/social-innovation-strategies-from-bottom-to-top/
10.	Fabriq Incubator in peripheries	http://www.fondazionebrodolini.it/en/projects/fabriq-social-innovation-incubator-municipality-milan
11.	Living Lab for smart territory	https://pdfs.semanticscholar.org/faf2/313b073857062b6ee8d1faf7be884302d052.pdf
12.	Fight against energy poverty	https://www.renewables-networking.eu/documents/Case-Study-Plymouth-UK.pdf
13.	Solar energy to improve hospital in a poor region	https://wecaresolar.org/about/our-story
14.	Public Lab community	https://publiclab.org/wiki/stories
15.	Engaging local farming knowledge	http://www.fao.org/3/a-mk953e.pdf
16.	Participatory land delimitation	http://www.fao.org/3/a-mk953e.pdf
17.	Participatory forestry management	http://www.fao.org/3/a-mk953e.pdf

	Practices	Sources
18.	Community-based natural resource territorial development	http://www.fao.org/3/a-mk953e.pdf
19.	Participatory plant breeding	http://www.fao.org/3/a-mk953e.pdf
20.	Supporting neighbourhood renewal	https://s3platform.jrc.ec.europa.eu/documents/20182/84453/Guide to Social Innovation.pdf
21.	Multi-stakeholder dialogue for priority setting in health research	https://www.kbs-frb.be/en/Activities/Publications/2019/20190118avc1
22.	Priority setting partnerships in the field of dementia	https://www.kbs-frb.be/en/Activities/Publications/2019/20190118avc1
23.	Designing a Nano Infrastructure for Water Resources	https://file.scirp.org/pdf/JWARP_2015012715073315.pdf
24.	Connecting actors for creating Territorial science, technology and innovation ecosystems	https://www.colciencias.gov.co/gestion-territorial/ecosistemas-territoriales-ctei
25.	Carbon farming solution	https://ensia.com/features/the-farm-that-grows-climate-solutions/?utm_source=Solutions+Story+Tracker
26.	University Partnership Model in The Development Of Community Sanitation	https://www.researchgate.net/publication/280254346_Community_Quadruple_Helix_Model_The_University_Partnership_Model_In_The_Development_Of_Community_Sanitation
27.	Water use master plans	https://www.hertie-school.org/en/governancereport/govreport-innovations/
28.	Innovation camps	https://s3platform.jrc.ec.europa.eu/documents/20182/227201/Innovation+Camps+methodology+guide_v0.1.pdf/77e4b71c-2a57-464f-a0c7-304f36414b96
29.	Solar photovoltaic communal farm scheme	https://www.interregeurope.eu/fileadmin/user_upload/plp_uploads/policy_briefs/2018-08-30_Policy_brief_Renewable_Energy_Communities_PB_TO4_final.pdf

	Practices	Sources
30.	Medical Emergency Response in the Islamic Community	https://www.academia.edu/36660313/Medical_Emergency_Response_in_Islamic_Community_Collaboration_with_Network_of_Mosque_leveraging_the_whole_concept_of_Government_and_Quadruple_Helix_Model_in_Malaysia
31.	Humanizing health care in hospitals with the help of Art and Technology	http://imaginationforpeople.org/en/project/living-lab-satchu-ste-justine/
32.	Sun power in rural areas	https://www.csmonitor.com/World/Africa/2015/0125/Africa-s-quiet-solar-revolution?utm_source=Solutions+Story+Tracker
33.	Climate change resilience farming methods	https://greentumble.com/malawian-farmers-fight-climate-change-head-on/?utm_source=Solutions+Story+Tracker
34.	Green stormwater infrastructure	https://ensia.com/features/flooding-increase-cities-live-with-water-green-stormwater-infrastructure/?utm_source=Solutions+Story+Tracker
35.	Seed bank managed by women	https://www.newsdeeply.com/womensadvancement/articles/2018/08/23/how-ancient-grains-and-a-seed-bank-turned-life-around-for-rural-women?utm_source=Solutions+Story+Tracker
36.	Participative forest protection	https://www.climate-change.org/en/card/ivory-coast-winning-back-its-forests/
37.	Low-carbon electrification	https://www.climate-change.org/en/card/kenya-innovation-low-carbon-electrification/
38.	Services and innovations for the cooperation between campus and community	https://www.uniaktiv.org/en/
39.	Urban heritage observatory	http://nws.eurocities.eu/MediaShell/media/2019_ROCK_CaseStudies-Governance-Lyon.pdf
40.	Engaging stakeholders to provide pathways for low-carbon living	https://www.cambridge.org/core/books/urban-planet/utilizing-urban-living-laboratories-for-social-innovation/72859197DCE25B34670AA9FC2E6EF579/core-reader